

# Value Investing Lecture 2

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Based on: Value Investing: FROM GRAHAM TO BUFFETT AND BEYOND, Bruce C.N.Greenwald, Judd Kahn, Paul.D.Sonkin, & Michael Biema

# Topics for today

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- ❑ Hudson General Corporation
- ❑ More on market anomalies
- ❑ “Value Investing: The Use of Historical Financial Statement Information to Separate Winners from Losers,” by Joseph D. Piotroski

# Hudson General Asset Value

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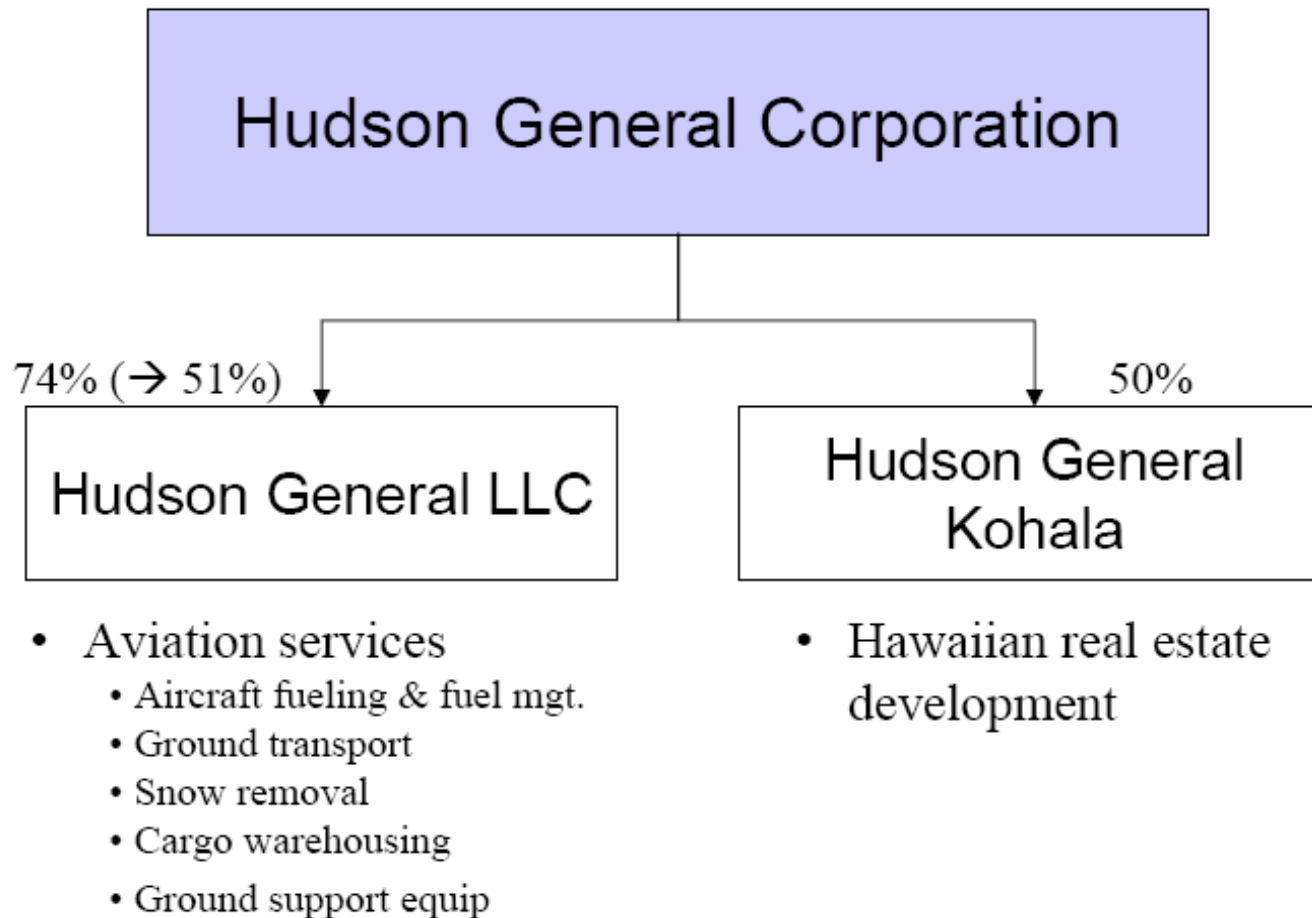
## Financials

