

Corporate Governance and Value Creation:

Evidence from Private Equity

- Viral V. Acharya and Conor Kehoe



McKinsey&Company

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Introduction

Existing evidence

1. Jensen (1989) in his seminal piece “The Eclipse of the Public Corporation” argued that buyouts create value through high leverage and powerful incentives
2. Kaplan and Schoar (2005) study *net* IRRs of 746 funds during 1985-2001
 - Median = 80% of S&P500, Mean = 90-95%; Confirmed by studies in Europe
3. Evidence is however rather rosy for the mature (≥ 5 years) and largest houses
 - Kaplan and Schoar (2005)
 - Median = 150% of S&P500, Mean = 160-180%
 - Performance is persistent across funds of these houses
 - Cao and Lerner (2006) study buyouts that exit during 1980-2002
 - Out-performance adjusted for risk by about 0.5% per month in the five years after exit, especially if PE involvement ≥ 1 year
4. “Active Ownership” study by McKinsey & Co.
 - Showed out-performance relative to quoted peers
 - Out-performance correlated with PE firm engagement and governance

Key questions addressed as part of the research

1

Do Private Equity owned companies create additional value at an enterprise level vs. their quoted sector peers?

1a

Are the returns to large, mature PE houses simply due to financial gearing of deals on top of comparable sector risk?

1b

What is the nature of systematic and leverage-induced risk in PE deals?

2

What is the operating performance of PE owned companies relative to that of quoted peers? How does this performance relate to value creation?

3

What are the distinguishing characteristics of the PE governance approach relative to PLC Boards? Which of these are associated with value creation?

Some of these questions relate directly to questions raised in the Treasury Select Committee and Sir David Walker Reports

Answers

1

PE deals of our sample from the UK have out-performed their quoted sector peers on average, based on an “alpha”, controlling for sector risk and leverage

- Out-performance is partly but not entirely attributable to leveraging up on sector
- Out-performance is in fact higher when quoted peers have under-performed

2

Out-performance appears to be due to **productive growth** and is correlated with stronger operating performance relative to peers

- Improvement in EBITDA margins is the key variable linked to deal alpha
- Organic deals have done better than those involving acquisitions and divestments

3

Interviews with GPs suggest that PE boards adopt an active governance approach

- Replacement of management in first 100 days and greater GP involvement and external support feature in out-performing deals

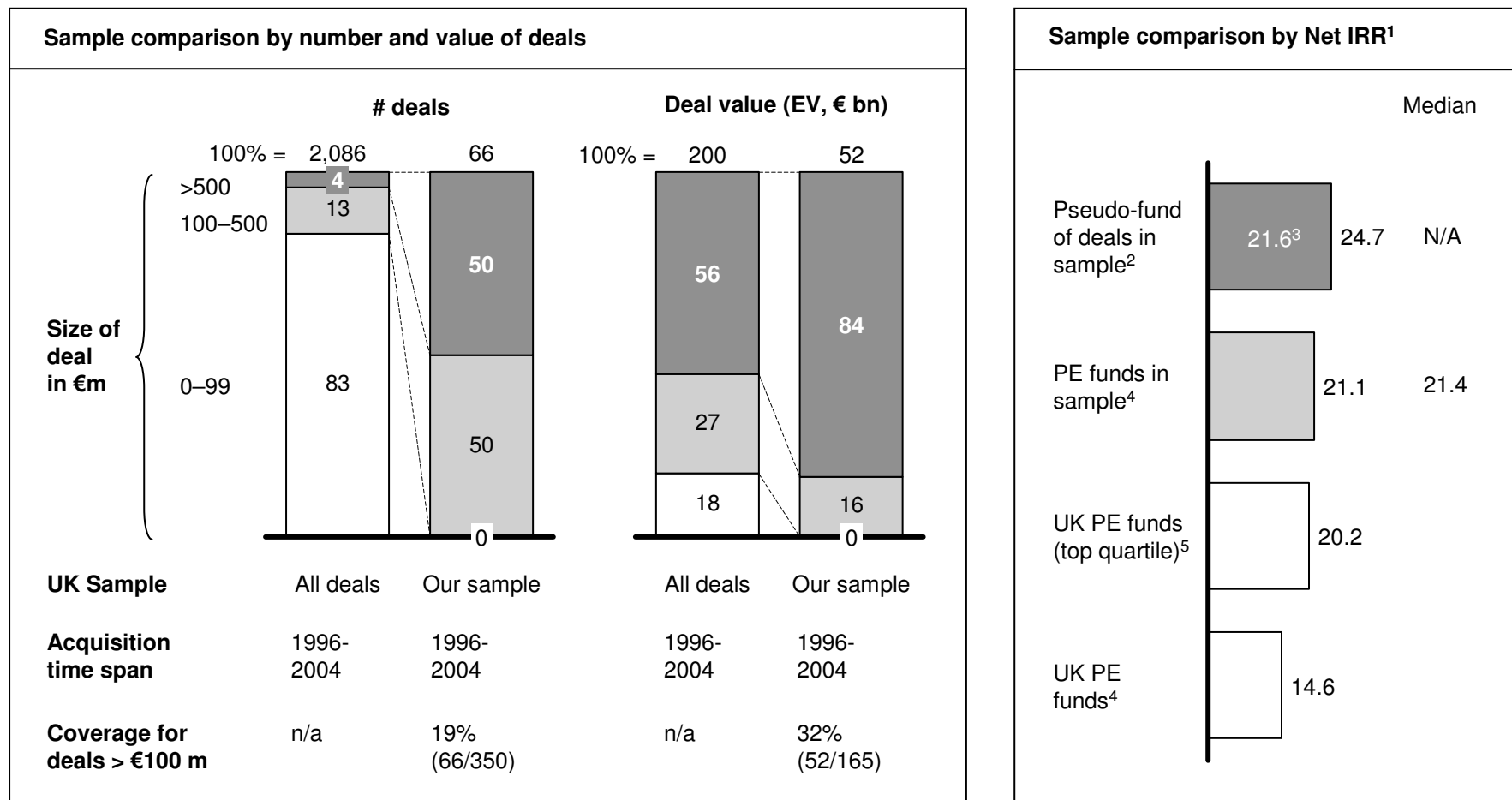
Details on data and sample

Focus on UK deals: characteristics of data-set

- Selected deals represent relatively large UK companies acquired by twelve large and mature PE houses
 - Acquired between 1996–2004, (if) exited during 2000-2007
 - For values greater than €100 million
- Deals have a median enterprise value at start of ~ €471 million
 - 18 deals > €1 billion
 - 15 in €500m- €1billion
 - 33 in €100m- €500m
- Currently, the data-set comprises 66 UK deals:
 - 59 exited deals (of which 4 bankruptcies)
 - 7 non-exited deals for which end EV cash flow simulated assuming start EV / EBITDA multiple and applying to end year EBITDA (robust to alternatives)
 - Eventual sample size to reach around 80 UK deals
- 29 have acquisitions and/or divestments; the balance 37 are “organic” deals
- Deals were held for an average of 3.8 years by PE firms

Our sample represents a significant proportion of total UK deals by size, focusing on large, mature PE houses

%



1 Net IRR estimated with 1.5% annual fees, and 20% carry if IRR > assumed benchmark of 8% market return

2 Acquisitions from 1996 – 2004 (exits from 2000 – 07); pooled, net IRR calculated using quarterly cash flows

3 Excluding top four deals in terms of pooled IRR

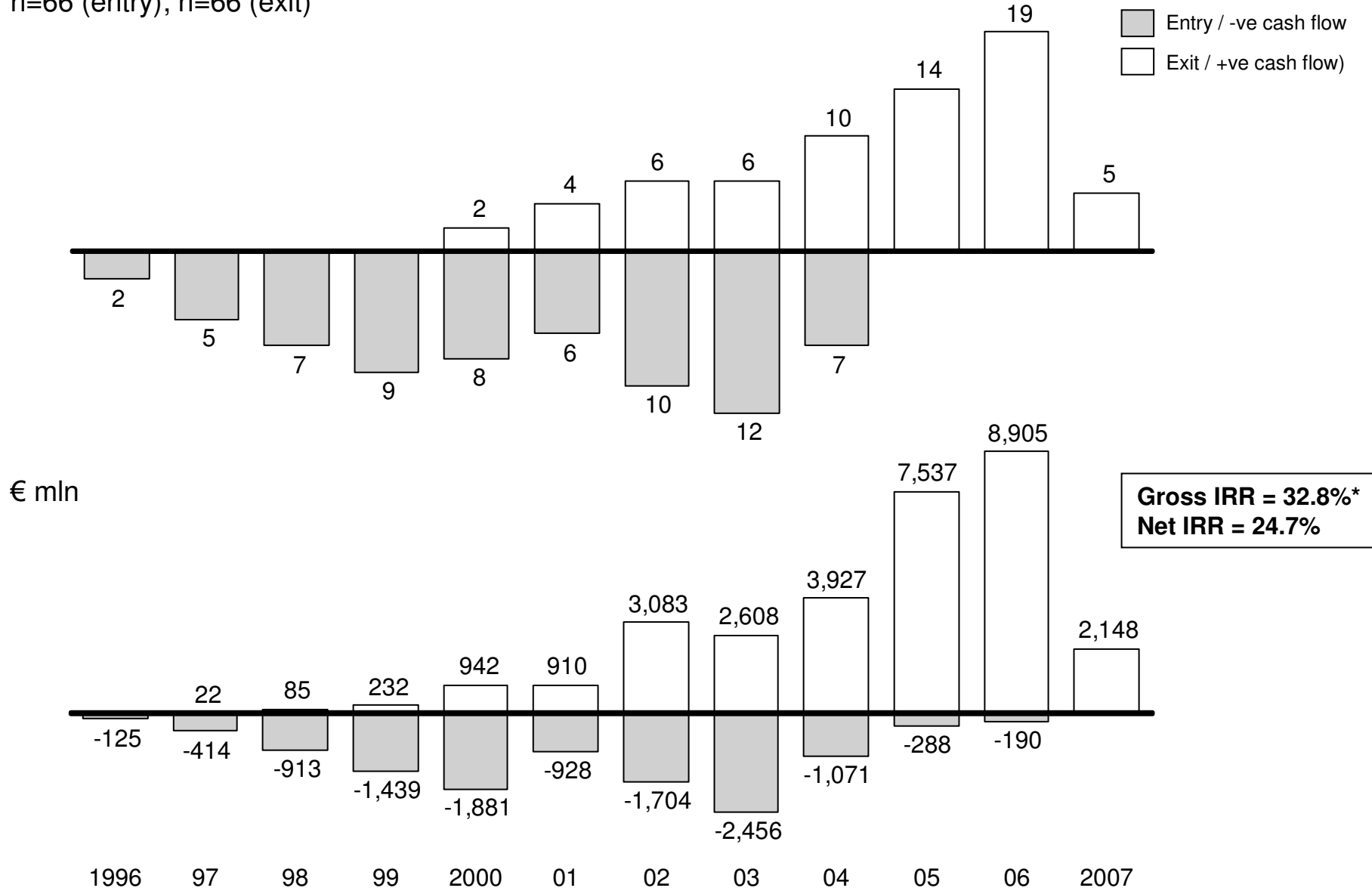
4 Vintage years 1994 – 2004 (22 funds); 1989 (1 fund); simple average

5 Performance from Dec 2005 for vintage years 1996 – 2001; simple averages

Source: Capital IQ; Initiative Europe; Buyouts magazine; BVCA Private Equity and Venture Capital Performance Measurement Survey 2005; CalSTRS; CalPERS; VentureXpert; Press searches; team analysis

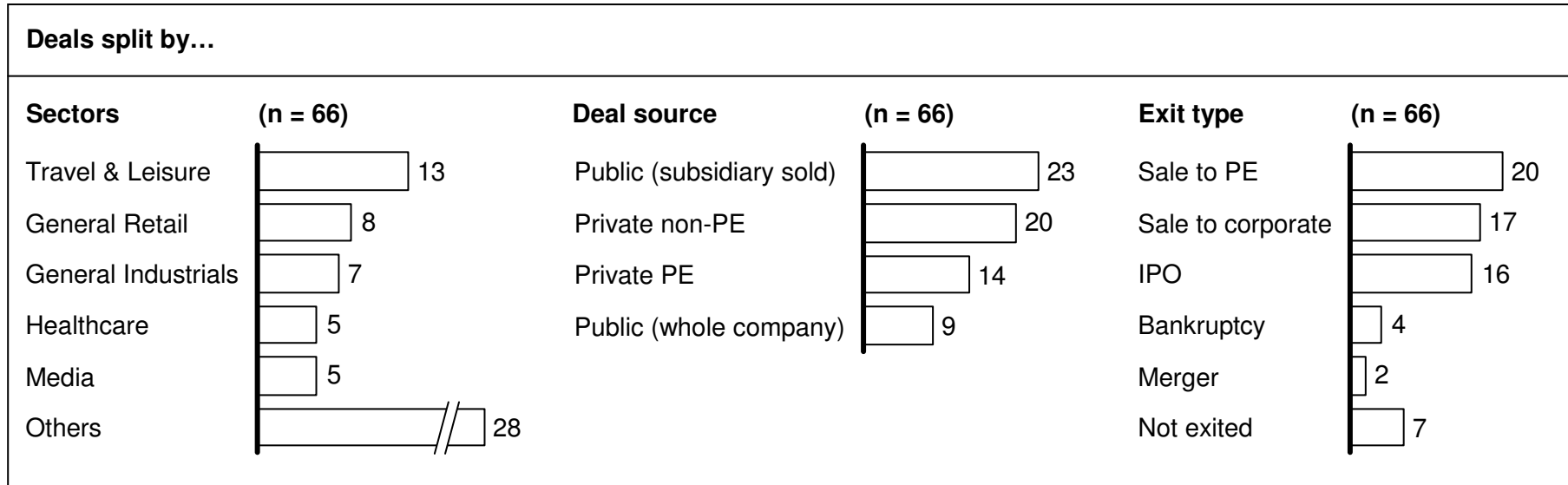
Time distribution of deal entry & exit, and cash flows, for pseudo-fund

n=66 (entry); n=66 (exit)



