

Leveraged Buyouts and Private Equity Funds

Definitions

- In a leveraged buyout (LBO), a company is acquired by a specialized investment firm using a relatively small portion of equity and a relatively large portion of outside debt financing.
- The leveraged buyout investment firms are generally referred to as private equity firms. In a typical leveraged buyout transaction, the private equity firm buys majority control of an existing or mature firm.

Private Equity Firms

- Organized as partnerships or limited liability corporations
 - Examples include Blackstone, KKR, Carlyle etc.
 - Largest PEs employ more than 100 investment professionals

Private Equity Funds

- A private equity *firm* raises equity capital through a private equity *fund*.
- Most private equity funds are “closed-end” vehicles in which investors commit to provide a certain amount of money to pay for investments in companies as well as management fees to the private equity firm.
- Organized as limited partnerships in which the general partners manage the fund and the limited partners provide most of the capital.

Limited and General Partners

- Limited partners include:
 - Pension funds
 - Endowments
 - Insurance companies
 - Wealthy individuals
- The private equity firm serves as the fund's general partner. It is customary for the general partner to provide at least 1% of the total capital.

PE Fund Structure

- Fixed life up to 10 years, may be extended to 13 years
- The first five years is for investing in companies, and the remaining years is for selling out and returning capital to investors (i.e., limited partners)
- Investment decisions of the GPs are limited by covenants:
 - Restrictions on amount that can be invested in a single firm
 - Restrictions on types of securities that the fund can invest in
 - Restrictions on the amount of debt at the fund level

GP Compensation

1. *Annual management fee* (a % of capital committed by LPs + as investments are realized a % of capital employed)
2. A share of the profits of the fund ("*carried interest*") that almost always equals to 20%
3. *Deal and monitoring fees*

GP Compensation Example

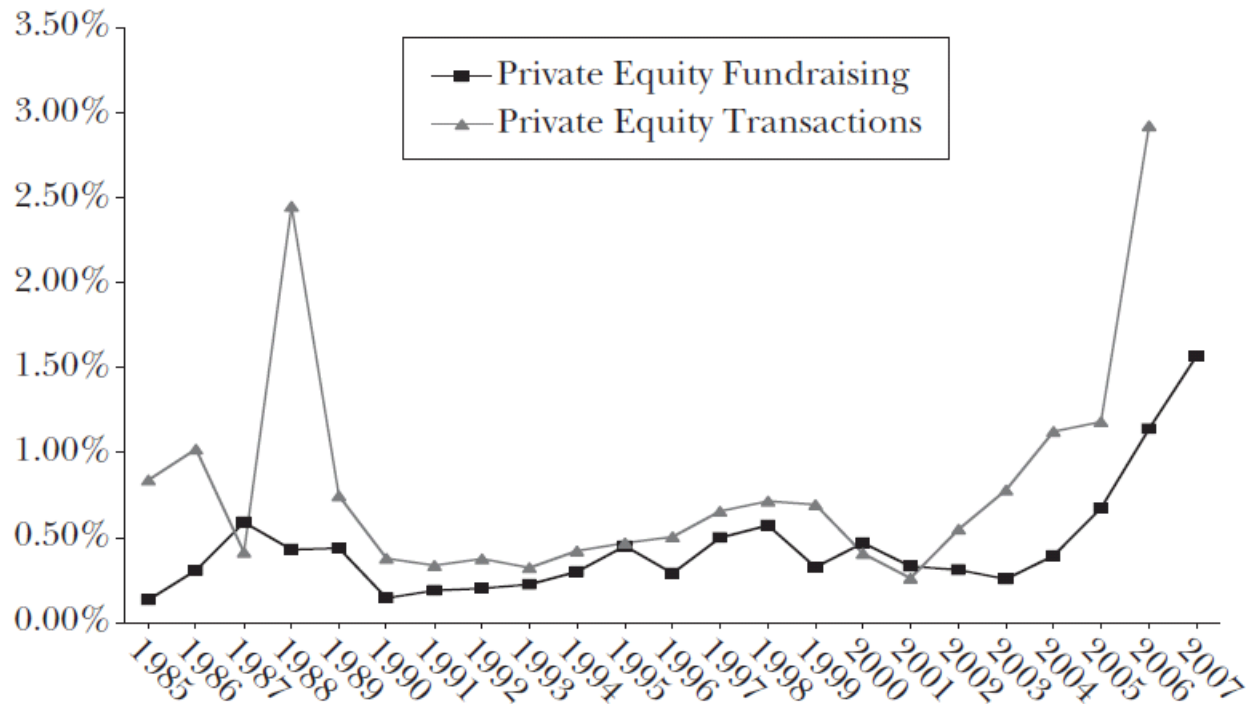
- XYZ Fund raises \$5 billion (capital committed from LPs)
- Annual management fee = 2% → \$100m/year for 10 years
- The fund invests capital minus annual mgmt fees
- XYZ's investments turn out to be successful and pays off \$10 billion
- Carried interest = \$2 billion
- Total compensation (excluding deal and monitoring fees) is \$3 billion, approximately 60% of nominal profits.