Shares Outstanding, mil (p.15)	2.10	D/P Ratio	2.07%
Market Price, \$/Sh, IVQ (H+L)/2, (p.12)	48.25	P/E Ratio	15.98
Market Value of Equity, \$ mil	101.43	Book/Market value of equity	0.67
Book Value of Equity, \$ mil (p.12)	68.44	Book Equity/Book Assets	93.16%
Total Assets, \$ mil (p.12)	73.47	Debt/Book Equity	7.34%
		Debt/Market Equity	4.95%
Dividend per share, 1998 (p.12)	1.00		
Basic Net EPS (p.12)	3.02		
Diluted Net EPS (p. 12)	2.99		

# Hudson General Asset Value ....

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## Corporate Structure



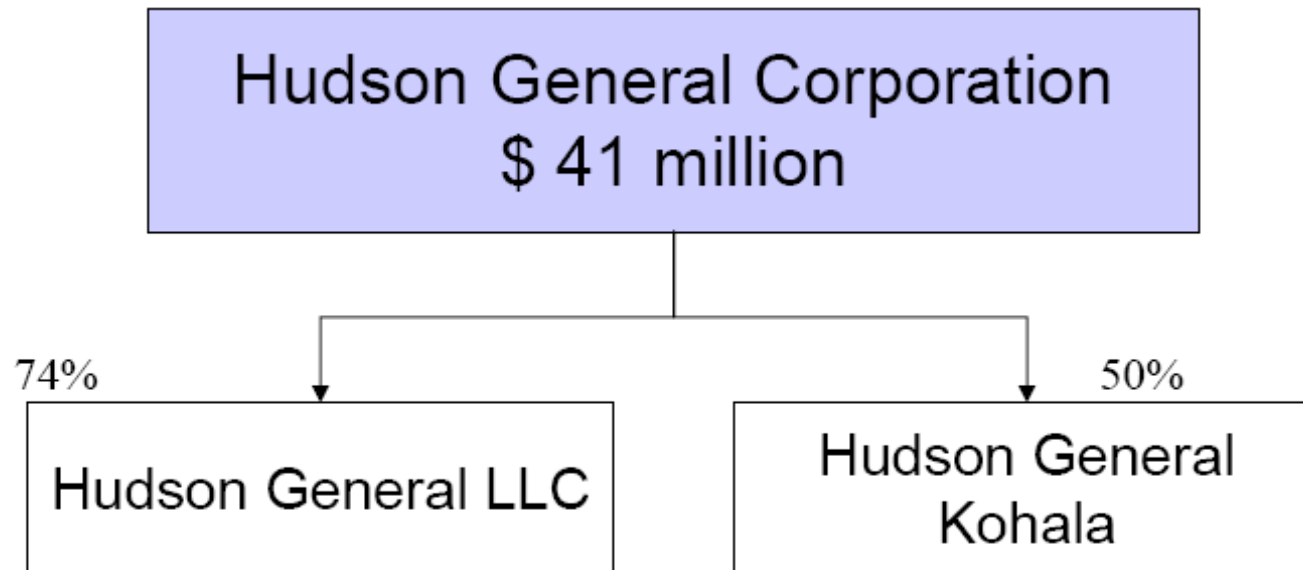
# Hudson General Asset Value ....