* IRRs calculated using quarterly cash flows

Distribution of deals by sector, deal source, exit type and years



Deals by entry and exit year (n = 66)

Years	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Entry	2	5	7	9	8	6	10	12	7	n/a	n/a	n/a
Exit	n/a	n/a	n/a	n/a	2	4	6	6	10	14	19*	5**

* Includes five deals for which exit simulated

** Includes two deals for which exit simulated

UK data summary statistics

	No. deals (n)	Mean	Median	StdDev	Minimum	Maximum
Deal IRR %	66	35.6	31.0	45.0	-72.5	197.4
Duration* (years)	59	3.8	3.5	1.5	1.2	7.3

Cash In/cash out multiple	66	2.8	2.4	1.9	0	10.3
Deal size** (Mio, EUR)	66	795	471	767	110	3157

EBITDA multiple (Entry)	63	9.6	9.1	4.6	3.2	34.8
EBITDA multiple (Exit)	61	10.5	9.9	4.5	3.4	23.6

Debt/equity (Entry)	65	1.7	1.6	0.8	0.1	5.2
Debt/equity (Exit)	65	0.9	0.6	0.9	0	5.1

Debt/EBITDA (Entry)	62	5.7	5.3	3.6	0	29.1
Debt/EBITDA (Exit)	60	4.5	4.0	2.8	0	15.1

*Only exited deals


** All data converted to Euros to enable direct comparison

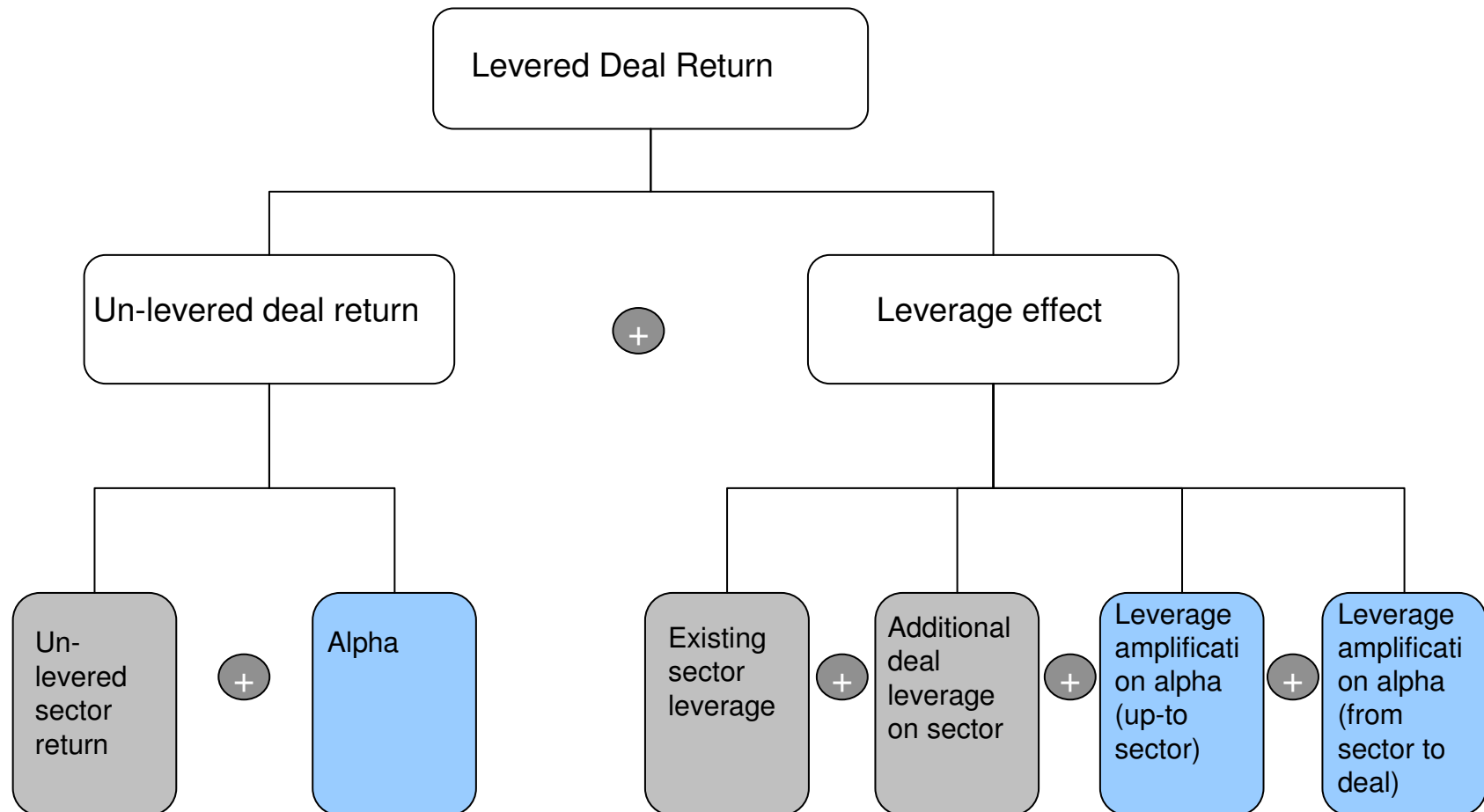
Source: PE deal data; team analysis

Understanding the performance of PE deals

From IRR to Alpha

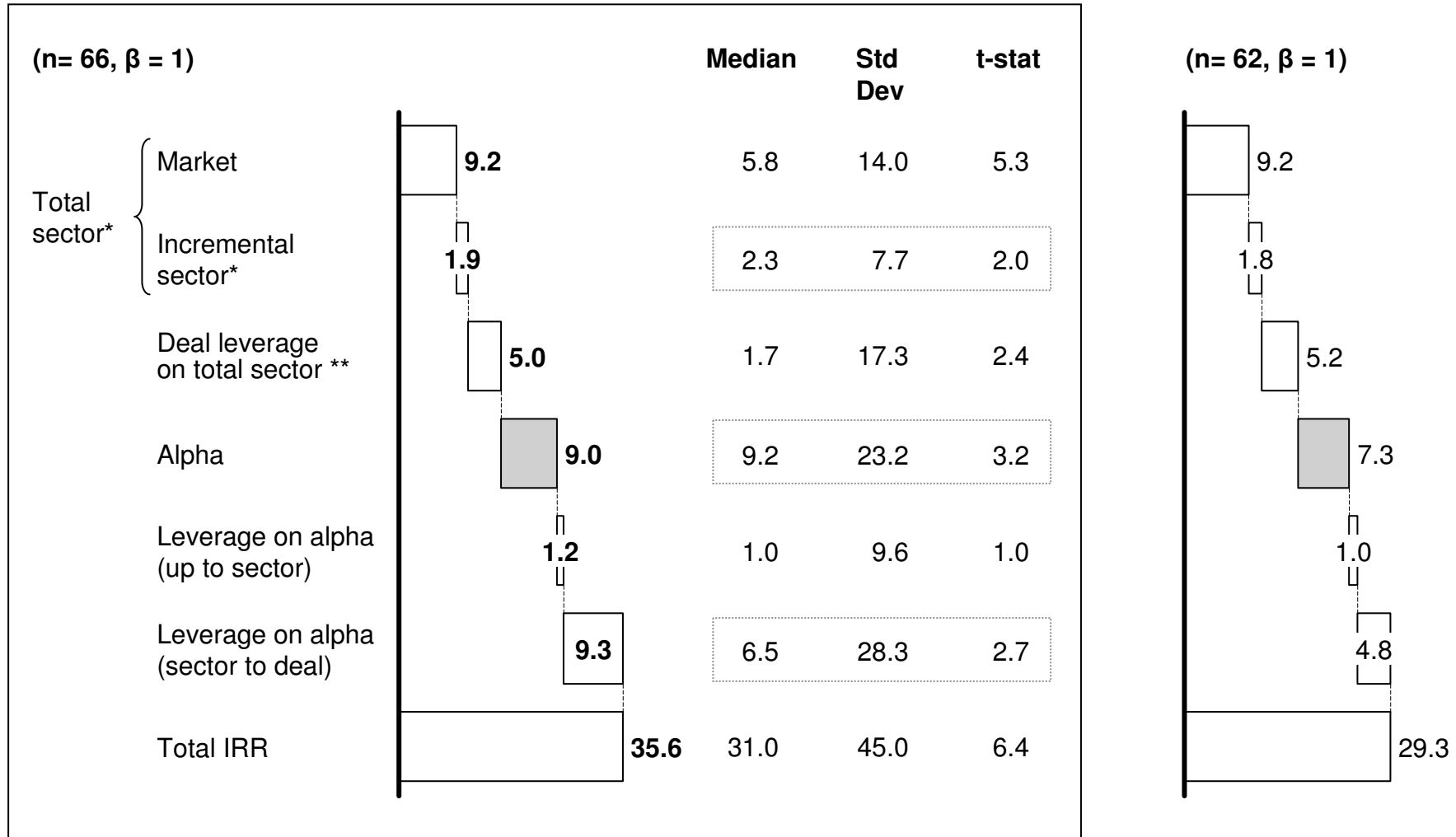
Methodology used to disaggregate portfolio company performance

 Contribution from alpha and amplification



PE deals in our sample have out-performed their sectors on average, after adjusting for leverage; alpha is still significant after removing sample skew

IRR decomposition (%)



* Sector return reflects the market return and the additional return (over the market) by the comparable sectors over the deal period

** Deal leverage effect assumes sector leverage is increased to the deal leverage

Source: PE deal data; Datastream; team analysis

Matching of IRR Quartiles and Alpha Quartiles by number of deals

(n = 66)

IRR Quartile → Alpha Quartile ↓	Q1	Q2	Q3	Q4
Q1	10	6	1	0
Q2	3	6	6	1
Q3	1	3	6	6
Q4	3	1	3	10
Total	17	16	16	17

Performance of club vs. non club deals, and by size at acquisition

Deal type	# of deals	IRR %	Alpha %
Club Deals	25	40.4	14.3
Non club deals	41	32.7	5.7
Total	66	35.6	9.0

Deal size (EV at acquisition)	# of deals	IRR %	Alpha %
>1 billion Euro	18	42.7	8.4
500m -1billion Euro	15	48.4	11.1
100m- 500m Euro	33	26.0	8.3
Total	66	35.6	9.0

Performance by deal source and exit type

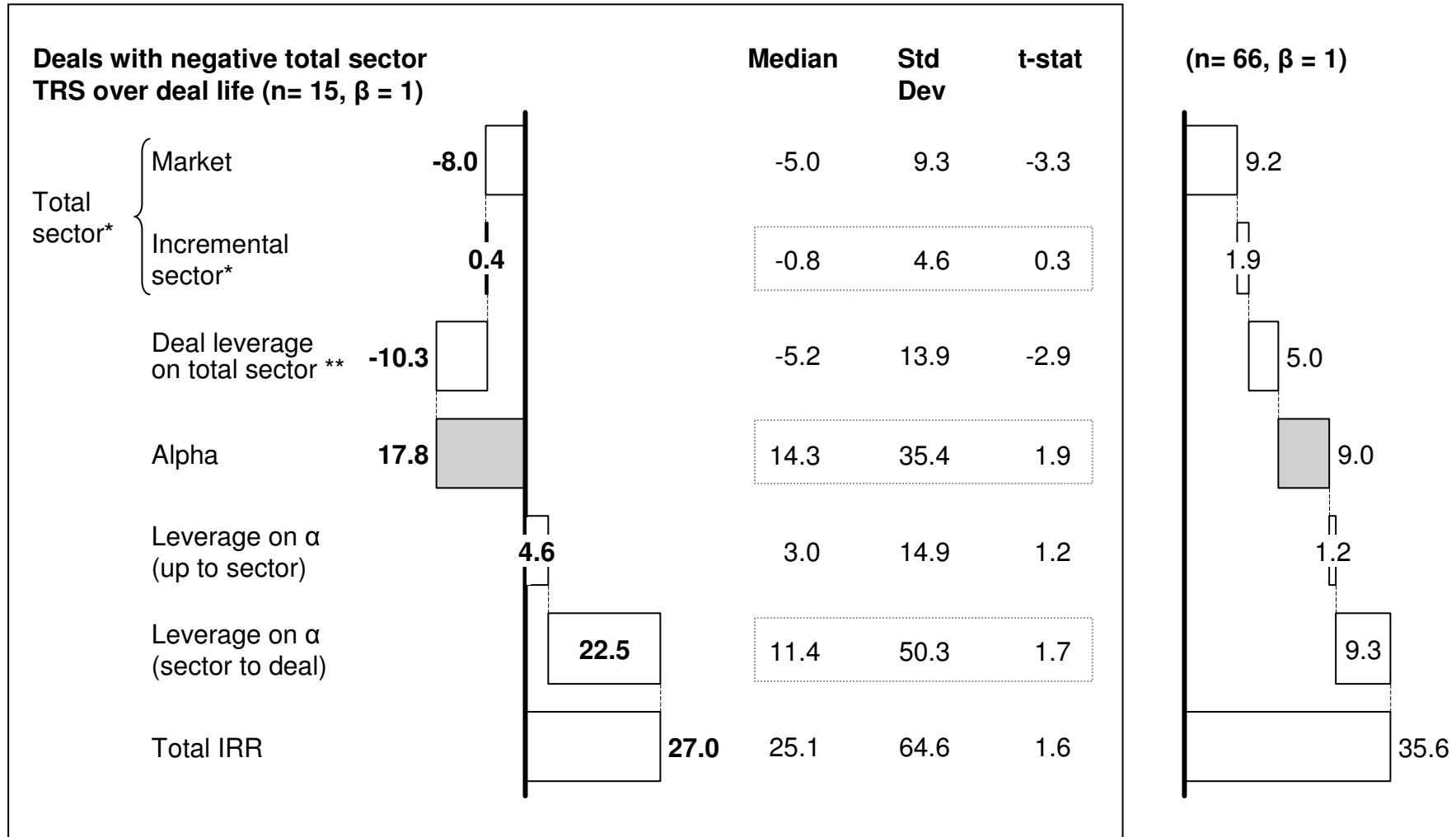
Deal source	# of deals	IRR (%)	Alpha (%)
Private non-PE	20	38.9	5.8
Private PE	14	36.7	10.3
Public carve-out (subsidiary sold)	23	33.8	14.5
Public to private	9	31.3	0.0
Total	66	35.6	9.0