Private Equity Transactions

- The PE firm buys a company and recapitalizes it with 60% to 90% debt (this is where the name leveraged buyout comes from).
- Main sources of debt financing for LBOs:
 - Senior secured bank debt (substituted with institutional leveraged loans in the recent LBO boom during 2004 and mid-2007)
 - Junior unsecured bonds or mezzanine financing

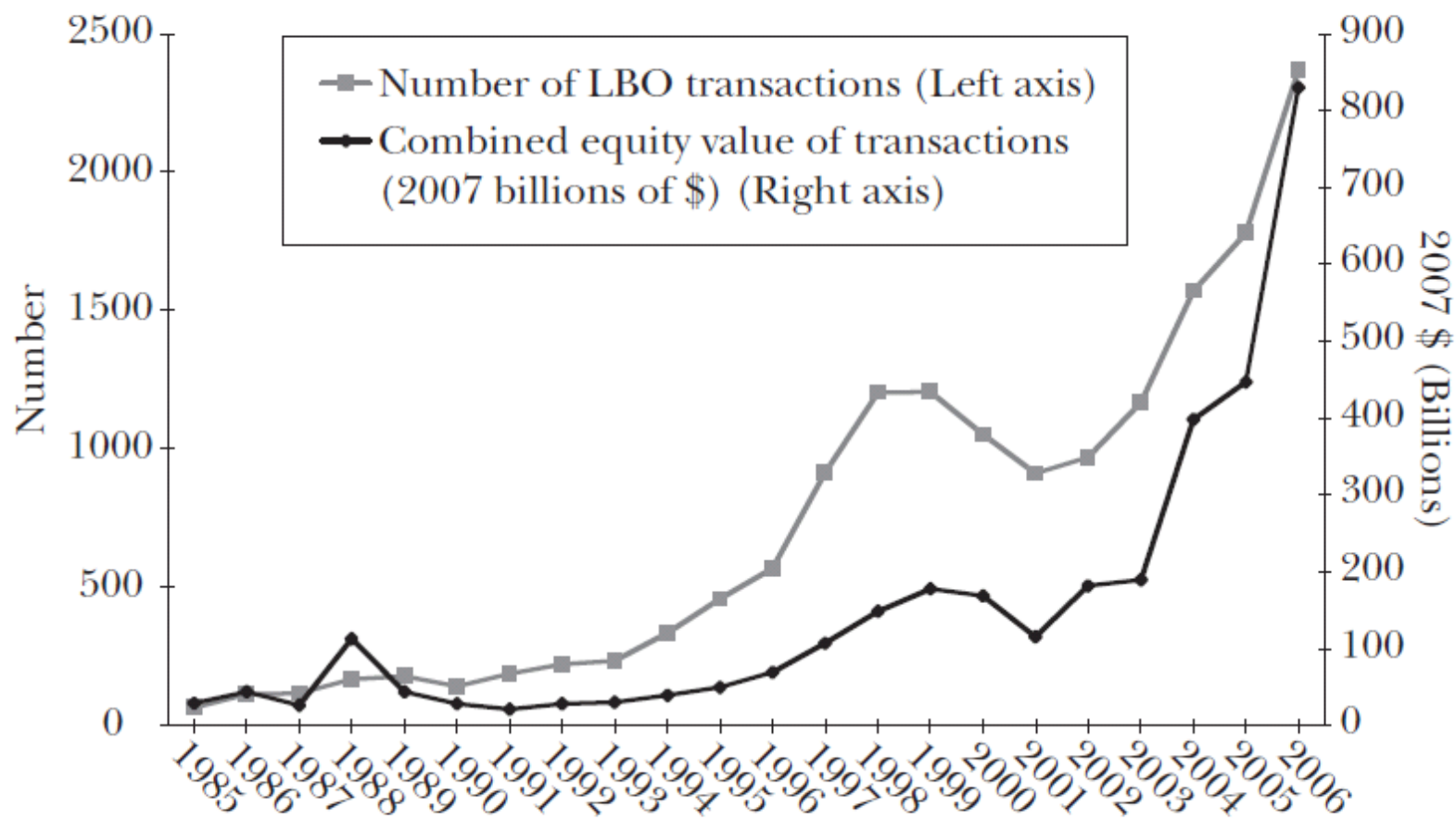
PE Transactions are Cyclical

U.S. Private Equity Fundraising and Transaction Values as a Percentage of Total U.S. Stock Market Value from 1985 to 2007



Sources: *Private Equity Analyst*, CapitalIQ, Strömberg (2008), authors' calculations.

Global Private Equity Transaction Volume, 1985–2006



Sources: CapitalIQ, Strömberg (2008), authors' calculations.

Note: "LBO" is "leveraged buyout."

Global Leveraged Buyout Transaction Characteristics across Time

	1985–1989	1990–1994	1995–1999	2000–2004	2005–6/ 30/2007	1970–6/ 30/2007
Combined enterprise value	\$257,214	\$148,614	\$553,852	\$1,055,070	\$1,563,250	\$3,616,787
Number of transactions	642	1,123	4,348	5,673	5,188	17,171
LBOs by type: (% of combined enterprise value)						
Public to private	49%	9%	15%	18%	34%	27%
Independent private	31%	54%	44%	19%	14%	23%
Divisional	17%	31%	27%	41%	25%	30%
Secondary	2%	6%	13%	20%	26%	20%
Distressed	0%	1%	1%	2%	1%	1%
LBOs by target location: (% of combined enterprise value)						
United States and Canada	87%	72%	60%	44%	47%	52%
United Kingdom	7%	13%	16%	17%	15%	15%
Western Europe (except UK)	3%	13%	20%	32%	30%	26%
Asia and Australia	3%	1%	2%	4%	6%	4%
Rest of World	0%	2%	2%	3%	3%	3%

