Does Mandatory Shareholder Voting Prevent Bad Acquisitions?

Oslo, 3 October 2014

Marco Becht

ECARES, Université libre de Bruxelles, CEPR and ECGI

based on joint work with

Andrea Polo

Universitat Pompeu Fabra and Barcelona GSE

Stefano Rossi

Krannert School of Management, Purdue University, CEPR and ECGI

"In the past, I've observed that many acquisition-hungry managers were apparently mesmerized by their childhood reading of the story about the frog-kissing princess. Remembering her success, they pay dearly for the right to kiss corporate toads, expecting wondrous transfigurations. Initially, disappointing results only deepen their desire to round up new toads. [...]

Ultimately, even the most optimistic manager must face reality. Standing knee-deep in unresponsive toads, he then announces an enormous "restructuring" charge. In this corporate equivalent of a Head Start program, the CEO receives the education but the stockholders pay the Tuition."

Corporate Acquisitions in Finance

- Large percentage of M&A destroy value for acquirer shareholders (Andrade, Mitchell and Stafford (2001), Bouwman, Fuller and Nain (2009), Harford et al (2012)) and losses from the worst performing deals are very large (Moeller, Schlingemann, and Stulz (2005))

- Why?

  - Agency theory: conflicted managers (Jensen (1986), Morck, Shleifer, and Vishny (1990)).

  - Behavioural finance: overconfident managers ("hubris") (Roll (1986), Malmendier and Tate (2008))

- Does shareholder voting provides a solution?

- U.S. studies (Kamar (2006), Hsieh and Wang (2008)) are inconclusive because shareholder voting is not mandatory

"Do bidders generally overpay: evidence of bidders' ($) gains from recent merger wave"

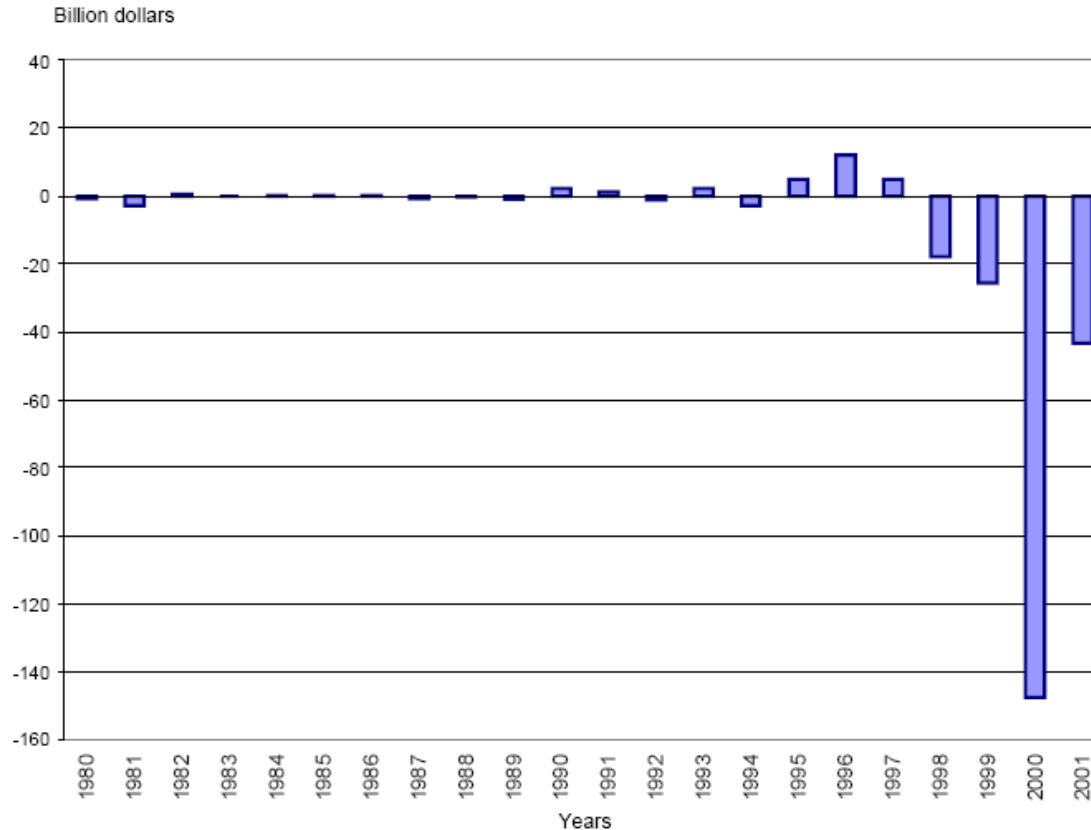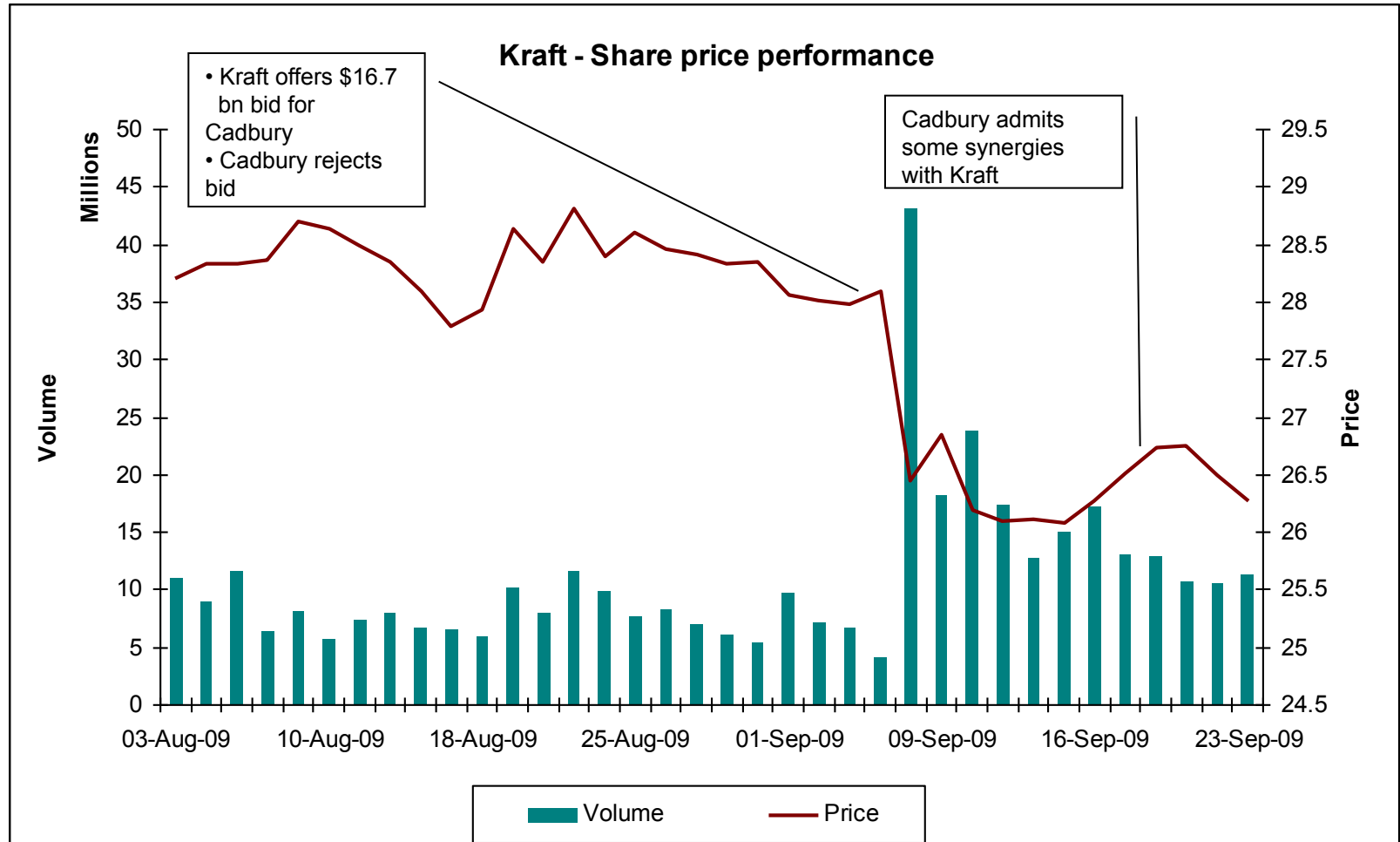Moeller, Schlingemann and Stulz, Journal of Finance 2005