Exit type	# of deals	IRR (%)	Alpha (%)
Sale to corporate	17	50.1	17.2
IPO	16	49.5	12.4
Merger	2	37.5	-0.4
Sale to PE	20	31.9	9.1
Not exited (exit simulated)	7	29.1	6.3
Bankruptcy	4	-52.8	-30.7
Total	66	35.6	9.0

Systematic risk of PE deals

Deal alpha is not adversely affected during sector downturns (it is actually twice as high as the overall average)

IRR decomposition (%)



* Sector return reflects the market return and the additional return (over the market) by the comparable sectors over the deal period

** Deal leverage effect assumes sector leverage is increased to the deal leverage

Source: PE deal data; Datastream; team analysis

Relationship between acquisition deal leverage (D/EV) and alpha is non-monotone, although deals with lowest leverage have the highest alpha

Quartiles sorted by leverage at acquisition

	Leverage	IRR decomposition (%)					No. bad deals	
Leverage quartile	Entry D/EV	Sector	Deal leverage on sector	Alpha	Leverage on alpha	Total IRR	Dogs* (IRR < 0)	Bankruptcies
Q1	0.72	9.0	5.2	7.2	11.8	33.2	2	0
Q2	0.64	17.5	10.1	6.4	15.3	49.3	1	1
Q3	0.57	7.7	1.8	5.1	7.6	22.2	3	1
Q4	0.39	10.4	3.4	16.8	7.1	37.7	3	2
Average	0.58	11.1	5.0	9.0	10.5	35.6	9	4

Alpha quartile	Entry D/EV	Exit D/EV	Average D/EV
Q1	0.48	0.38	0.43
Q2	0.62	0.34	0.48
Q3	0.63	0.45	0.54
Q4	0.58	0.61	0.59
Average	0.58	0.45	0.51

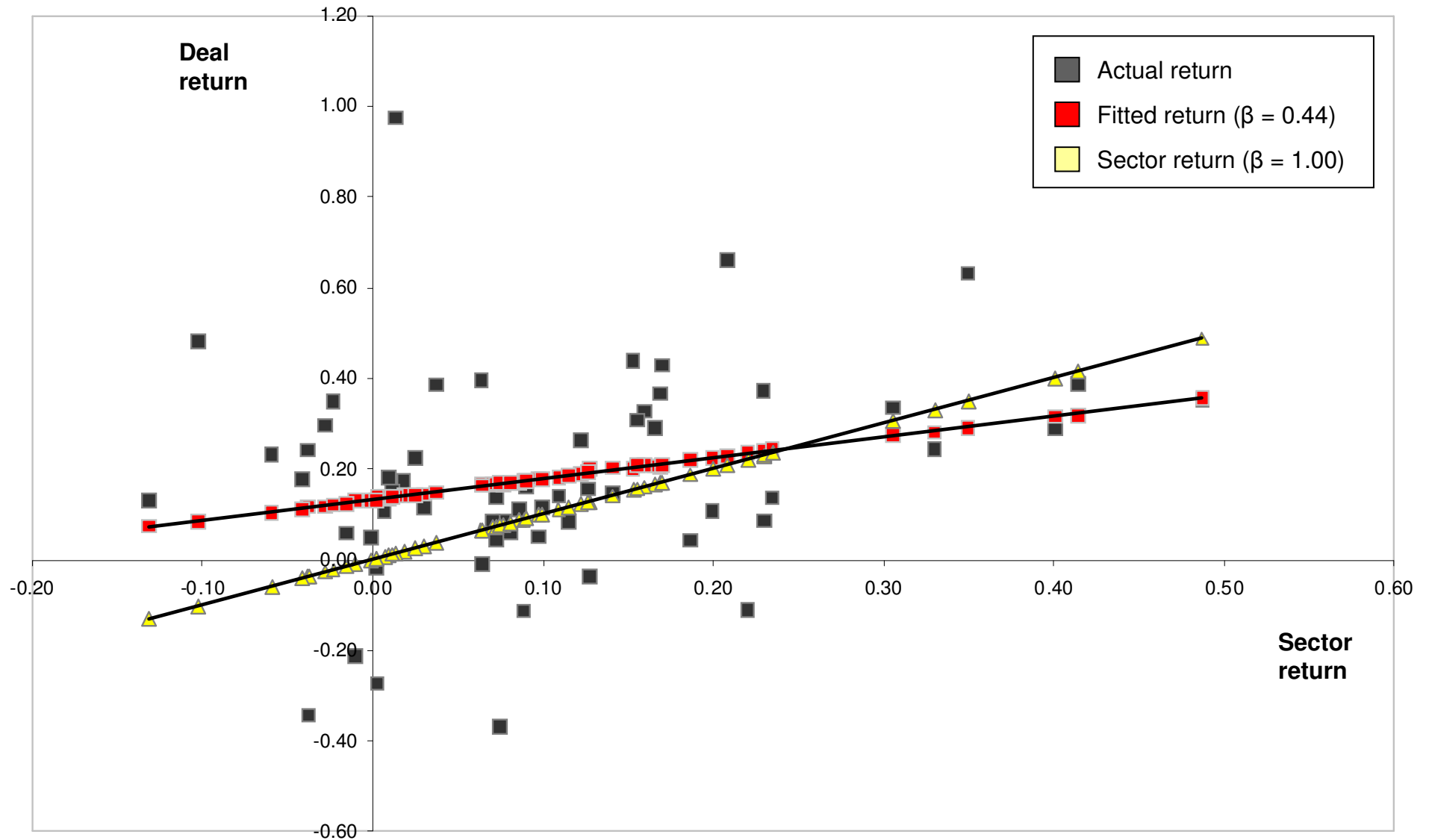
Deal strategy relative to sector	Entry D/EV	Exit D/EV	Average D/EV
Inorganic	0.61	0.47	0.54
Organic	0.59	0.46	0.52
Sales growth only	0.61	0.45	0.53
Margin growth only	0.60	0.44	0.52
Sales & margin growth	0.60	0.49	0.55
Others	0.44	0.43	0.43

* Includes bankrupt deals

Source: PE deal data; Datastream; team analysis

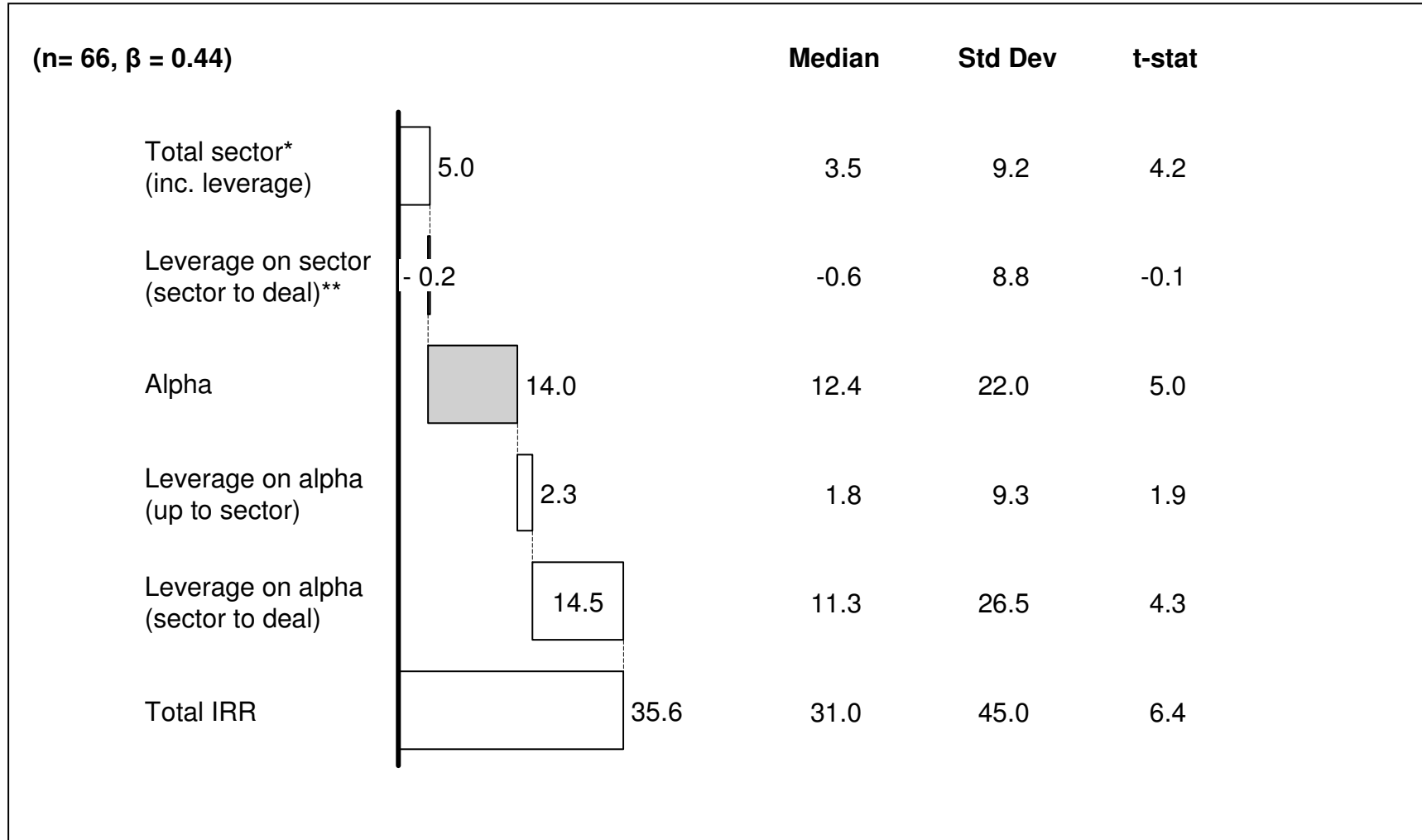
Systematic risk of PE deals appears lower than that of quoted peers

Realised, and fitted unlevered, deal returns vs. unlevered sector returns



IRR disaggregation, adjusted for deal risk

IRR decomposition (%)



* Sector return reflects the market return and the additional return (over the market) by the comparable sectors over the deal period

** Deal leverage effect assumes sector leverage is increased to the deal leverage

Source: PE deal data; Datastream; team analysis

Operating performance

Operating performance of all deals

%

	No. deals*	Mean	Median	St. deviation	Minimum	Maximum
Sales CAGR	62	10.0	8.2	14.8	-25.0	63.0
w/o deals with M/A	34	11.1	7.4	15.4	-15.2	63.0
EBITDA CAGR	61	10.2	8.5	17.7	-34.8	66.1
w/o deals with M/A	34	12.1	9.0	17.0	-24.8	66.1
Margin growth, p.a.	61	0.3	0.1	2.2	-7.3	7.9
w/o deals with M/A	34	0.7	0.1	2.5	-4.7	7.9
FTE CAGR	44	1.6	1.2	12.7	-30.3	30.9
w/o deals with M/A	24	1.0	1.1	11.4	-22.5	30.9
EBITDA/FTE CAGR	44	11.6	8.5	18.8	-21.6	88.2
w/o deals with M/A	24	16.1	12.0	19.7	-3.2	88.2
CAPEX CAGR	31	14.4	10.1	40.0	-54.3	154.8
CAPEX/Sales CAGR	31	1.2	0.5	34.5	-59.0	116.4
SGA CAGR	24	9.6	13.0	18.6	-49.8	38.2
SGA/Sales CAGR	21	-3.9	-3.5	11.7	-33.8	27.6
Fixed Assets CAGR	20	3.2	2.1	10.7	-17.9	23.0
Fixed Assets/Sales CAGR	20	-7.8	-7.7	12.7	-40.5	16.2

* Excluding deals with negative EBITDA figures for entry or exit years
Source: PE deal data; team analysis

Operating performance when quoted peers have negative returns

%

	No. deals*	Mean	Median	St. deviation	Minimum	Maximum
Sales CAGR	14	7.6	10.8	12.4	-15.2	22.0
Sector	14	2.7	2.5	5.8	-6.1	16.0
EBITDA CAGR	14	9.8	7.5	20.5	-24.8	66.1
Sector	14	1.1	-0.9	7.3	-10.5	18.6
Margin growth, p.a.	14	0.4	0.1	2.2	-2.2	6.4
Sector	14	-0.3	-0.4	0.9	-2.3	2.0
FTE CAGR	10	-2.3	0.6	15.7	-30.3	23.9
Sector	10	0.9	0.3	4.4	-4.2	8.0
EBITDA/FTE CAGR	10	16.9	10.8	27.1	-7.6	88.2
Sector	10	-0.2	-0.9	6.2	-7.1	12.7
CAPEX CAGR	5	0.5	0.0	42.8	-54.3	63.3
CAPEX/Sales CAGR	5	-0.1	-5.1	48.7	-53.5	74.0
SGA CAGR	6	0.2	7.0	26.4	-49.8	25.2
SGA/Sales CAGR	4	-2.8	-4.1	4.4	-6.6	3.4
Fixed Assets CAGR	4	-8.3	-8.4	9.0	-17.9	1.6
Fixed Assets/Sales CAGR	4	-3.3	-6.6	13.8	-16.3	16.2