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	Book Value	Reproduction Value
	\$ '000	
Cash & Marketable securities	38,003	38,003
Receivables, prepaids	2,676	2,676
PPE (leased to HG LLC)	2,389	2,389
Hudson General Investment	Separate	
Kohala JV Investment	Separate	
Receivables from HG LLC	3,130	3,130
Total Assets	46,198	46,198
 <i>Current Liabilities</i>		
A&P Accrued Expense	2,828	2,828
Deferred Tax	2,197	2,197
Total current liabilities	5,025	5,025

# Hudson General Asset Value ....

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# Hudson General Asset Value ....

Page Twenty			Book Value	Liquidation Value
Cash and cash equivalents			355	355
Land & Development costs			Look Separate	
Mortgage, AR, & Note receivables			2,137	2,137
Foreclosed real estate			2,186	2,186
Other assets			1,549	1,549
		Total assets	6,227	6,227
		Payables	860	860
		Total Value	5,367	5,367
Adjustments to shut down, 25%				-1,342
		Total liquidation value		4,025
Hudson General's 50% interest value				2,013

# Kohala Joint Venture -- Land

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- ❑ Only real value may be in the land (original 4,000 acres)
- ❑ Paid \$120 million, starting in 1981 → \$30,000/acre
- ❑ Phase 1&2: 2,100 acres sold
- ❑ Phase 3: 550 acres
  - 100×5 parcels available, 15×5 acre plots sold
  - 420 acres available
- ❑ Phase 4: 1,350 acres
  - 1,350 acres available and undeveloped
  - 1,490 units approved and pending legal rulings
- ❑ 1,770 acres; 50% share for HGC
  - 885 acres

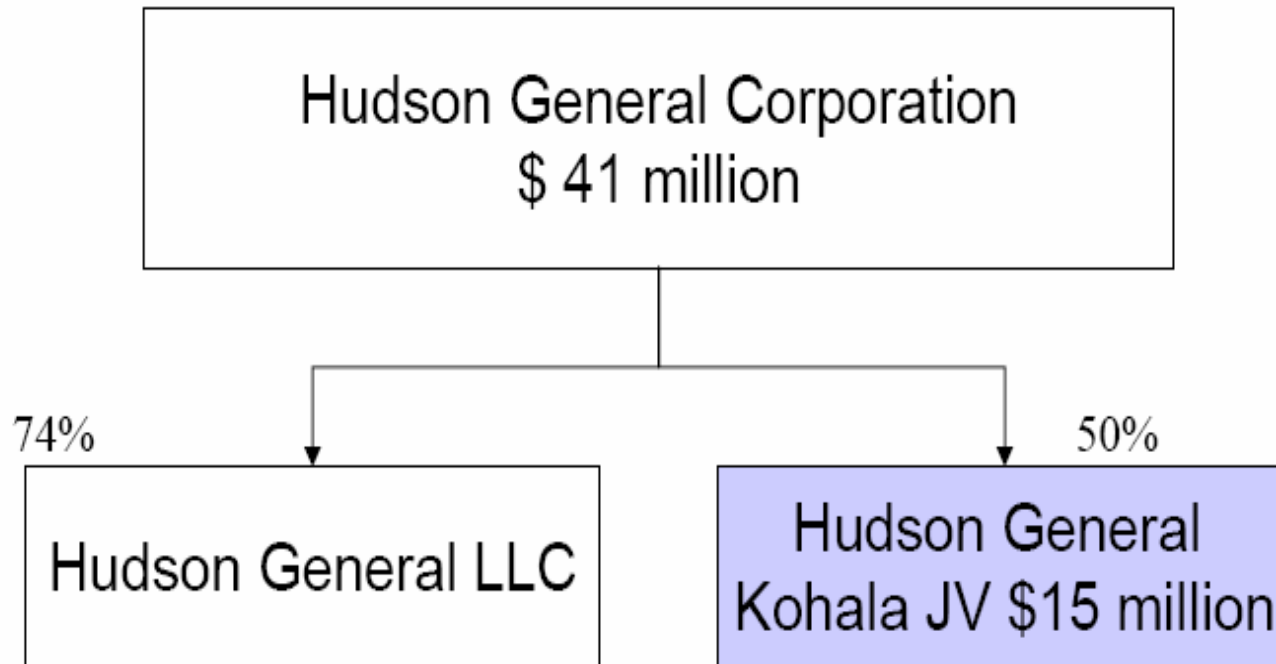
# Kohala Joint Venture – market value

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- Research real estate values,
  - Approximate, \$15,000 per acre
  - 885 acres × \$15,000 = \$13.3 million
    - (1/2 of original price)
  - Add the liquidation value of \$2 million
    - Gives \$15 million