Figure 1. Yearly aggregate dollar return of acquiring-firm shareholders (1980 to 2001). Data are from the SDC Mergers and Acquisitions Database. The graph shows the aggregate dollar return associated with acquisition announcements for each sample year. The aggregate dollar return is defined as the sum of the product of the abnormal return of each announcement multiplied by the equity capitalization of the acquirer.

Market's response to Kraft Inc's bid for Cadbury Plc

Kraft - Share price performance

- Kraft offers $16.7 bn bid for Cadbury
- Cadbury rejects bid

Cadbury admits some synergies with Kraft

Legend: Volume, Price
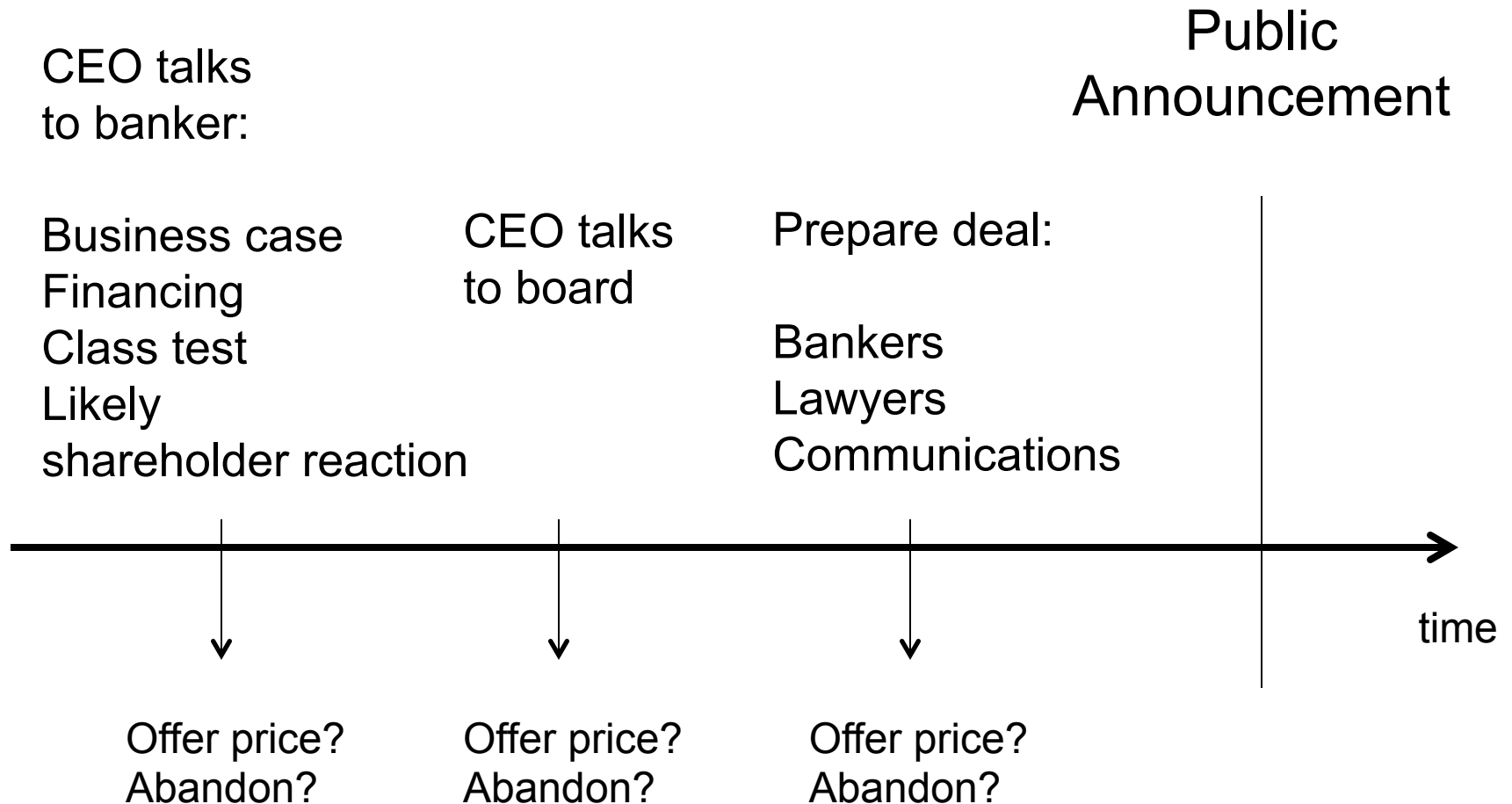
Source: Bloomberg, Factiva

Comparative Legal Perspective

- What is a "fundamental change" that can and should not be approved by the board without shareholder consent?