* Excluding deals with negative EBITDA figures for entry or exit years

Source: PE deal data; Datastream; team analysis

High alpha deals have higher EBITDA and margin growth, and also benefit from an increase in EV/EBITDA multiples relative to their sector peers

%

(n= 66)

Alpha quartile	Deal Sales CAGR	Sector Sales CAGR	Deal EBITDA CAGR	Sector EBITDA CAGR	Deal EBITDA margin change p.a.	Sector EBITDA margin change p.a.	Deal EV/ EBITDA (start)	Deal EV/ EBITDA (exit)	Sector EV/ EBITDA (start)	Sector EV/ EBITDA (exit)
Q1	13.1	10.3	21.7	14.8	1.4	0.0	8.4	10.4	11.3	9.4
Q2	11.7	4.6	11.5	5.1	0.9	0.1	8.7	11.3	8.8	9.4
Q3	8.7	3.8	4.3	5.9	-0.5	-0.2	10.9	10.0	9.6	9.6
Q4	6.3	4.3	3.3	7.1	-0.5	0.4	10.3	10.4	7.4	8.1
Average	10.0	5.7	10.2	8.2	0.3	0.1	9.6	10.5	9.3	9.1
Median	8.2	3.2	8.5	4.8	0.1	0.0	9.1	9.9	8.1	9.1
<i>t-stat</i>	<i>5.3</i>	<i>3.8</i>	<i>4.5</i>	<i>5.2</i>	<i>1.1</i>	<i>0.4</i>	<i>16.7</i>	<i>18.1</i>	<i>21.2</i>	<i>28.7</i>
<i>t-stat of diff with sector</i>	<i>1.7</i>		<i>0.8</i>		<i>0.6</i>		<i>0.4</i>	<i>2.5</i>		

Deals with high alpha grow employment faster than the sector; on average PE employment growth is positive, but below sector

Quartiles sorted by alpha

(n= 66)

	All deals				Deals excluding acquisitions and divestments			
Alpha quartile	Deal Employment CAGR%	Sector Employment CAGR%	EBITDA/ FTE CAGR%	Sector EBITDA/ FTE CAGR%	Deal Employment CAGR%	Sector Employment CAGR%	EBITDA / FTE CAGR%	Sector EBITDA / FTE CAGR%
Q1	8.2	2.8	19.3	7.9	1.6	2.0	26.5	7.6
Q2	2.1	3.6	11.2	2.4	3.2	5.6	14.7	3.2
Q3	-2.1	0.7	10.4	2.0	1.6	2.5	3.8	2.3
Q4	-1.7	3.0	6.4	12.1	-8.4	3.0	20.7	22.6
Average	1.6	2.7	11.6	5.6	1.0	3.7	16.1	6.5
Median	1.2	1.8	8.5	2.9	1.1	2.3	12.0	2.9
<i>t-stat</i>	0.9	3.1	4.1	2.9	0.4	3.1	4.0	2.1
<i>t-stat of diff with sector</i>	-0.5		1.7		-1.0		2.0	

Source: PE deal data; Datastream; team analysis

**Alpha is related to
productive growth**

Relative margin growth is the most significant determinant of alpha

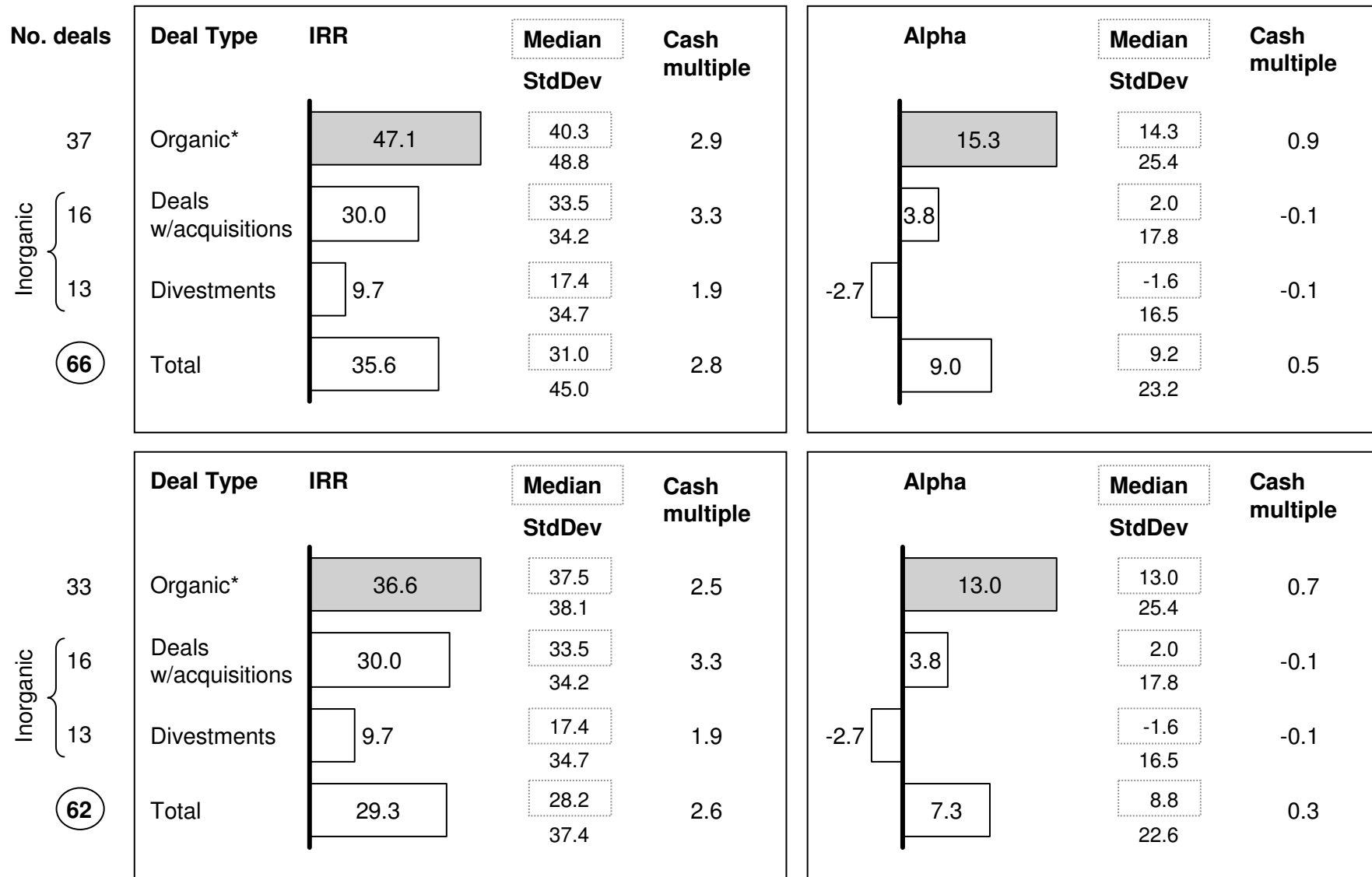
Regression no.	Alpha regressed on	Intercept	Deal duration	Size (*10 ⁻⁵)	Acquisition dummy	Divestment dummy	Sales CAGR relative to sector	EBITDA CAGR relative to sector	EBITDA Margin CAGR relative to sector	R ² (Obs)
1	Coeff	0.27	-0.047	0.60	-0.027	-0.082	-0.062			21%
	t-stat	(3.51)	(-2.63)	(0.19)	(-0.45)	(-1.18)	(-0.47)			(61)
2	Coeff	0.26	-0.044	-0.14	-0.035	-0.058		0.179		23%
	t-stat	(3.39)	(-2.50)	(-0.04)	(-0.61)	(-0.84)		(1.44)		(61)
3	Coeff	0.27	-0.046	-0.01	-0.008	-0.063			0.36	29%
	t-stat	(3.62)	(-2.71)	(-0.02)	(-0.14)	(-0.96)			(2.50)	(61)
							Multiple expansion			
4	Coeff	0.21	-0.027	-1.42	-0.062	-0.045	0.012		0.37	31%
	t-stat	(2.77)	(-1.52)	(-0.47)	(-1.10)	(-0.68)	(2.46)		(2.39)	(57)
							Buy-well	Sell-well		
5	Coeff	0.13	-0.009	-0.36	-0.068	-0.047	0.027	0.017	0.53	48%
	t-stat	(1.92)	(-0.57)	(-0.14)	(-1.39)	(-0.83)	(4.89)	(2.83)	(3.89)	(55)

Relative margin growth is a significant determinant of alpha, even after controlling for entry and exit year

Regression no.	Alpha regressed on	Deal duration	Size (*10 ⁻⁵)	Acquisition dummy	Divestment dummy	Buy-well	Sell-well	EBITDA Margin CAGR relative to sector	R ² (Obs)
1	Coeff	-0.025	-0.005	-0.039	-0.058	0.026	0.017	0.43	61%
	t-stat	(-1.09)	(-0.02)	(-0.75)	(-0.97)	(4.59)	(2.81)	(2.86)	(55)
	Entry yr			1996-98	1999-00	2001-02	2003-04		
	Coeff			0.17	0.20	0.21	0.10		
	t-stat			(1.70)	(2.07)	(2.73)	(1.40)		
2	Coeff	-0.009	-0.47	-0.064	-0.047	0.029	0.018	0.55	58%
	t-stat	(-0.56)	(-0.17)	(-1.28)	(-0.80)	(4.88)	(2.80)	(3.55)	(55)
	Exit yr				2000	2001-02	2003-07		
	Coeff				0.044	0.14	0.13		
	t-stat				(0.36)	(1.73)	(1.79)		

Performance of organic vs inorganic (M&A) deals

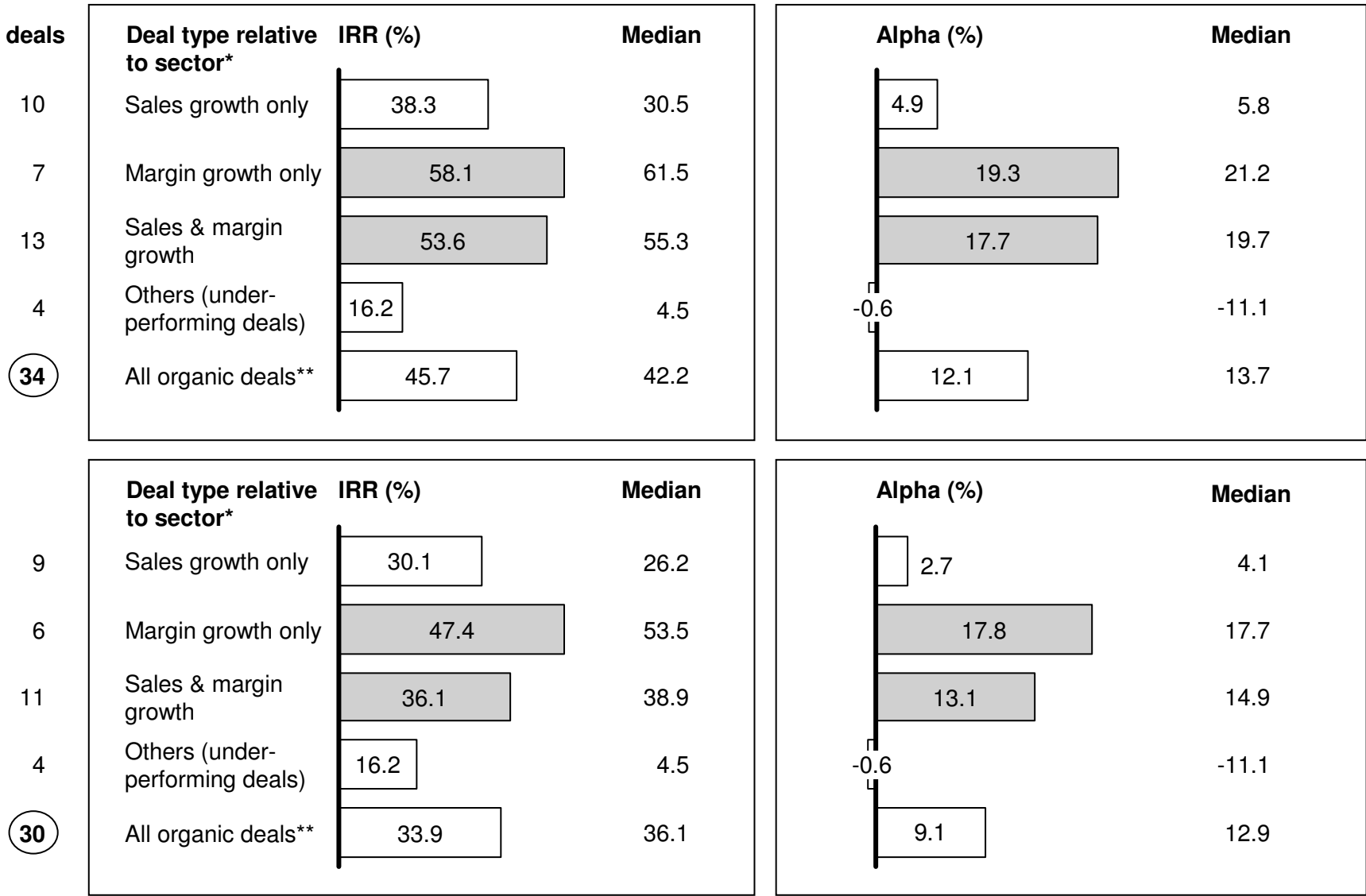
Organic deals outperform inorganic deals on both total IRR and alpha; divestments appear to distinctly under-perform in our sample