# Kohala Joint Venture – market value

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# Hudson General LLC: Summary

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- Stable revenues
- No debt
- Operating income: \$14.6 million (p.19)
  - Depressed by upstream pmts to HGC
  - Decent margins
  - 24 airports and long term contracts

# Hudson General LLC: Asset Value

page eighteen		Book Value	Reproduction Value
		\$ million	
Cash & Equivalent		3.39	3.39
Receivables		16.89	16.89
Other current assets		6.39	6.39
PPE - net; rep val +20%?		45.64	55.00
Goodwill		0.00	Value of contracts?
Other assets net		0.64	0.64
	Total assets	72.31	82.31
<i>Current Liabilities</i>			
AP & ST & Accrued liabilities		36.37	36.37
Advances & Notes payable		5.51	5.51
	Total debt	41.88	41.88
	Net Asset Value	30.43	40.44
	HGC -- 74% interest	22.52	29.92

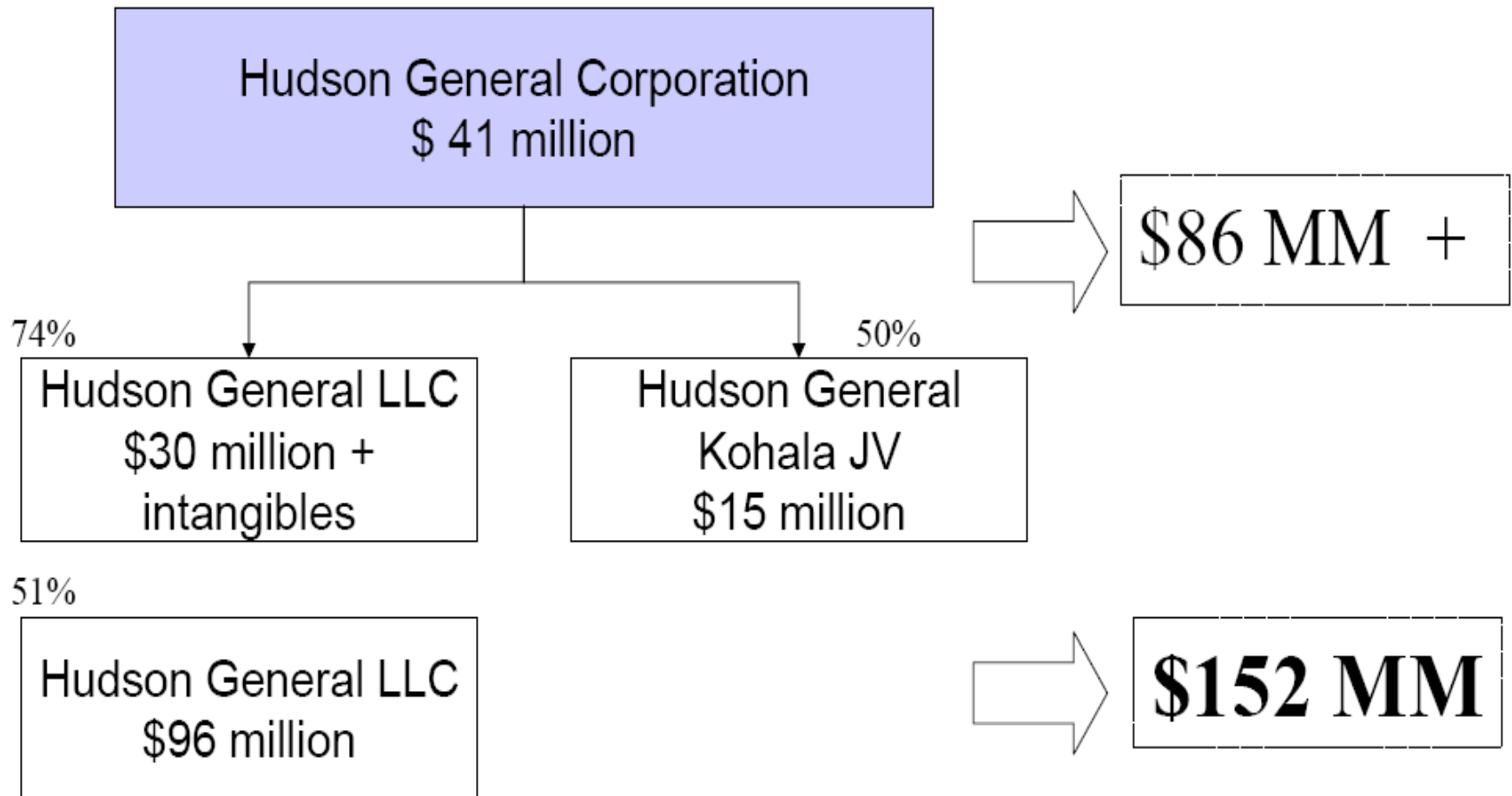
## Hudson General LLC: Private Market Value