- Broad consensus across jurisdictions
(Rock, Davies, Kanda and Kraakman, 2009, The Anatomy of Corporate Law, 2nd Edition, OUP)

- Notable exception: large acquisitions
  - Germany : no shareholder vote
  - UK : mandatory vote if target relatively large
  - US : discretionary

UK Rules on Corporate Acquisitions

- "Class tests"
  - at least four ratios
  - regulator can use additional ratios to measure relative size
- Class 1 (25%+)
  - if target is "large" relative to acquirer (25%+ of assets, profits, turnover or consideration to market), shareholder voting is mandatory
- Class 2 (25%-5%) : disclosure, no voting
- Class 3 (<5%) : no disclosure, no voting

Stylized Acquisitions by a UK Acquirer : Pre-Announcement Period

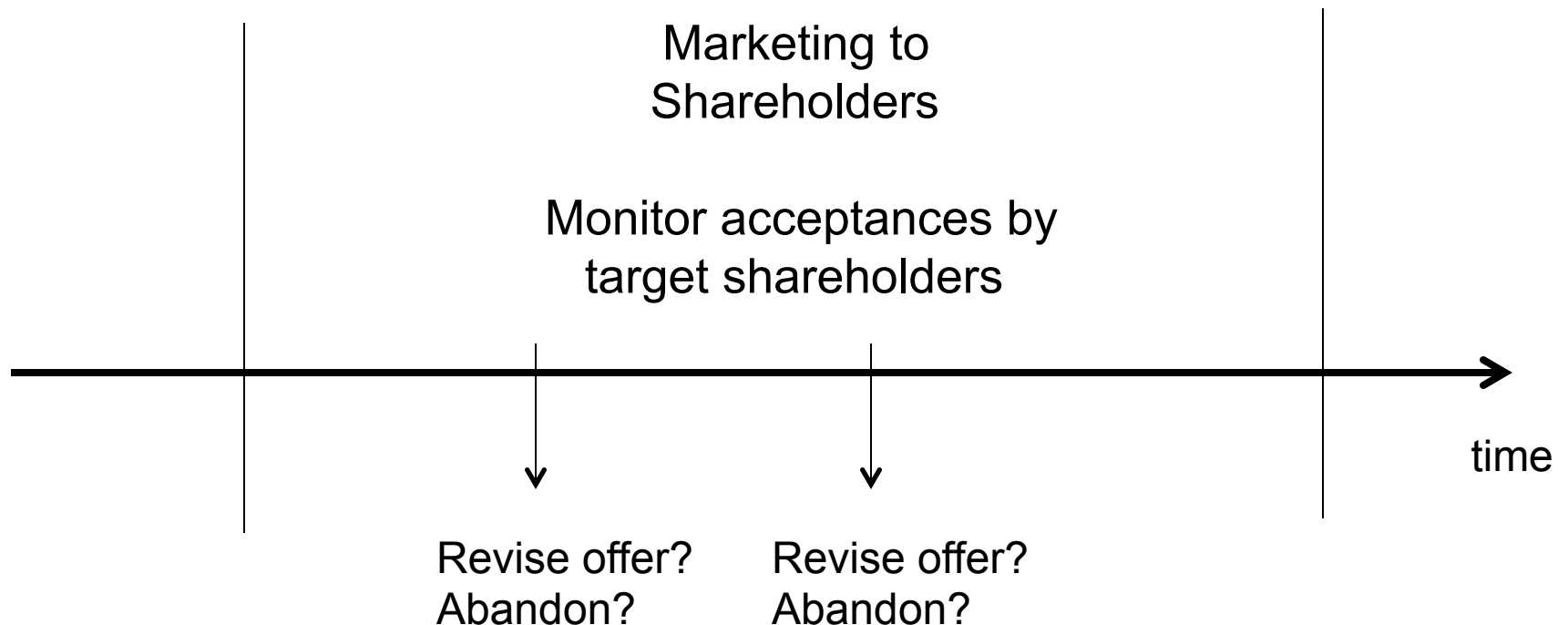Public Announcement

CEO talks
to banker:

Business case
Financing
Class test
Likely
shareholder reaction

CEO talks
to board

Prepare deal:

Bankers
Lawyers
Communications

time

Offer price?
Abandon?

Offer price?
Abandon?

Offer price?
Abandon?

Stylized Class 1 Acquisitions by a UK Acquirer Post-Announcement

Public Announcement

EGM Vote

Marketing to Shareholders

Monitor acceptances by target shareholders

time

Revise offer?
Abandon?

Revise offer?
Abandon?

Case : Prudential's (failed) bid for AIA
(AIG Inc's Asia business)

- 1 March 2010 : Announcement
- Scheme of arrangement
  - Requires majority of members in numbers
  - 75% majority in value
  - Acquirer and target
- Friday 26 close to Tuesday 2 March: -22% cumulative abnormal return relative to the FTSE100 index
- 26 May: Riskmetrics (ISS) negative recommendation
- Prudential revises offer downwards
- 1 June: AIA rejects
- 2 June: Prudential withdraws
- Cost of failed deal: GBP 377 million

Prudential's (failed) bid for AIG Asia
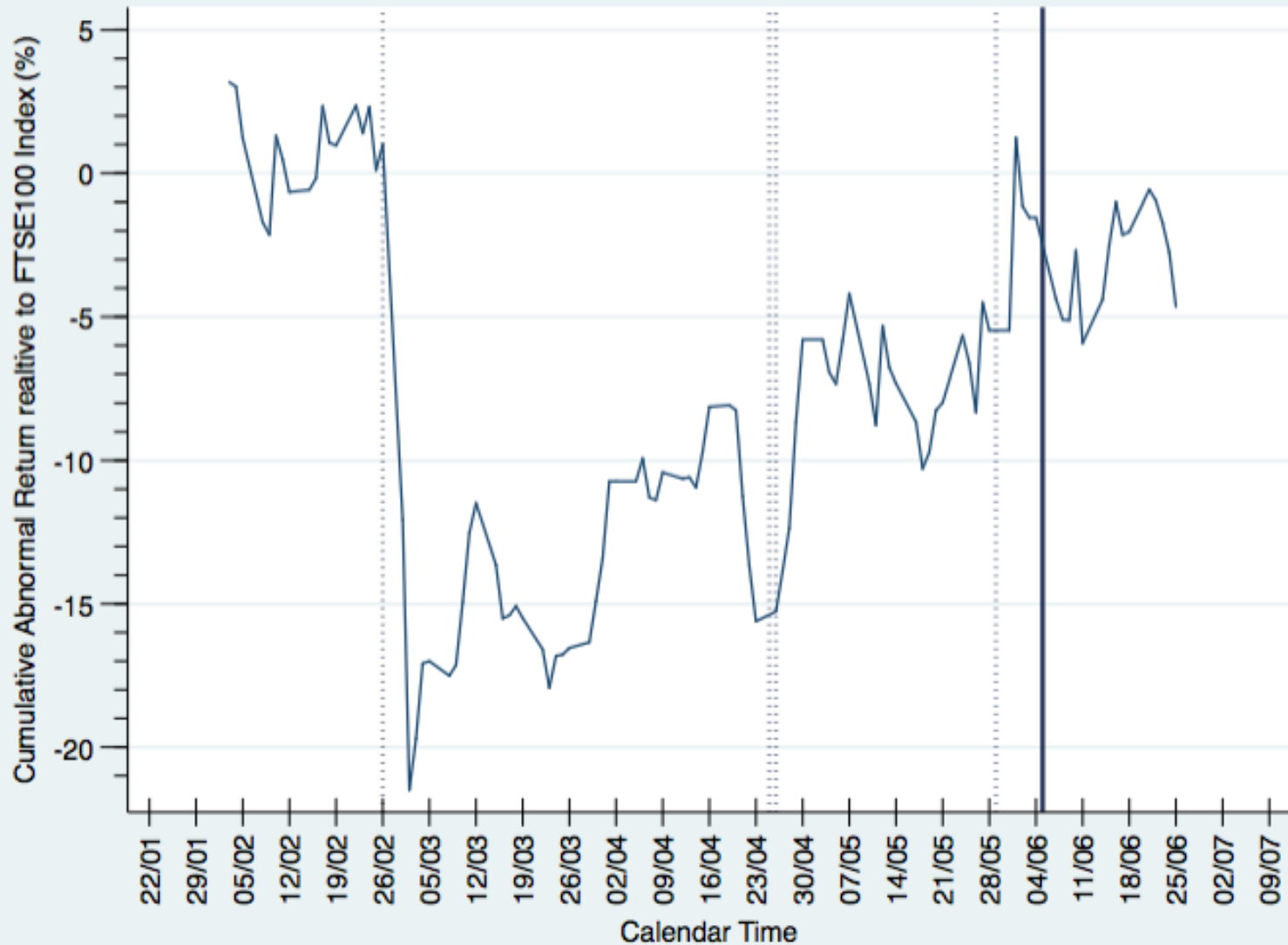
Study Design