* Organic deals are those where no major acquisition or divestment was reported
 Source: PE deal data; Datastream; team analysis

Successful strategies for organic growth

For organic deals, margin improvement relative to sector has the highest impact on alpha



* Deal classification based on performance relative to sector e.g. for sales growth only, sales growth is higher than sector, but margin growth is not

** Organic deals used where relevant sector data available

Source: PE deal data; Datastream; team analysis

Success comes from substantial margin growth, or some margin growth coupled with substantial sales growth

Deal type relative to sector	Deal performance (%)					Sector performance (%)				
	Sales CAGR	EBITDA CAGR	Change in EBITDA margin p.a.	EBITDA/FTE CAGR	FTE CAGR	Sales CAGR	EBITDA CAGR	Change in EBITDA margin p.a.	EBITDA/FTE CAGR	FTE CAGR
Sales growth without margin improvement	19.4	12.7	-0.7	9.8	3.8	3.3	11.9	0.9	14.1	2.7
Margin improvement w/o rev. growth	-1.3	10.5	3.7	21.9	-3.9	18.3	16.8	-1.0	0.5	10.0
Margin improvement & rev. growth	15.4	20.0	0.9	21.4	4.8	5.1	2.9	-0.3	3.7	2.1
Others (under-performing deals)	-2.2	-11.7	-1.9	9.6	-13.8	4.0	2.1	-0.2	2.1	5.7
All organic deals	11.1	12.1	0.7	16.1	1.0	7.2	8.3	-0.1	6.5	3.7
Median	7.4	9.0	0.1	12.0	1.1	3.8	4.8	0.1	2.9	2.3
t-stat	4.2	4.2	1.6	4.0	0.4	2.8	3.9	-0.3	2.1	3.1

Substantial margin improvement takes place in the very first year

Organic deals (n=34) Deal type relative to sector	Deal performance (%)					PE owned deal performance (YR 1 %)				
	Sales CAGR	EBITDA CAGR	Change in EBITDA margin p.a.	EBITDA/ FTE CAGR	FTE CAGR	Sales	EBITDA	Change in EBITDA margin	EBITDA/ FTE	FTE
Sales growth without margin improvement	19.4	12.7	-0.7	9.8	3.8	16.2	11.1	-2.6	1.3	-3.1
Margin improvement w/o rev. growth	-1.3	10.5	3.7	21.9	-3.9	0.7	11.9	10.8	81.3	28.4
Margin improvement & rev. growth	15.4	20.0	0.9	21.4	4.8	20.8	29.0	9.5	22.2	-0.5
Others (under- performing deals)	-2.2	-11.7	-1.9	9.6	-13.8	1.8	-21.9	-15.2	13.0	-14.2
All organic deals	11.1	12.1	0.7	16.1	1.0	13.0	14.3	3.5	18.5	-6.0
Median	7.4	9.0	0.1	12.0	1.1	8.4	9.1	2.5	13.5	-4.1
t-stat	4.2	4.2	1.6	4.0	0.4	3.0	2.8	1.1	1.9	-1.5

EV/EBITDA improves substantially only for margin improvement deals

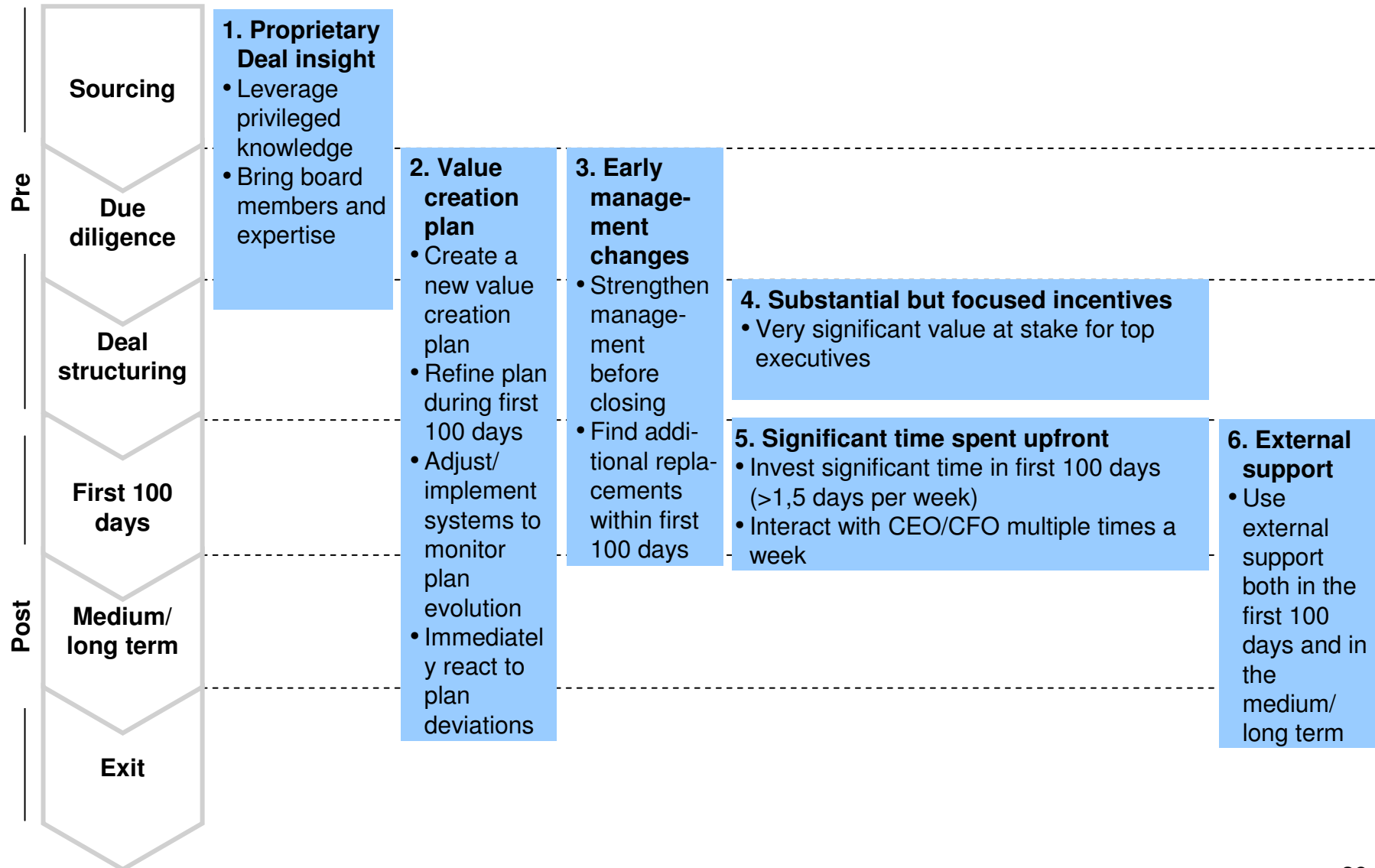
Organic deals (n=34), Inorganic deals (n = 27)

	Deal performance			Sector performance	
Organic deals by strategy	EV/ EBITDA (start)	EV/ EBITDA (exit)		EV/ EBITDA (start)	EV/ EBITDA (exit)
Sales growth without mgn. improvement	11.3	11.5		8.7	8.6
Margin improvement w/o rev. growth	9.6	11.6		10.3	9.4
Margin improvement & rev. growth	8.5	9.2		8.9	8.9
Others	8.3	8.2		7.7	8.8
Average of all organic deals	9.5	10.2		9.0	8.9
Average of inorganic deals	9.6	10.9		9.8	9.5

Source: PE deal data; Datastream; team analysis

PE model of active ownership and value creation

Company outperformance driven by active ownership practices deployed mainly before or right after acquisition



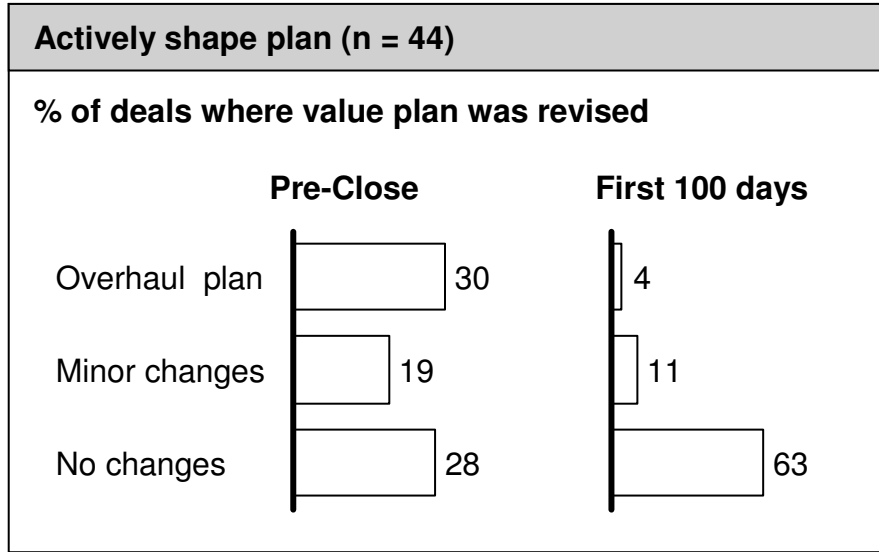
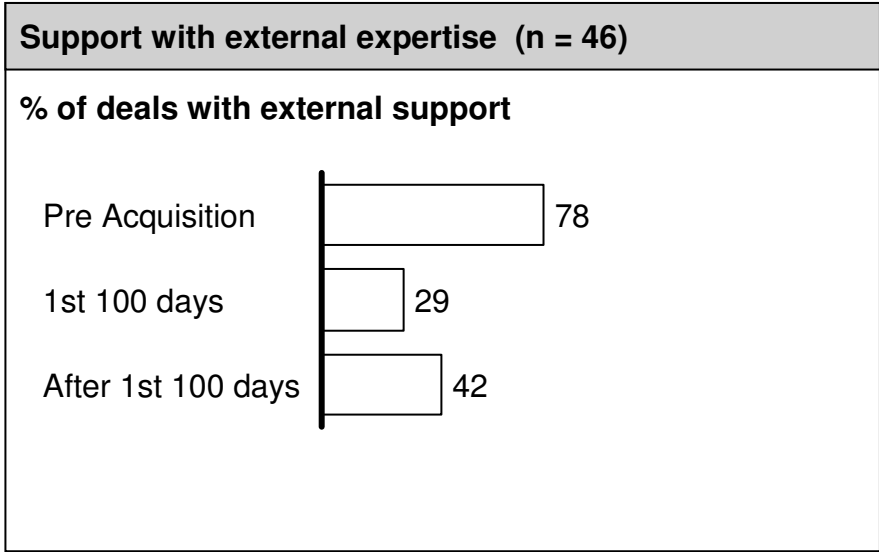
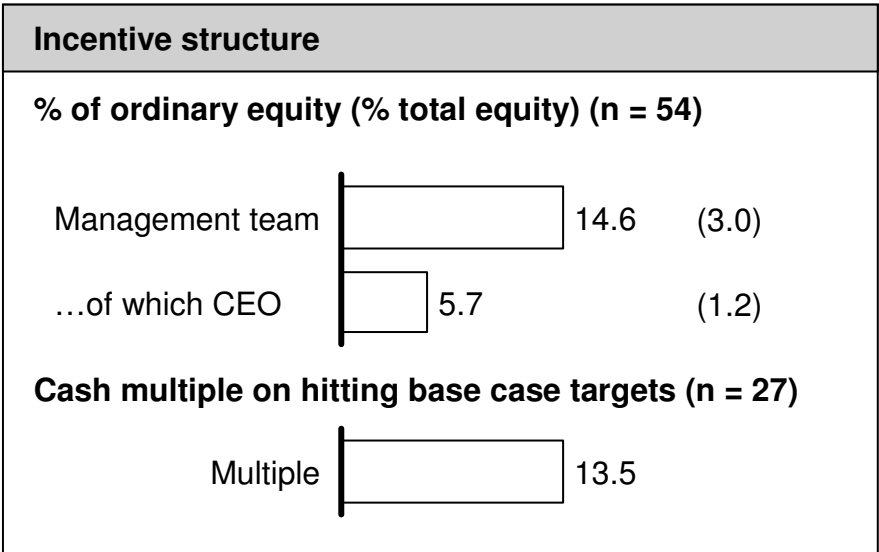
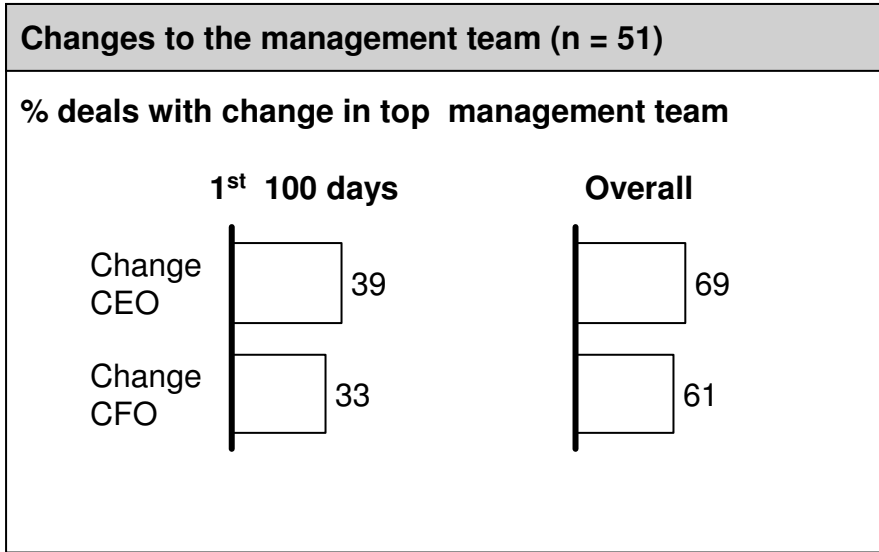
PE follows an active governance approach