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- Rather than try to value the intangibles, use current transaction value
- Lufthansa transactions
  - 6/96 → 26% for \$23.7 million = \$ 91 million (in 1996)
  - 9/98 → 23% for 29.6 million = **\$ 129 million**, a 10x earnings multiple (\$12.7 earnings)
- Hudson General's 51% stake in LLC post transaction
  - + 51% x 129 = \$66 million
  - + \$ 30 million in cash from transaction
  - + Control Premium (?)
  - = **\$ 96 million**

# Hudson General Corporation: Total Value

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# Hudson General: Earnings Power

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- Compute earnings Power for Hudson General
- Compute the valuation based on reorganization of the company
  - LLC continues to operate
  - Kohala land venture shut down, land sold
  - Management at Corporation removed
- Calculations:
  - EPV of LLC + Assets at Corporation, including cash from the Lufthansa transaction + Estimated value of the land

# Hudson General: Earnings Power..

	Current	Reorganized*	
EBIT	(\$ 2.724)	\$ ---	Get rid of Corp. structure, distribute assets
Hudson General LLC	\$ 9.426	\$ 7.45	(\$14.6mm EBIT x 51%)
Recapture of fees to HG Corp from LLC		\$ 5.78	
Kohala Joint Venture	(\$ 2.822)	\$ ---	Shut down, sell land
Adjusted Earnings	\$ 3.88	\$ 13.23	
Provision for Taxes	\$2.780	\$ 4.76	At 36%
<b><u>Net earnings</u></b>	<b><u>\$ 1.10</u></b>	<b><u>\$ 8.47</u></b>	
$\text{WACC} = (50\%)(12\%) + (50\%)(8\%)(64\%) = 8 \frac{1}{2}\%$ <div style="display: flex; justify-content: space-around; width: 100%;"> <span>Equity</span> <span>Debt</span> <span>(1-36%)</span> </div>			
Earnings Power	\$13.0	\$100	+ AV of Parent = \$41 + Kohala = \$15 + Cash from sale = \$30 mm + Control Premium
		<b>\$ 186 MM</b>	