Note: The table reports transaction characteristics for 17,171 worldwide leveraged buyout transactions that include every transaction with a financial sponsor in the CapitalIQ database announced between 1/1/1970 and 6/30/2007. Enterprise value is the sum of equity and net debt used to pay for the transaction in millions of 2007 U.S. dollars. For the transactions where enterprise value was not recorded, these have been imputed using the methodology in Strömberg (2008).

Exit Characteristics of Leveraged Buyouts across Time

<i>Year of original LBO</i>	<i>1970– 1984</i>	<i>1985– 1989</i>	<i>1990– 1994</i>	<i>1995– 1999</i>	<i>2000– 2002</i>	<i>2003– 2005</i>	<i>2006– 2007</i>	<i>Whole period</i>
Type of exit:								
Bankruptcy	7%	6%	5%	8%	6%	3%	3%	6%
IPO	28%	25%	23%	11%	9%	11%	1%	14%
Sold to strategic buyer	31%	35%	38%	40%	37%	40%	35%	38%
Secondary buyout	5%	13%	17%	23%	31%	31%	17%	24%
Sold to LBO-backed firm	2%	3%	3%	5%	6%	7%	19%	5%
Sold to management	1%	1%	1%	2%	2%	1%	1%	1%
Other/unknown	26%	18%	12%	11%	10%	7%	24%	11%
No exit by Nov. 2007	3%	5%	9%	27%	43%	74%	98%	54%
% of deals exited within								
24 months (2 years)	14%	12%	14%	13%	9%	13%		12%
60 months (5 years)	47%	40%	53%	41%	40%			42%
72 months (6 years)	53%	48%	63%	49%	49%			51%
84 months (7 years)	61%	58%	70%	56%	55%			58%
120 months (10 years)	70%	75%	82%	73%				76%

Note: The table reports exit information for 17,171 worldwide leveraged buyout transactions that include every transaction with a financial sponsor in the CapitalIQ database announced between 1/1/1970 and 6/30/2007. The numbers are expressed as a percentage of transactions, on an equally-weighted basis. Exit status is determined using various databases, including CapitalIQ, SDC, Worldscope, Amadeus, Cao, and Lerner (2007), as well as company and LBO firm web sites. See Strömberg (2008) for a more detailed description of the methodology.