Typical board structure (n = 52)		
	% split	Average staff
PE staff	33	2.5
Management team	43	3.3
NXDS	24	1.9
Total		7.7

Regular interactions with board and key management team members	
Board meetings % split (n = 37) Monthly: 68 Quarterly: 19 > 3 months: 13	Regular informal interactions with CEO in 1st 100 days % (n = 48) > Once/wk: 52 Once/week: 40 Infrequently: 8

Significant time commitment by PE firm (n = 48)		
	Total FTEs	Partner FTEs
DD	2.96	1.44
1 st 100 days	0.73	0.41
Rest of Yr 1	0.41	0.25
Yr 2 onwards	0.41	0.43

PE follows an active governance approach (continued)



To assess the impact of PE governance on outperformance, we assigned scores to 7 interview questions and related these with alpha

Action taken	Score
1 Management changes	
• Replacing CEO, CFO or Others in 1 st 100 days	1
• All other outcomes	0
<hr/>	
2 Value creation initiatives	
• Launch of one or more initiatives in each category (organic growth; productivity; strategic repositioning) during 1 st 100 days	1
• All other outcomes	0
<hr/>	
3 Value creation plan	
• Doing the following, in 1 st 100 days	
– Make adjustments to plan	1
– Devising new KPIs	1
• Acting immediately on deviations at any time	1
• All other outcomes	0
<hr/>	
4 Management support	
• Interacting > than once/week with CEO or CFO during 1 st 100 days	1
• Committing > average GP time during 1 st 100 days	1
• All other outcomes	0

Action taken	Score
5 Incentives	
• Awarding > average equity to management and employees	1
• Awarding equity to at least CEO, 1 st line and 2 nd line management	1
• Providing > average cash multiples on hitting base case targets in plan	1
• All other outcomes	0
<hr/>	
6 Board structure	
• No. of people on board < average	1
• Share of NXDs on board < average	1
• CEO & chairman different	1
• All other outcomes	0
<hr/>	
7 External support	
• Employing external consultants during each of the following:	
– DD phase	1
– 1 st 100 days	1
– Year 1 or later	1
• All other outcomes	0

Comparison of interview-based governance scores by quartile

All scores normalised

Alpha quartile	Changed mngmt. in 1 st 100 days	Launched value creation initiatives	Shaped value creation plan	Provided mngmt. support	Provided strong incentives	Created an effective board	Leveraged external support	Total score across 7 questions
Q1	0.49	0.59	0.68	0.75	0.39	0.64	0.69	0.58
Q2	0.36	0.54	0.52	0.55	0.45	0.64	0.47	0.48
Q3	0.31	0.57	0.71	0.51	0.59	0.75	0.47	0.60
Q4	0.36	0.48	0.58	0.56	0.54	0.62	0.33	0.50
Average	0.38	0.54	0.62	0.59	0.50	0.66	0.49	0.54

Management change in first 100 days and leveraging external support correlate with alpha the best

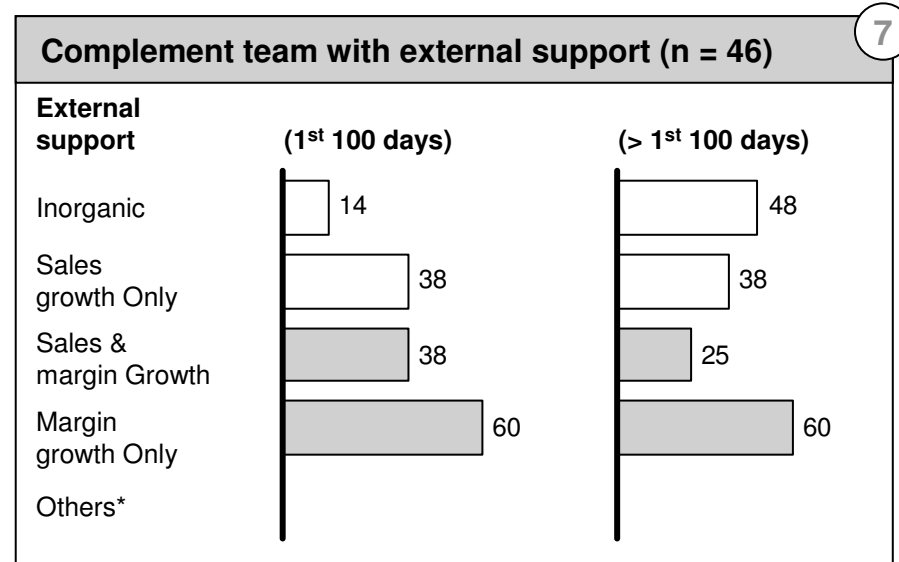
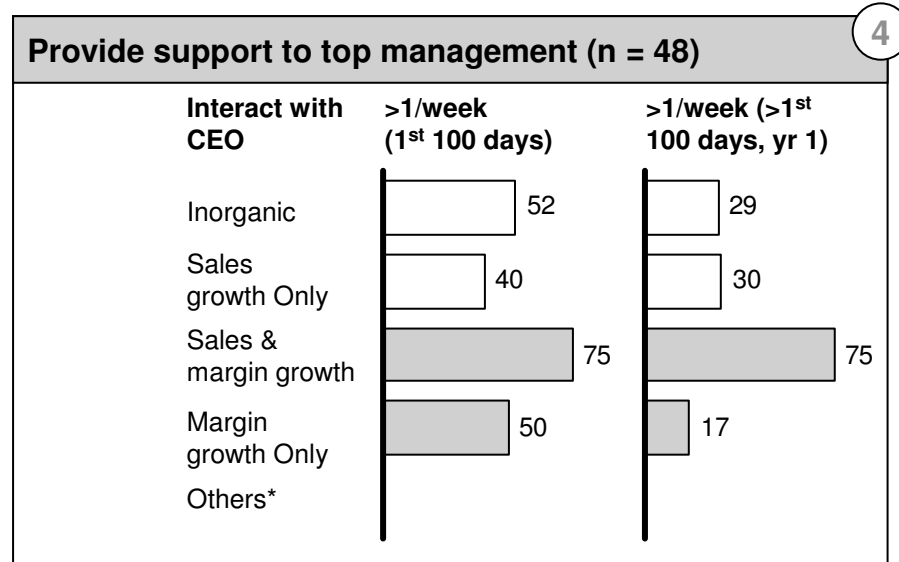
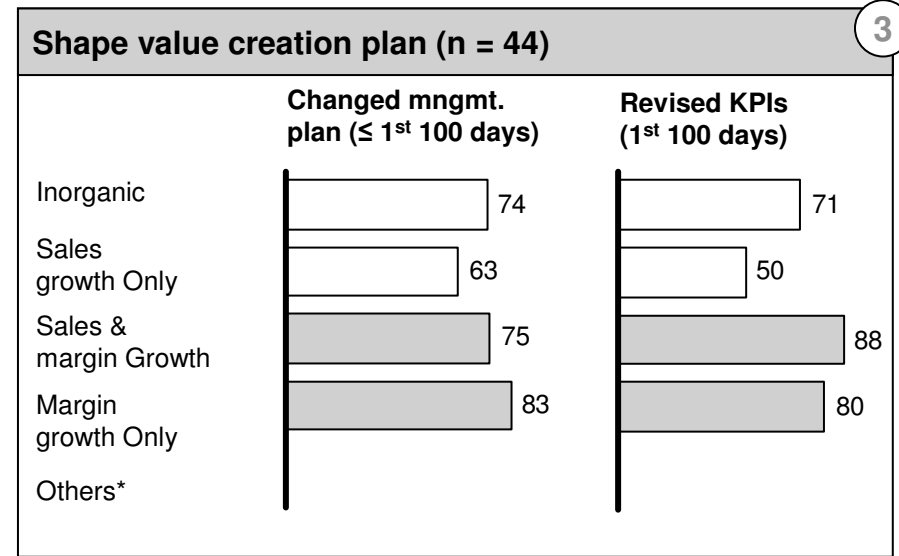
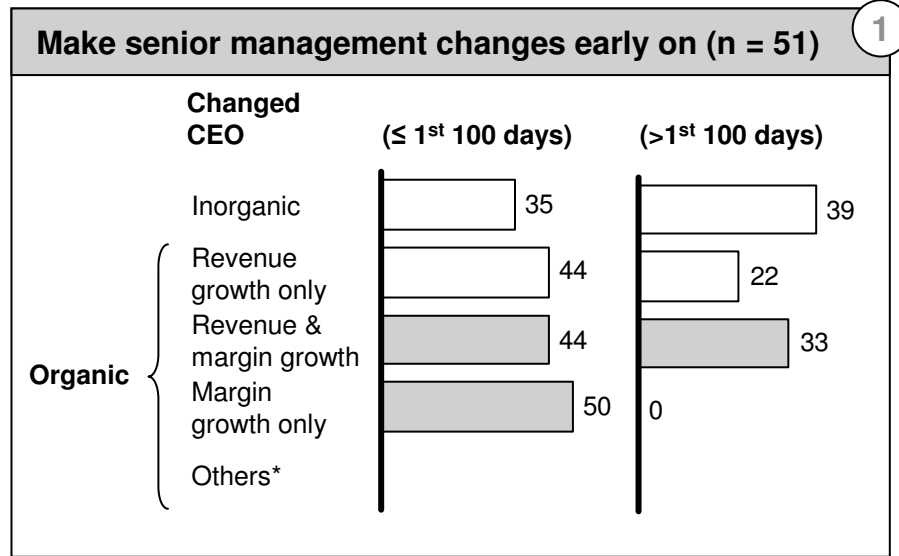
Individual regressions (intercept, size, duration, acquisition dummy, divestment dummy – not reported)

Alpha regressed on (controlling for duration and size)	Changed mgt. in 1 st 100 days	Launched multiples initiatives for value creation	Shaped value creation plan	Provided management support	Provided strong incentives	Created an effective board	Leveraged external support
Coefficient	0.10	0.011	0.106	0.091	-0.095	-0.019	0.24
t-stat	1.68	0.22	1.03	1.02	-1.35	-0.28	2.81
R ²	27%	27.2%	21%	25%	22%	21%	38%
Obs	48	38	46	47	54	61	43

Joint regression

Alpha regressed on (controlling for duration and size)	Intercept	Deal duration	Size (*10 ⁻⁵)	Acquisition dummy	Divest-ment dummy	Changed mgt. in 1 st 100 days	Leveraged external support
Coefficient	0.12	-0.049	-2.012	-0.034	-0.058	0.11	0.22
t-stat	0.94	-2.08	-0.43	-0.51	-0.82	1.69	2.50
R ²	43%						
Obs	42						

Deals with substantial margin growth, or those with substantial sales growth and some margin growth, have the highest deal involvement



* Too few data points to provide reliable % figures

Value creation initiatives consist of productivity and organic growth

Productivity initiatives

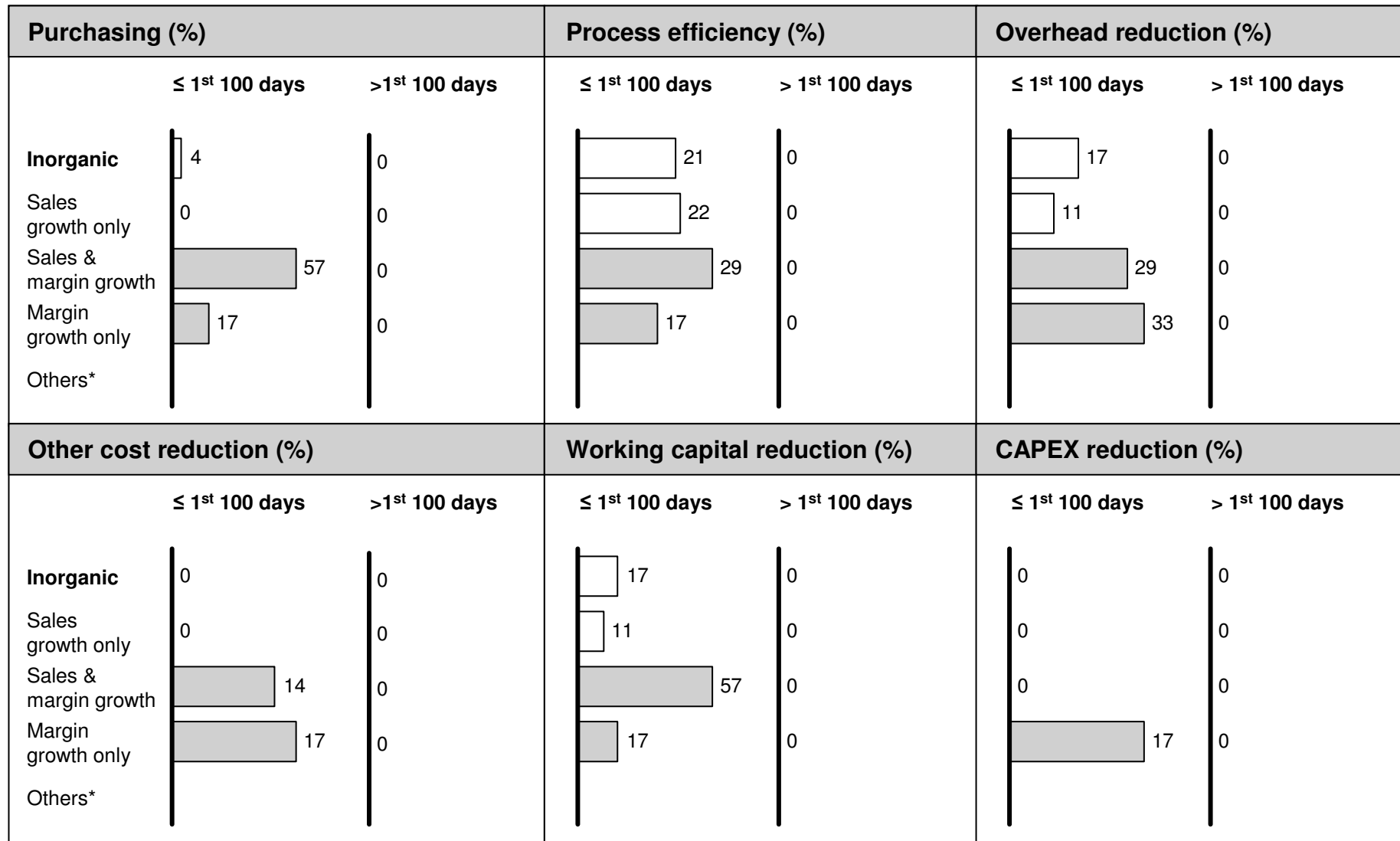
- ① Purchasing (e.g. supplier consolidation)
- ② Process efficiency (e.g. supply chain)
- ③ Overhead reduction (e.g. SG&A, or Selling, General & Admin costs)
- ④ Other cost reduction (detailed by interviewee)
- ⑤ Working capital reduction
- ⑥ CAPEX reduction