- Compare UK Class 1 to Class 2 deals
  - Average announcement returns (% and value)
  - Controlling for other things (regression)
  - Propensity score matched
  - "On the border" (MRDD)
- Compare similar transactions in the U.K. and U.S.
- "Before-after" study is not possible
  - Class 1 rule goes back to at least the 1970s
  - M&A databases do not
  - No regulatory "break"

Data

- Acquisitions by companies listed on the London main market 1992-2010

- Data from SDC Platinum

- Match with stock returns from Datastream

- Take a 50% random sample : 5400 deals

- Exclude
  - Relative size smaller 5%
  - Deal value less than $1 million

Class 1 or Class 2?

- Classify deals "by hand" looking at Factiva
- For Class 1 record EGM date

Sample distribution by announcement year
(1992 – 2010)

Year of announcement	Number of transactions	Percentage of the sample	Number of Class 2 transactions	Number of Class 1 transactions	Percentage of Class 1
1992	54	4.9%	39	15	27.8%
1993	62	5.6%	46	16	25.8%
1994	72	6.5%	49	23	31.9%
1995	78	7.0%	51	27	34.6%
1996	83	7.5%	49	34	41.0%
1997	94	8.5%	67	27	28.7%
1998	112	10.1%	74	38	33.9%
1999	104	9.4%	62	42	40.4%
2000	93	8.4%	60	33	35.5%
2001	76	6.9%	59	17	22.4%
2002	38	3.4%	32	6	15.8%
2003	42	3.8%	34	8	19.0%
2004	45	4.1%	31	14	31.1%
2005	37	3.3%	27	10	27.0%
2006	26	2.3%	22	4	15.4%
2007	41	3.7%	32	9	22.0%
2008	28	2.5%	25	3	10.7%
2009	8	0.7%	6	2	25.0%
2010	16	1.4%	12	4	25.0%
Total	**1109**		**777**	**332**	**29.9%**

Sample distribution of Class 1 Transactions

	Number	Percentage
Class 1 Transactions		
Completed deals	332	86.7%
Withdrawn deals	20	5.2%
Other	31	8.1%
Total	383	
Class 1 Completed Transactions		
EGM date within 1 month of announcement	221	66.6%
EGM date between 1 month and 6 months	101	30.4%
EGM dated after 6 months	10	3.0%
Total	332	

Shareholder never vote against a Class 1 at EGM

Announcement Returns
Class 1 vs. Class 2

		Class 1 transactions (1)	Class 2 transactions (2)	Difference (1)-(2)	t/z statistic for the tests of difference
CAR (-1,+1)	Mean	2.5%	0.8%	1.7	4.9***
	Median	1.6%	0.5%	1.1	4.0***
	N. of observations	332	777		

Announcement Dollar Returns
Class 1 vs. Class 2

		Class 1 transactions (1)	Class 2 transactions (2)
Dollar Returns in $ Millions	Mean	$41.19	-$3.87
	Total	*$13,632*	*-$2,958*
	N. of observations	332	777

Robustness

		Class 1 transactions (1)	Class 2 transactions (2)	Difference (1)-(2)	t/z statistic for the tests of difference
		Differences in Announcement Abnormal Returns			
CAR (-2,+2)	Mean	2.66	1.05	1.61	3.60***
	Median	2.00	0.35	1.65	3.93***
	N. of observations	332	777		
CAR (-1,+1) including cases with confounding information	Mean	2.05	0.96	1.09	2.88***
	Median	1.10	0.51	0.59	2.64***
	N. of observations	446	937		
CAR (-1,+1) after winsorization	Mean	2.46	0.82	1.64	4.93***
	Median	1.60	0.46	1.14	4.05***
	N. of observations	332	777		

Poorly received and withdrawn – withdrawn, how poorly were they received?

- Among the group of Class 1 transactions that are poorly received (CAR <-3%) 14.5% are withdrawn by the management.
- Only 1 out of 108 badly received Class 2 transactions (0.009%) is withdrawn

Differences in Announcement Abnormal Returns of Withdrawn Cases				
	N. of observations	Mean	Median	25th Percentile	5th Percentile
Class 2	9	-0.76	0.36	-1.2	-3.9
Class 1	20	-1.7	-1	-6.1	-11.9

Poorly received transactions that are approved anyway

- We calculate the Buy-and-Hold returns from one day before the announcement to one day before the EGM. We find that in 38% of the cases where there is a negative announcement reaction the market reaction is reversed

- We still observe 26 Class 1 acquisitions (2.3% of database) that get shareholder approval despite a persistent market reaction below -3%.