Is private equity a superior organizational form?

- *Proponents:* PE firms apply financial, governance, and operational engineering to their portfolio companies, and, in so doing, improve firm operations and create economic value.
- *Opponents:* PE firms take advantage of tax breaks and superior information, but do not create any operational value. Moreover, critics sometimes argue that private equity activity is influenced by market timing (and market mispricing) between debt and equity markets.

LBO Targets

- Firms with high cash flows and limited investment projects

Financial, Governance, and Operational Engineering

1. Management incentives

- Share upside with management by issuing them stocks and options (this was unusual among public firms during the 1980s)
- Management ownership increases by x4 after LBO completion - so management also shares the downside

2. Leverage

- Creates pressure on managers not to waste money, because they must make interest and principal payments (reduces free cash flow problems).

3. Corporate governance

- More frequent board meetings (12 a year)
- Smaller boards (more efficient)
- Board members with significant industry experience
- Increased CEO and CFO turnover

Operating Performance

- Largely positive after the completion of the LBO:
 - Operating income-to-Sales increases by 10% to 20% (absolutely and relative to industry)
 - Cash flows (Operating income-CapEx)-to-Sales increases by roughly 40%
 - Significant increases in firm value
 - Significant increases in factor productivity
- Do firms achieve these results by cutting back on investment (giving up future value for short-term gains)? NO.
 - Post-buyout increases in innovation and patents relative to pre-buyout levels
 - Reverse LBOs (LBOs exited thru an IPO) tend to perform quite well

Asymmetric Information

- Do PE firms “select” companies that they somehow (thru the management of the target firm, for example) know will perform well or do they “influence” firm value positively?
- “Selection” story is unlikely to be true:
 - Performance after the LBO lags management’s predictions at the time of the LBO (implies that management was not hiding positive private information about operating performance from pre-LBO shareholders)
 - LBO attempts that failed because they are rejected by the board or shareholders are not associated with the same valuation and operating performance increases as completed LBOs.
 - CEO turnover is quite high during the first year of the LBO (most managers cannot internalize the benefits from tipping private equity funds)

Buy Low - Sell High

- PE funds are able to buy firms cheaper than other bidders
 - Post-1980s public-to-private transactions experience only modest increases in firm operating performance, but still generate large financial returns to private equity funds.
 - Better bargaining power or ability to identify undervalued firms/industries?

Employment

- *Critics:* LBOs benefit private equity investors at the expense of employees who suffer job and wage cuts.
- Employment grows at firms that experience LBOs, but at a slower rate than at other similar firms, consistent with concerns over job destruction.

Taxes

- Deductions of increased interest expenses from taxable income explain about 8% to 20% of valuation increases after an LBO.

PE Funds Returns

- Do PE funds generate earn returns for their limited partners?
 - Shareholders of firms that are sold to PE funds are likely to capture an important portion of the value created after the LBO because in acquisitions buyers share some of the synergy gains to target shareholders to convince them to sell their shares.
 - The limited partner investors in private equity funds pay meaningful fees. As a result, the return to outside investors net of fees will be lower than the return on the private equity fund's underlying investments.
 - Fees equal \$19 in present value per \$100 of capital under management for the median private equity fund.
 - Gross of fees PE funds outperform the S&P 500 index. However, net of fees, PE funds perform below (93% to 95%) the index. Also, there is persistence in PE fund returns that is absent in mutual and hedge funds.

Boom and Bust Cycles

- PE activity substantially increases during hot credit markets.
 - Private equity investors take advantage of systematic mispricings in the debt and equity markets. That is, when the cost of debt is relatively low compared to the cost of equity, private equity can arbitrage or benefit from the difference.
- During “hot” LBO markets, acquirers pay more (e.g., higher valuation multiples) to targets, suggesting PE funds pass along part of the benefits from cheap debt financing to target shareholders.
- PE deals completed during “hot” LBO markets tend to perform poorly.
- Question: Why don't public firms recapitalize using more debt during hot “LBO” markets?