Organic growth initiatives

- ① Review of pricing
- ② New channels
- ③ New products
- ④ New geographies
- ⑤ Existing geographies, new customers
- ⑥ Existing geographies, existing customers

Productivity initiatives, especially purchasing improvements, and working capital and CAPEX reduction, feature more prominently in margin deals

n = 50

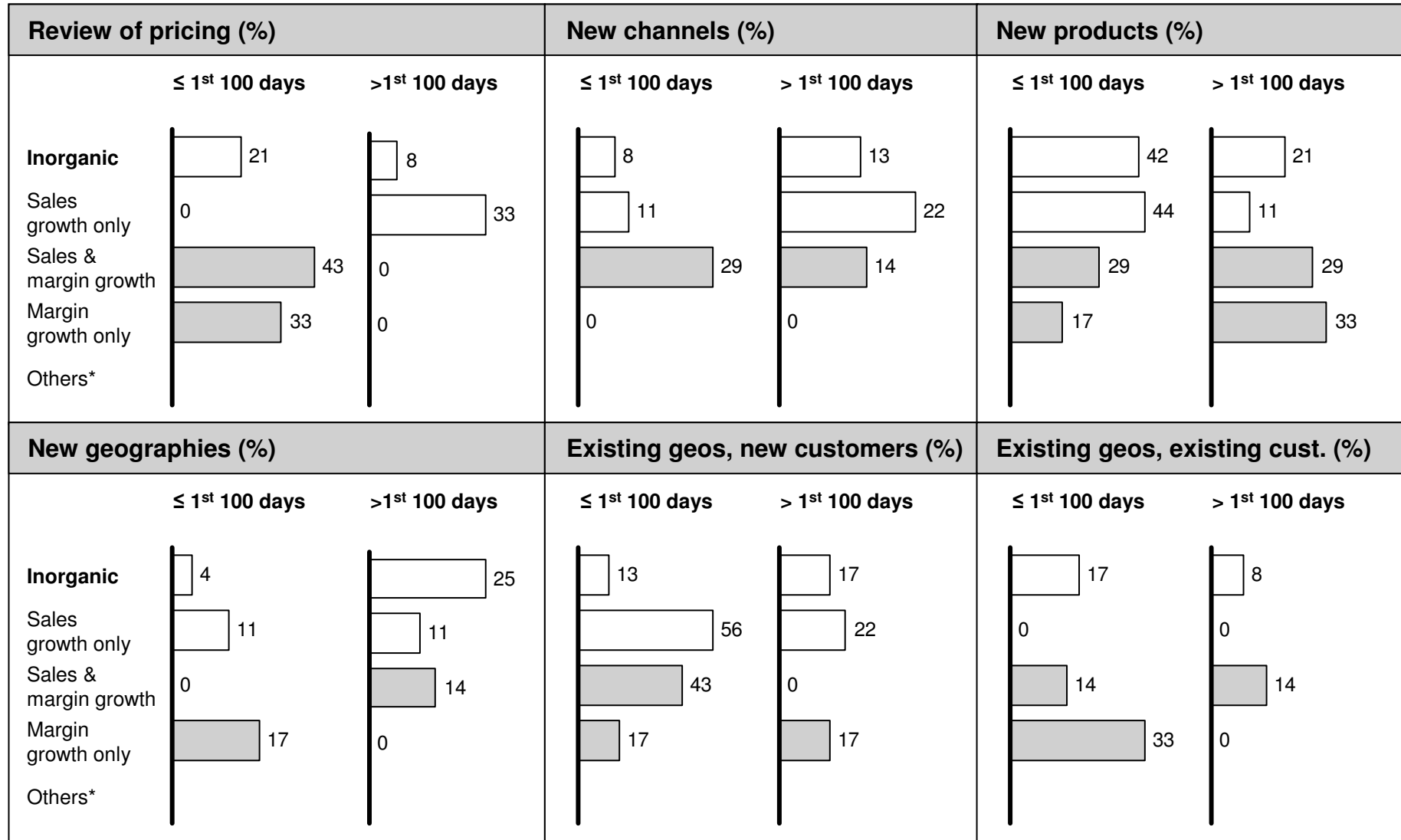


* Too few data points to provide reliable % figures

Source: PE interviews; team analysis

However, margin deals also include organic growth initiatives; pricing reviews and new channels feature more prominently than for other deals

n = 50



* Too few data points to provide reliable % figures

Source: PE interviews; team analysis

PE versus PLC model of governance

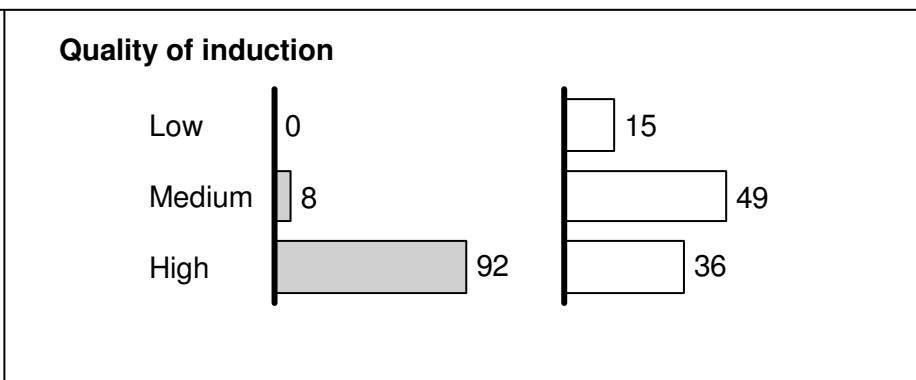
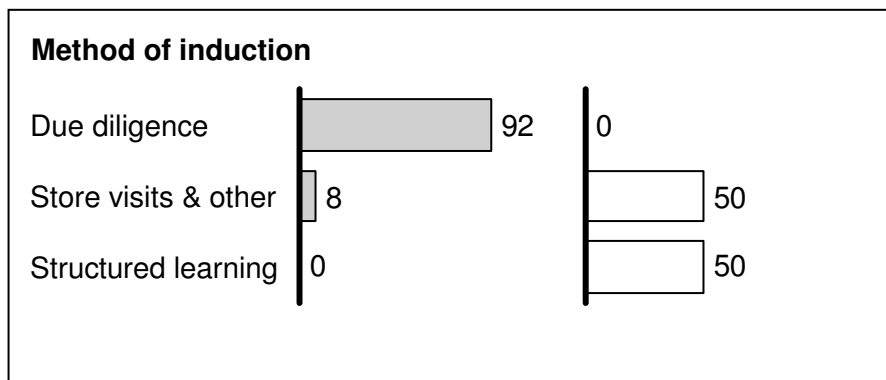
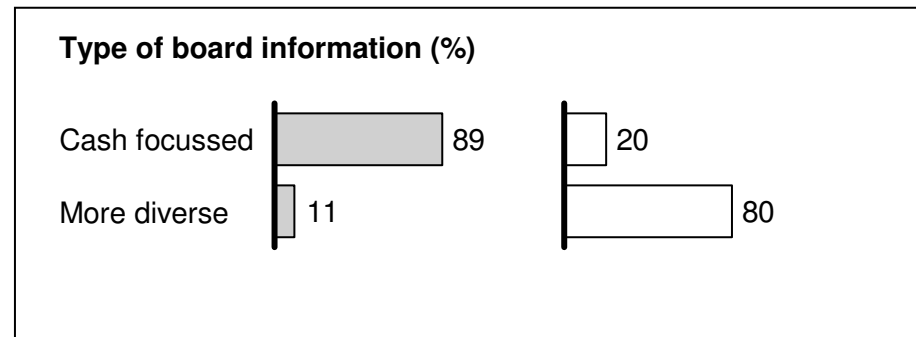
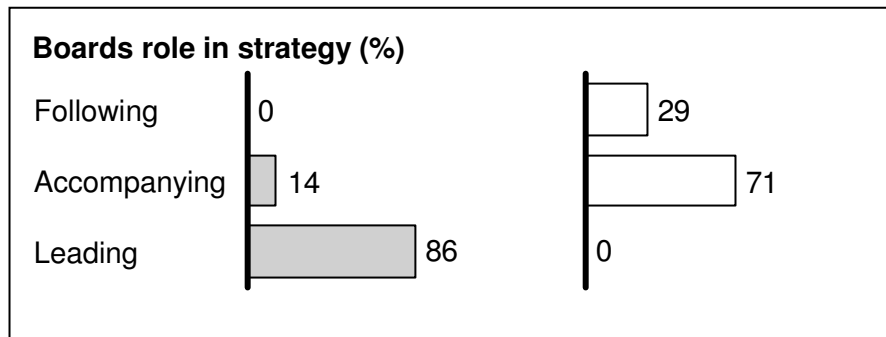
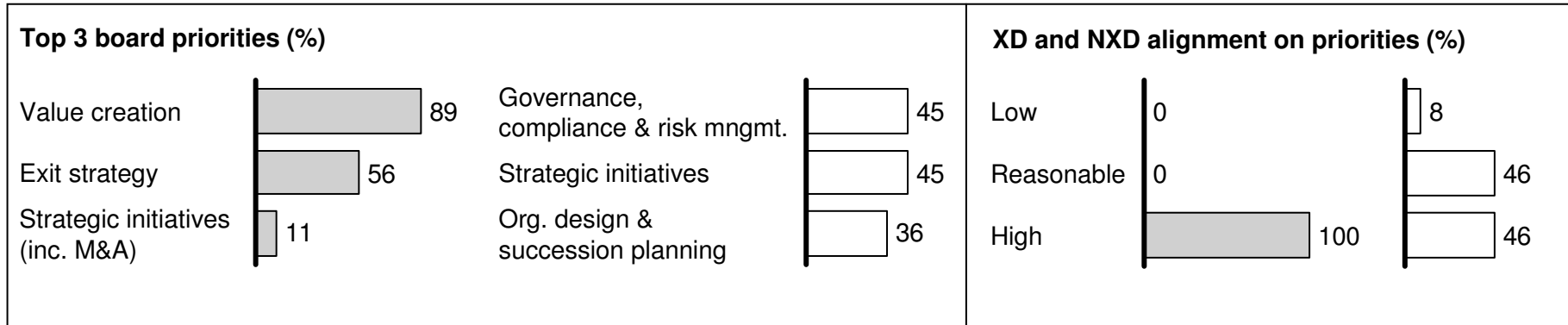
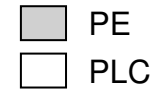
How does the PE governance model differ from that of PLCs?

Based on data from Spencer Stuart 2005 Board Index for top 150 firms in the UK (matched to average size of sample deals)

		PE Model	PLC Model*
1.	Board size	<ul style="list-style-type: none"> Average size = 8 	<ul style="list-style-type: none"> Average Size = 10
2.	Board composition (%)	<ul style="list-style-type: none"> NXD = 24 PE = 33 Mgt. = 43 	<ul style="list-style-type: none"> NXD = 50 PE = 0 (n/a) Mgt. = 50
3.	Frequency of board meetings	<ul style="list-style-type: none"> Formal – 9/year on average Informal – c. 90% of deals involve contact between GP and CEO at least once/week throughout deal life (with many deals involving frequent contact every week) 	<ul style="list-style-type: none"> Formal – 9/year
4.	Time commitment to firm	<ul style="list-style-type: none"> PE partners – 0.4 Partner FTEs in 1st 100 days 	<ul style="list-style-type: none"> 20 hours/month equating to 0.1 FTE (based on 240 working days/year and 10 hours/working day)
5.	Ownership of firm	<ul style="list-style-type: none"> PE owns 75% of total deal equity (inc. equity owned by other club members) and 'votes 100% of the shares' 	<ul style="list-style-type: none"> NXDs have little equity and own less than 2% of voting rights Salary of £40-60k
6.	Management investment in deal	<ul style="list-style-type: none"> Management co-invests and owns ~15% of ordinary equity CEO co-invests and owns ~6% 	<ul style="list-style-type: none"> CEO does not co-invest; works on salary and stock options
7.	Change in senior management	<ul style="list-style-type: none"> CEO changed in 69% of deals (and within 1st 100 days in 39% deals) 	<ul style="list-style-type: none"> Average CEO service = 4.7 years
8.	Cost focus	<ul style="list-style-type: none"> Successful deals grow margins as well as sales by cutting costs and increasing efficiency 	<ul style="list-style-type: none"> Only 36% of boards rate themselves as good at cost reduction

*Source: Korn Ferry 33rd Annual Board of Directors Study; team analysis

Auxiliary interviews with ex-members of PE and PLC boards reveal additional differences in the two models



Conclusions

So what have we learnt?