- This could be due to disagreements between shareholders

ARM plunges 13 pct on Artisan takeover news

- **STOCKWATCH ARM plunges 13 pct on Artisan takeover news**
- 23 August 2004

- STOCKWATCH ARM plunges 13 pct on **Artisan** takeover news
- LONDON (AFX) - **ARM Holdings** PLC lost over an eighth of its value in opening deals this morning after the UK semiconductor designer paid a huge premium to acquire US peer **Artisan** Components Inc, dealers said.

Press

- 22/23 August – 13% Plunge Headlines
- 28 August – Interview with Sir Robin Saxby, Chairman of ARM Holdings in the Independent
- 2 September – Merrill Lynch ups ARM to buy
- 19 October – Q3 Results 95 percent jump in profits, better than expected
- "Strong ARM muscles out critics" (Citywire)

Lex

- 23 August – ARM and a leg : "One man's garbage may be another man's art."
- 17 September - **ARM Holdings** was left in no doubt about the strength of investor feeling over its recent acquisition of **Artisan** Components. Almost a fifth of the semiconductor designer's value was wiped out on the day the deal was announced on concerns that the price was too high. **But did the share price drop reflect long-term holders throwing in the towel or speculative short selling?** …… Considerable uncertainty remains over the extent of eventual revenue synergies, but some analysts have been won round. Merrill Lynch, for example, views the deal as pre-empting industry consolidation**. If the balance of opinion shifts further in favour of the deal, the short sellers may be forced to cover their bets by buying the stock.**

Stronger Identification

- Objection: results might be driven by differences in relative size between Class 1 and Class 2, not voting

- In the literature relative size is not clearly associated with higher returns. Positive in Asquith, Bruner, and Mullins (1983) but negative in Travlos (1987). In Moeller Schlingemann and Stulz (2005) it is positive for small acquirers and negative for large acquirers. It is insignificant in Masulis, Wang and Xie (2007)

- Control for size in linear regression

- Controlling for observables (relaxing assumption of linearity)
  - Propensity Score Matching

- Controlling for unobservables
  - Small bands analysis
  - Fuzzy MRDD

Multivariate analysis of acquirer returns

	Dependent variables CAR		
	(1)	(2)	(3)
Class 1	1.804***	2.406***	2.479***
	(4.71)	(5.60)	(5.61)
Relative size		-0.006	-0.007
		(-1.24)	(-1.20)
Deal characteristics	No	Yes	Yes
Acquirer characteristics	No	No	Yes
Industry dummies	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
N	1109	971	941
R-sq	0.066	0.100	0.110

Multivariate analysis of acquirer returns: subsamples

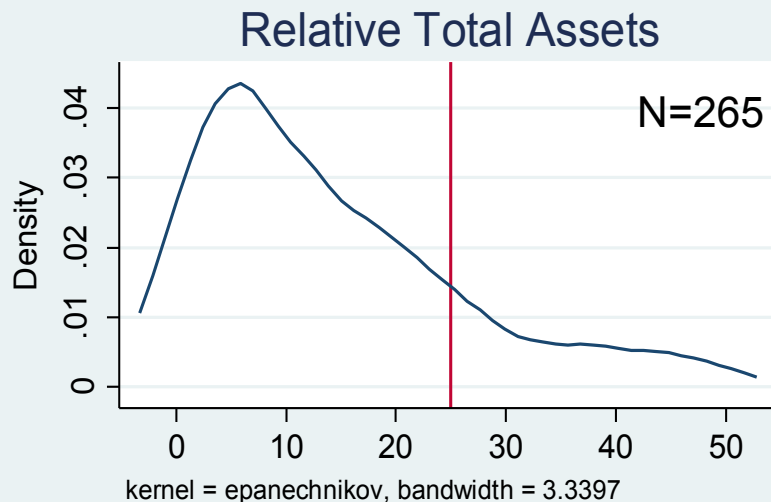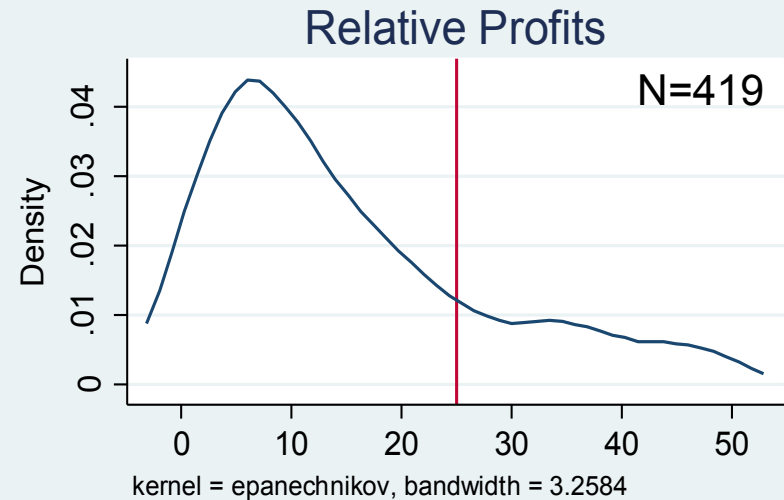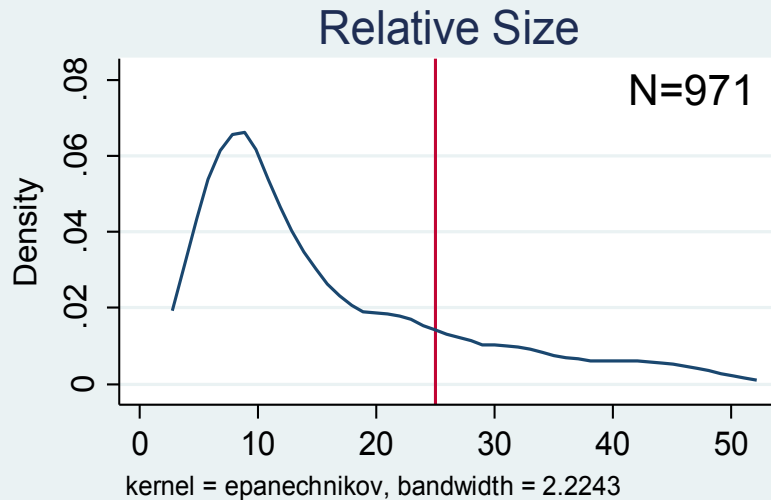|	Dependent variables CAR			
	Acquirer Bottom Size Quartile (1)	Acquirer Top Size Quartile (2)	Private Targets (3)	All-cash Deals (4)
Class 1	2.259*	1.981**	2.358***	1.733***
	(1.98)	(2.08)	(3.43)	(2.63)
Deal controls	Yes	Yes	Yes	Yes
Acquirer controls	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
N	185	264	502	430
R-sq	0.238	0.250	0.118	0.169

Is group assignment really exogenous?

- Can management manipulate the tests to avoid a shareholder vote?

- Does the regulator have a bias towards a shareholder vote?

- If yes, one should observe a spike in a density plot of the assignment variables just below or just above 25%

Kernel Density Estimates for Class Test (Assignment) Variables
(all transactions – subject to individual data availability)

Relative Size — N=971
kernel = epanechnikov, bandwidth = 2.2243

Relative Profits — N=419
kernel = epanechnikov, bandwidth = 3.2584

Relative Total Assets — N=265
kernel = epanechnikov, bandwidth = 3.3397

Relative Gross Assets — N=276
kernel = epanechnikov, bandwidth = 3.3934
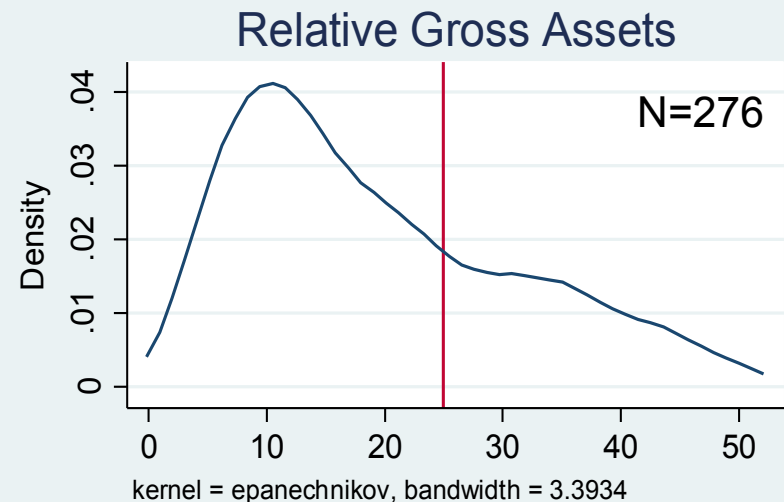
Propensity Score Matching

- List of covariates to calculate propensity score: Relative size, Stock, Public, Hostile, Industry activity, Diversifying, Firm size, Tobin Q, Free cash flow, Leverage ratio

Method	N. of treated (Class 1)	N. of control (Class 2)	ATT	Standard error	t-statistic
Kernel	332	777	1.32	0.63	2.07**
Nearest Neighbour	332	229	1.69	0.61	2.74***

Small band analysis

- Compare Class 1 with relative size smaller than 35% and Class 2 with relative size larger than 15%

Differences in Announcement Abnormal Returns in Small Bands			Small Class 1 transactions (1)	Large Class 2 transactions (2)	Difference (1)-(2)	t/z statistic for the tests of difference
CAR (-1,+1)		Mean	2.98	0.76	2.07	3.33***
		Median	2.60	0.54	2.06	2.83***
Dollar Returns in Millions		Mean	$33.47	-$9.71		
		Tot.	*$5,858*	*-$1,164*		
		N. of observations	175	120		

Small band analysis

- Compare Class 1 with relative size smaller than 35% and Class 2 with relative size larger than 15%

Multivariate analysys

	Dependent variables CAR		
	(1)	(2)	(3)
Class 1	2.469***	3.420***	3.746***
	(3.42)	(4.60)	(4.53)
Deal controls	No	Yes	Yes
Acquirer controls	No	No	Yes
Industry dummies	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
N	295	295	284
R-sq	0.120	0.216	0.244

Fuzzy MRDD

- Multidimensional Regression Discontinuity Design

$$Class\ 1(x) = \begin{cases} 1 \text{ if } x_1 \geq x_1' | x_2 \geq x_2' | x_3 \geq x_3' | x_4 \geq x_4' \\ 0 \text{ otherwise,} \end{cases}$$

$M = \max(R_1, R_2, R_3, R_4)$ $\qquad\qquad R_i = x_i - x_i'$ and i=1,2,3,4

$$Class\ 1(M) = \begin{cases} 1 \text{ if } M \geq 0 \\ 0 \text{ otherwise} \end{cases}$$