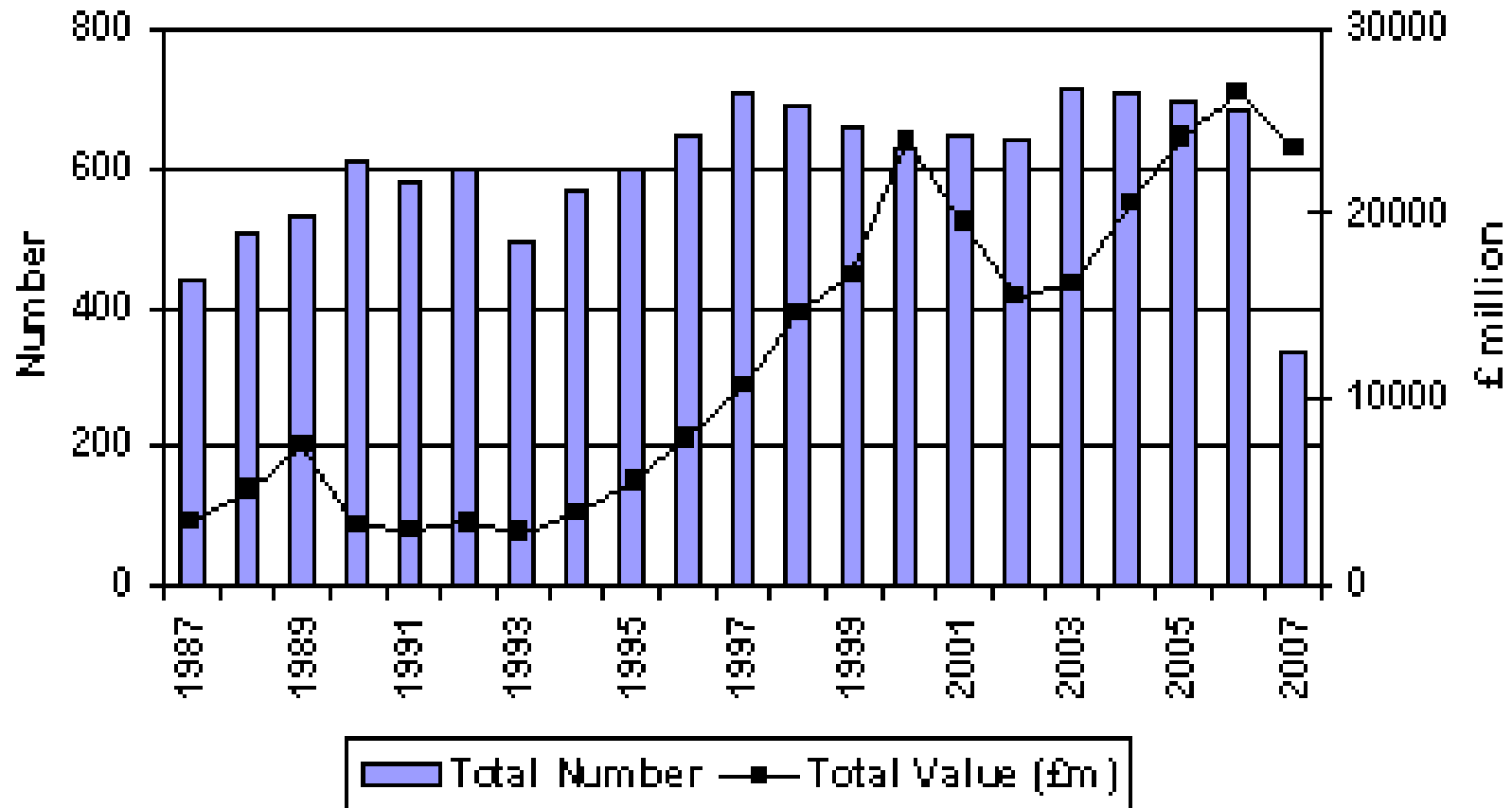
1. PE deals of large, mature houses in the UK have out-performed their quoted sector peers on average, based on “alpha”, controlling for sector risk and leverage
2. Out-performance correlated with stronger operating performance relative to peers; Improving margins seems to be the mantra for generating alpha
3. PE deals of large, mature houses in the UK have grown employment on average, but less than that of quoted peers
4. Alpha deals are associated with replacing management with a new team focused on improving margins and profitability per employee and provision of support to top management from GPs and external experts

What remains?

1. Expanding the sample to 80-100 deals for the UK
2. Selection issues and pre-private phase performance for diff-of-diff analysis
3. Providing richer insights on differences in functioning and effectiveness of PE and Plc Boards by interviewing CEOs and Boardmembers who have been on both
4. Comparative analysis of US, UK, Continental Europe (Germany/France) and Nordics

Implications for policy issues in the UK

Increasing size of buyout industry in the UK



- 8% of UK's workforce (1.2 million workers) in PE-owned companies (19% at some point)
- In 2006, UK-based PE houses raised GBP 33.64 bln out of global total of GBP 223.24 bln

House of Commons Treasury Committee Tenth Report of Session 2006-07

- Central issue: What impact the current activities of large PE firms are having on the UK economy as a whole?
- How much of the PE industry profit can be attributed to financial engineering compared to value extraction and creation?
- Raises a central question: “Determination of the most efficient form of financing should not be a function of the form of ownership and yet it appears to be.”
 - Do public firms have too low leverage (risk-aversion)? OR
 - Is supply of credit to buyouts too lenient (risk-shifting)?
- Effect of credit supply and weak debt covenants on default rates over the business cycle
- FSA concerned about the flow of price-sensitive information relating to private equity transactions
- Jobs, pensions, financial stability, transparency and accountability
- Tax revenues: What are the costs and benefits of reducing the taper relief on carried interest to buyout industry?

The Walker Committee Report on “Disclosure and Transparency in Private Equity” (July 2007)

- Concerns relate primarily to medium and large-scale buyouts
- Better disclosure on an annual basis
 - Financial statements (level, structure and conditionality of debt)
 - Attribution analysis to decompose value enhancement into gains from financial structuring, growth in earnings in sector, and strategic and operational management of business
 - How the PE houses are approaching corporate governance and board composition of portfolio companies
- Setting up of an objective body to collect, assemble and analyze data

Answers to questions raised by Treasury Select Committee and Walker reports

Questions & issues raised by Treasury Select Committee report & Walker Report

- How much of PE industry profit can be attributed to financial engineering vs. actual value creation
- High levels of leverage are likely to increase risk and any shift from a stable financial environment will amplify the risk
- Impact of PE on UK economy - jobs, financial stability and transparency
- Need for better disclosure and transparency in reporting on PE owned companies
- GPs to publish annual review of performance decomposing value enhancements into gains from financial restructuring, growth in earnings of sector and strategic and operational management of the business

Observations from our research

- Initial findings from our UK deal sample suggest that PE owned companies on average generate out-performance relative to the sector, driven by operating performance improvements
- Our research shows greater 'alpha' in economic downturns. Further there are early indications that PE selects inherently less risky companies
- Initial findings from UK deal sample shows 1.2% employment growth by PE owned companies vs. 1.8% for the quoted peers
- Have developed a methodology that disaggregates returns into sector returns, leverage effects and out-performance. *No view on the benefits of disclosure*
- AS ABOVE

Appendix I: Details on methodology

Basic methodology used to decompose PE owned company performance

Assumptions

1. Un-levered beta = 1.

(Deal risk = sector risk, with sector defined by Datastream ICB 3 digit code)
2. Tax shields as risky as Equity.

(Results robust to alternative assumptions, e.g., tax-shields as risky as debt and tax rate of 33%)
3. Cost of borrowing = 5%.

(Results robust to alternative assumptions, e.g., 0%, which underestimates company out-performance relative to sector)

Model methodology (also see Appendix)

1. Aggregate the sector return (TRS) across sector peers over the period the deal was held by the PE house (to calculate the average sector return)
2. Use un-levering formula to separate deal IRR into enterprise-level return and leverage effect
3. Enterprise level return = Un-levered sector return + Deal 'alpha'
4. Deal leverage on sector = additional sector return from deal leverage (financial leverage)
5. Leverage amplification = additional return on alpha from deal leverage (operating leverage)

Detailed methodology for decomposing IRR into out-performance

-Unlevering of IRR: $R_U = \frac{R_L + R_D * D / E}{(1 + D / E)}$

-Sector risk in unlevered IRR: $R_{U,i} = \alpha + \beta_S * R_{SU} + \varepsilon_i$

-Yields three components of IRR:

1. Leverage effect: $R_{L,i} - R_{U,i}$

2. Sector effect : $\beta_S * R_{SU}$

3. Deal outperformance : $\alpha + \varepsilon_i$

-We sub-divide the leverage effect further to obtain the following four components of IRR:

1. Sector play including sector leverage effect: $\beta_S * R_{SU} + [(\beta_S * R_{SU} - R_D) * D / E_S]$

2. Financial gearing or incremental deal leverage on sector effect: $[(\beta_S * R_{SU} - R_D) * (D / E - D / E_S)]$

3. Alpha or enterprise-level out-performance: $\alpha + \varepsilon_i$

4. Operational gearing or deal leverage on out-performance: $(\alpha + \varepsilon_i) * D / E$

-Throughout the analysis, we assume that $\beta_S = 1$

Description of Control Group for calculating sector performance

1. Sector Control Group has been constructed as an aggregate of all publicly listed companies in Europe (using Datastream as the source)
2. In total Datastream defines 35 sectors (classified as ICB Level 3 codes) and for the purpose of the analysis, each deal is matched to one sector
3. For each sector, financial and operational performance is driven primarily by the large companies within a sector as we have calculated a weighted average across all companies within a sector
4. Financial performance for the sector is calculated as TRS growth over the deal period. All calculations for un-levering a sector are based on the 10 year average D/E for the sector
5. Operating performance for the sector is calculated for 5 key indicators – revenue growth, EBITDA growth, EBITA margin growth, FTE growth and EBITDA/FTE growth

Appendix II: Related literature

Evidence on operating performance for the US buyouts in 1980's

1. Kaplan (1989)
 - 48 large management buyouts (MBOs) of public companies in 1980-86
 - Operating income increased by 24% in three years after the buyout
 - Net cash flow in the first three years post-buyout showed gains of 22%, 43% and 81%, respectively
 - Significant reductions in capital expenditures

2. Smith (1990)
 - 58 MBOs during 1977-86
 - Operating cash flow per employee and per dollar of book value increase
 - Better working capital management

3. Lichtenberg and Siegel (1990)
 - MBO plants' productivity increased from 2% above industry mean in the three pre-buyout years to 8% above in the three post-buyout years
 - Increase not attributable to reductions in R&D, wages or capex

4. No evidence in any of these three papers of reduction in wages or employment

Recent evidence on operating performance of the US & UK buyout sector

1. Guo, Hotchkiss and Song (2007)
 - 89 public to private transactions in the US between 1990 and 2006
 - Gains in operating performance of buyouts comparable or exceeding by 2% compared to those of public benchmarks
 - Weaker performance for asset sales, better for large acquisitions
2. Nikoskelainen and Wright (2005)
 - 321 exited buyouts in the UK during 1995-2004
 - 22.2% (above market) return to enterprise value and 70.5% to equity
 - Operating improvements related to organic changes rather than to M&A
3. Harris, Siegel and Wright (2005)
 - TFP of 35,752 manufacturing establishments around MBO in 1994-98
 - MBO plants were less productive (-1.6% in the short run and -2.0% in the long run) than other plants in the same industry
 - Post-MBO, these plants experienced substantial increase in productivity (+70.5% in the short run and +90.3% in the long run) in most industries
 - Lower labor intensity of production and out-sourcing of intermediates
4. Amess and Wright (2007)
 - Insignificant effect on FTE growth but lower wage growth than non-LBOs

Existing evidence on role played by the governance model of PE

1. Smith (1990)
 - 58 MBOs during 1977-86
 - Increased in operating cash flows correlated with buyout-induced changes in debt ratio and management ownership

2. Guo, Hotchkiss and Song (2007)
 - 89 public to private transactions in the US between 1990 and 2006
 - Gains in operating performance are better with greater proportion of bank financing and for club deals

3. Nikoskelainen and Wright (2005)
 - 321 exited buyouts in the UK during 1995-2004
 - Value increase positively related to management ownership and number of equity syndicate members

4. Renneboog, Simons and Wright (2007)
 - Pre-transaction shareholders during 1997-2003 received premium of 40%
 - Shareholder gains from buying well, tax-shields and incentive realignment

Historical evidence from late 1980s in the US suggested PE “overheating”

Kaplan and Stein (1993) study the boom and the subsequent bust of the buyout industry during the 1980's

- Price to cash flow and cash flow to total debt ratios rose substantially during later part of the 1980s
 - Axelson et al. (2007) also find that the primary determinant of buyout leverage is the economy-wide cost of borrowing
- Out of 86 large issues during 1985-89, by 1991 23 had defaulted and 18 had gone bankrupt
- Private and bank debt replaced by public junk debt, resulting in coordination problems in reorganization of bankrupt firms
- LBO volume of \$88 bln in 1988 dried up to \$7.5 bln by 1991
- LBO volume recovered post 1992 but deals occurred at EV/EBITDA multiples of 5-6 rather than 7-8 before and management equity had to be raised to 20% from 5-10%