- Fuzzy

  M does not perfectly determine the treatment assignment: 11% of the transactions are misclassified. Fuzzy RDD exploits a discontinuity in the probability of treatment at the cutoff M=0.
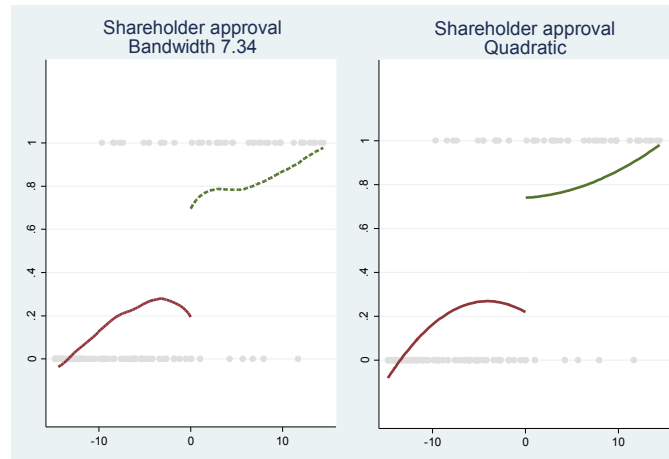
  Limitation: sample where we observe the 4 ratios drops significantly (117 cases with -15%<M<15%)
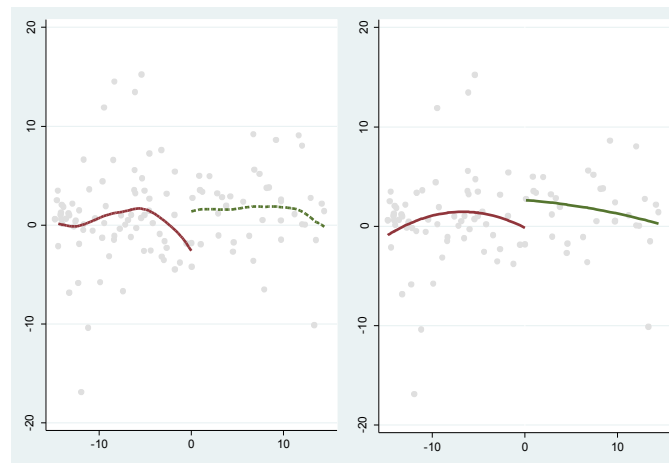
McCrary (2008) Test around M=0
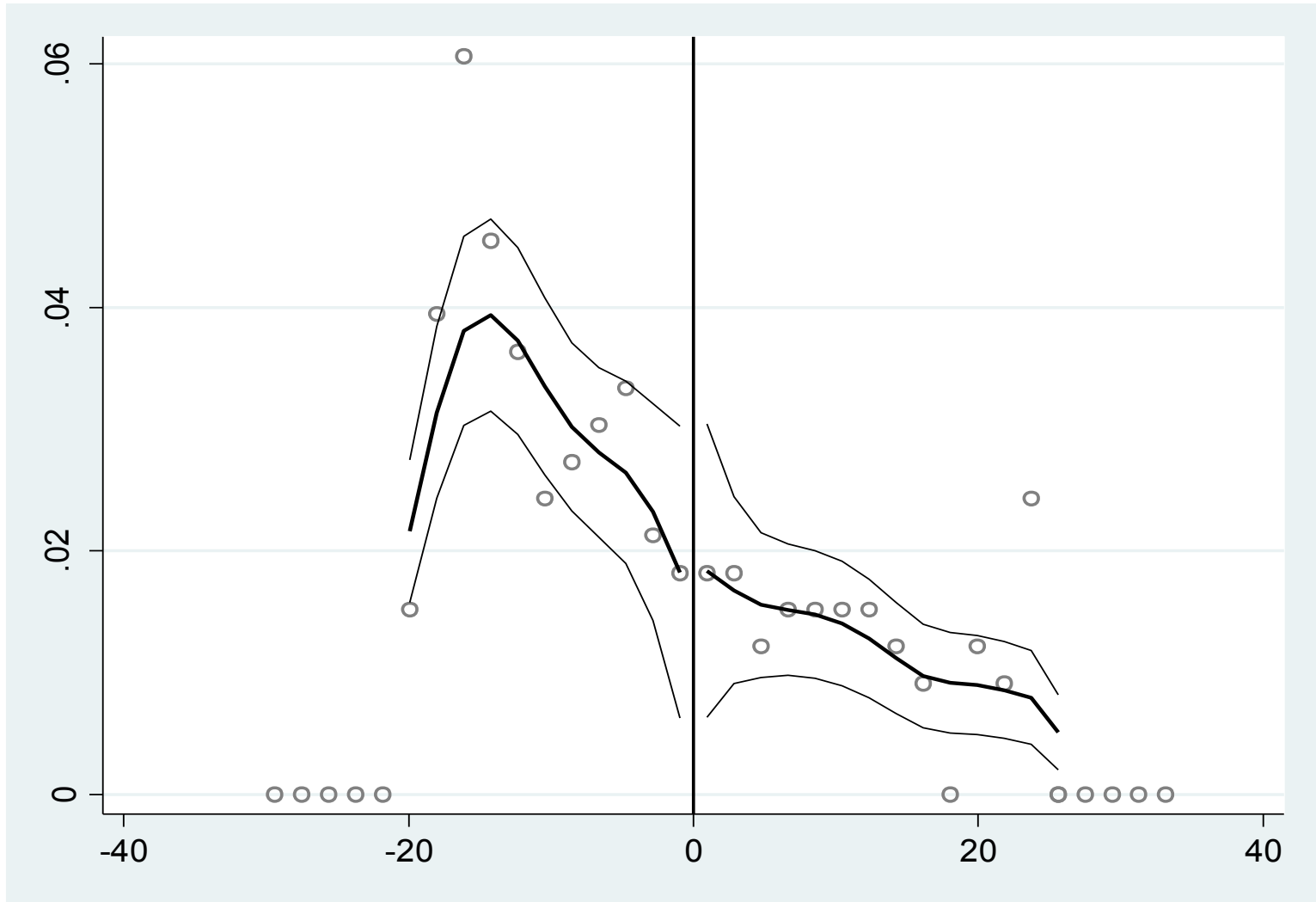
Fuzzy MRDD

Jump in probability of Class 1 treatment around M=0

Jump in CARs around M=0

Fuzzy MRDD

|	M = 0 (1)		M = 0 (2)		M = 0 (3)	
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Jump in outcome (CAR)	3.96	2.00**	3.22	1.54	3.10	1.73*
Jump in probability of treatment (Class 1)	0.50	1.92*	0.51	2.90***	0.51	2.18**
Ratio (Local Wald Estimator)	7.90	1.95*	6.34	1.81*	6.01	1.83*
Bandwidth	7.34		5.14		9.54	

Comparison with the U.S.

- In the United States management can avoid mandatory voting for relatively large deals

- In the UK this is not possible

- Difference-in-differences comparison across the Atlantic

US

	Dependent variables CAR		
	All sample	Small bands	All sample
	(1)	(2)	(3)
Transactions with RS > 25%	1.673***	-0.075	
	(5.85)	(-0.08)	
Transactions with RS > 100%			2.783***
			(3.54)
Deal controls	Yes	Yes	Yes
Acquirer controls	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
N	8299	2308	8299
R-sq	0.046	0.050	0.046

| Window		Larger than 25%	Smaller than 25%
		(1)	(2)
		All sample	
(-1,+1)	Mean	-$58.25	-$10.29
	Tot.	*-$214,114*	*-$65,438*
	N	3676	6361
		Small bands	
(-1,+1)	Mean	-$44.12	-$23.31
	Tot.	*-$42,932*	*-$41,996*
	N	973	1780

UK and US : Mean Abnormal Dollar Returns (millions)
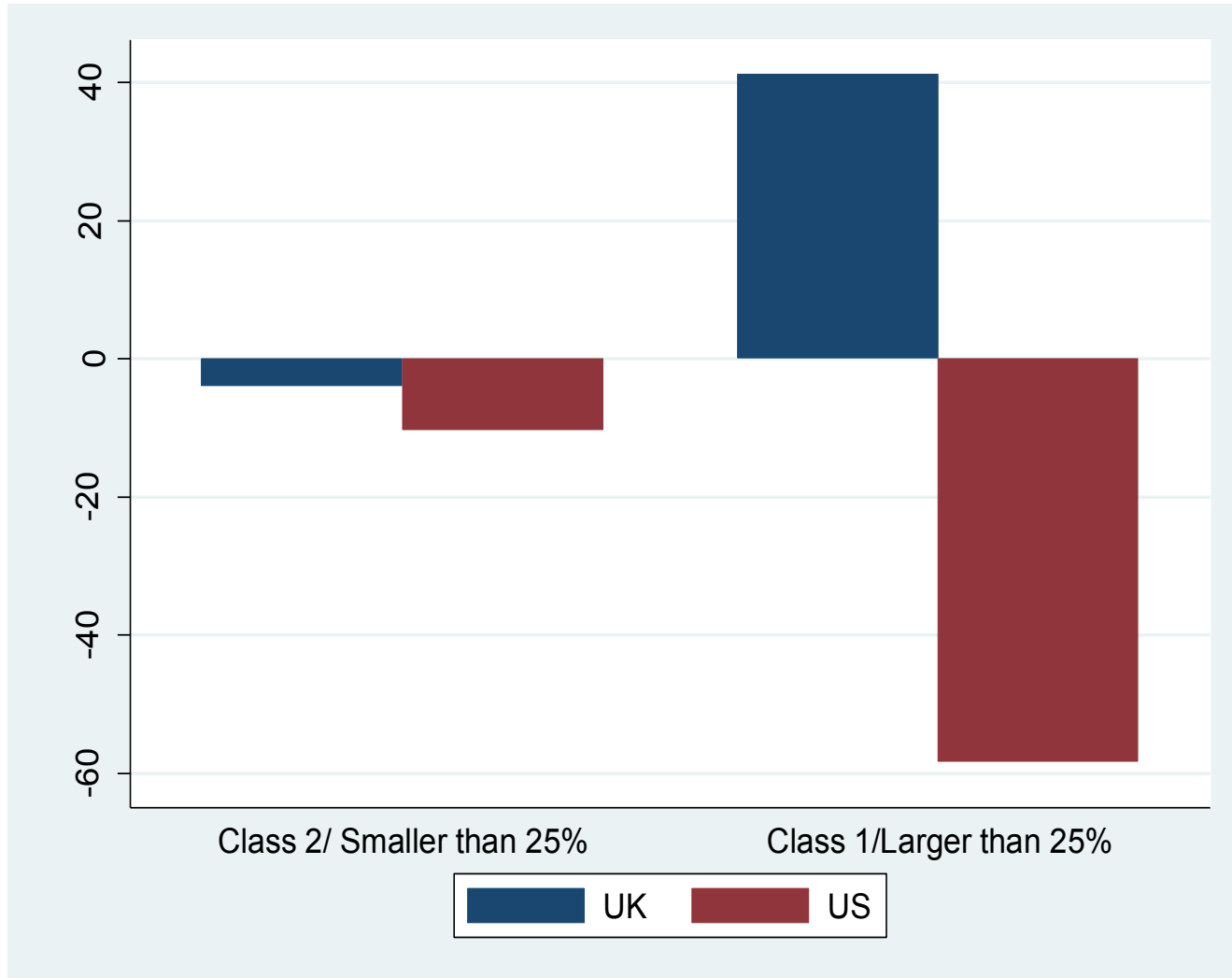
Propensity Score Matching UK vs. US for Class 1 and Class 2

Method	N. of treated (UK)	N. of control (US)	ATT	Standard error	t-statistic
Class 2\ Smaller than 25%					
Kernel	628	7138	-$0.708	6.12	-0.12
Nearest Neighbour	628	1635	-$2.66	10.84	-0.25
Class 1\ Larger than 25%					
Kernel	245	4456	$95.43	53.95	1.78**
Nearest Neighbour	245	616	$109.51	65.80	1.66**

Time Pattern of Abnormal Dollar Returns in the US and UK
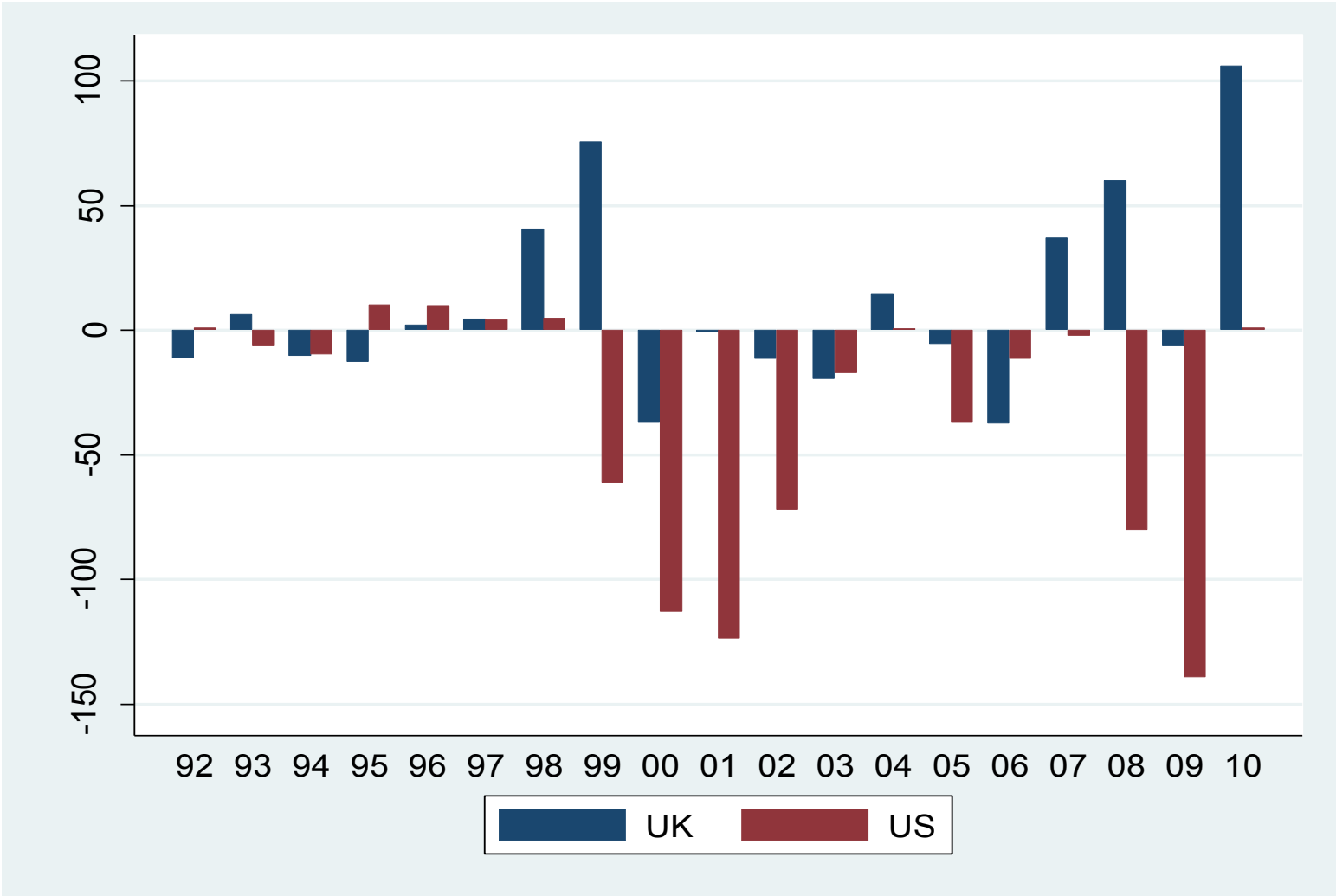
Conclusion and Caveats

- Shareholders in the UK never vote against Class 1. Nevertheless, there is a sizeable difference between the performance of Class 1 and Class 2

- Study does not provide a full cost/benefit analysis of the mandatory voting rule

- Results do not apply for banks: shareholder of highly leveraged companies might want to take big risks & banks excluded from study