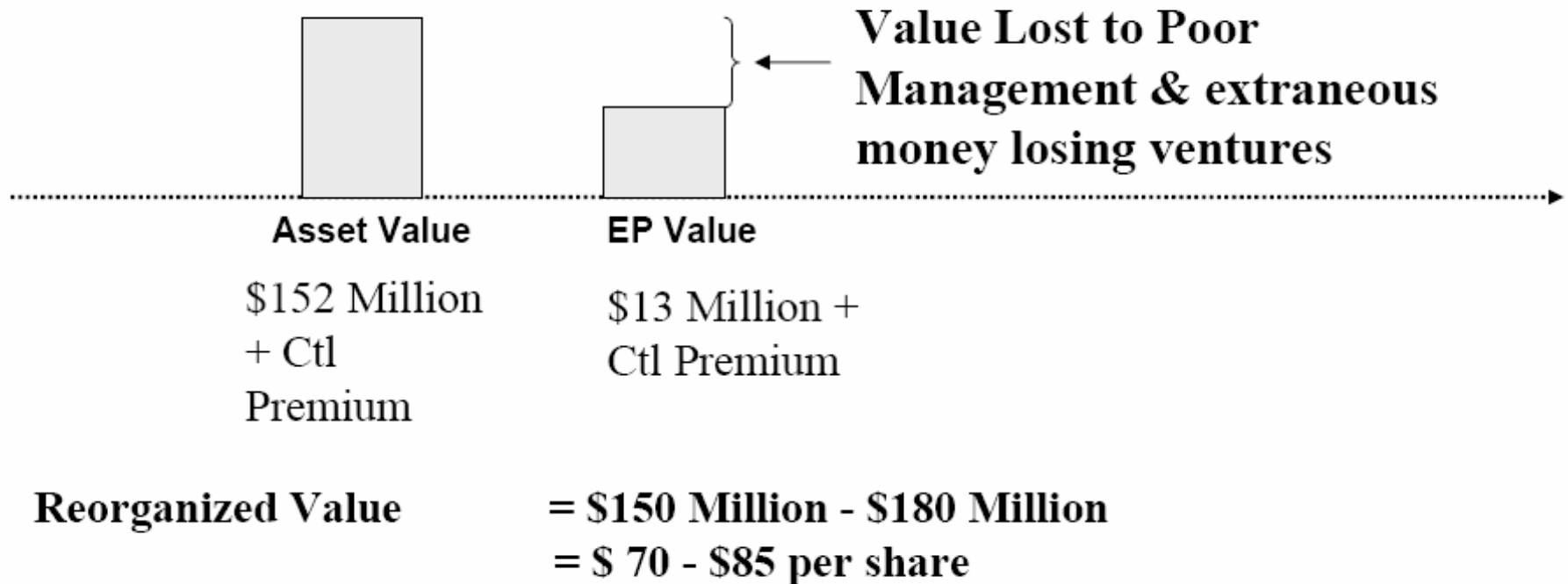
\* At 51% share, after transaction

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# Hudson General: Summary

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## Case A: Hudson General



# Hudson General: Summary

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- Poor management
  - Holding cash
  - Aimless (joint venture)
- Mitigate some of the critical uncertainties
  - Triangulating data (assets, earnings power, private market values, etc.)
  - Know what you are buying – isolate the unknowns and quantify
- Catalyst exists
  - Gabelli owns majority of stock – 49%

# Hudson General: Summary

Date	Bidder	Total Value	Per Share	Premium to price
11/20/1998	Pre-announcement		\$54.625	
11/24/1998	Management	\$ 100.0	\$57.25	4.8%
12/14/1998	Ranger Aerospace	\$ 108.3	\$62.00	8.3%
2/9/1999	Ogden	\$ 113.5	\$65.00	13.5%
	Lufthansa (Globe Ground)	\$ 117.0	\$67.00	17.0%
	Management	\$ 106.5	\$61.00	6.6%
2/12/99	Ranger Aerospace	\$ 125.7	\$72.00	25.6%
2/16/99	Lufthansa (Globe Ground)	\$ 132.7	\$76.00	32.6%
Purchase on 11/25/98 @ \$60 / share = 26.6% return, 113.8% annualized				

# More on Market Anomalies

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- Accruals
- Limited Attention
- Geographic proximity
- Tangible Vs. Intangible ....

# Accruals

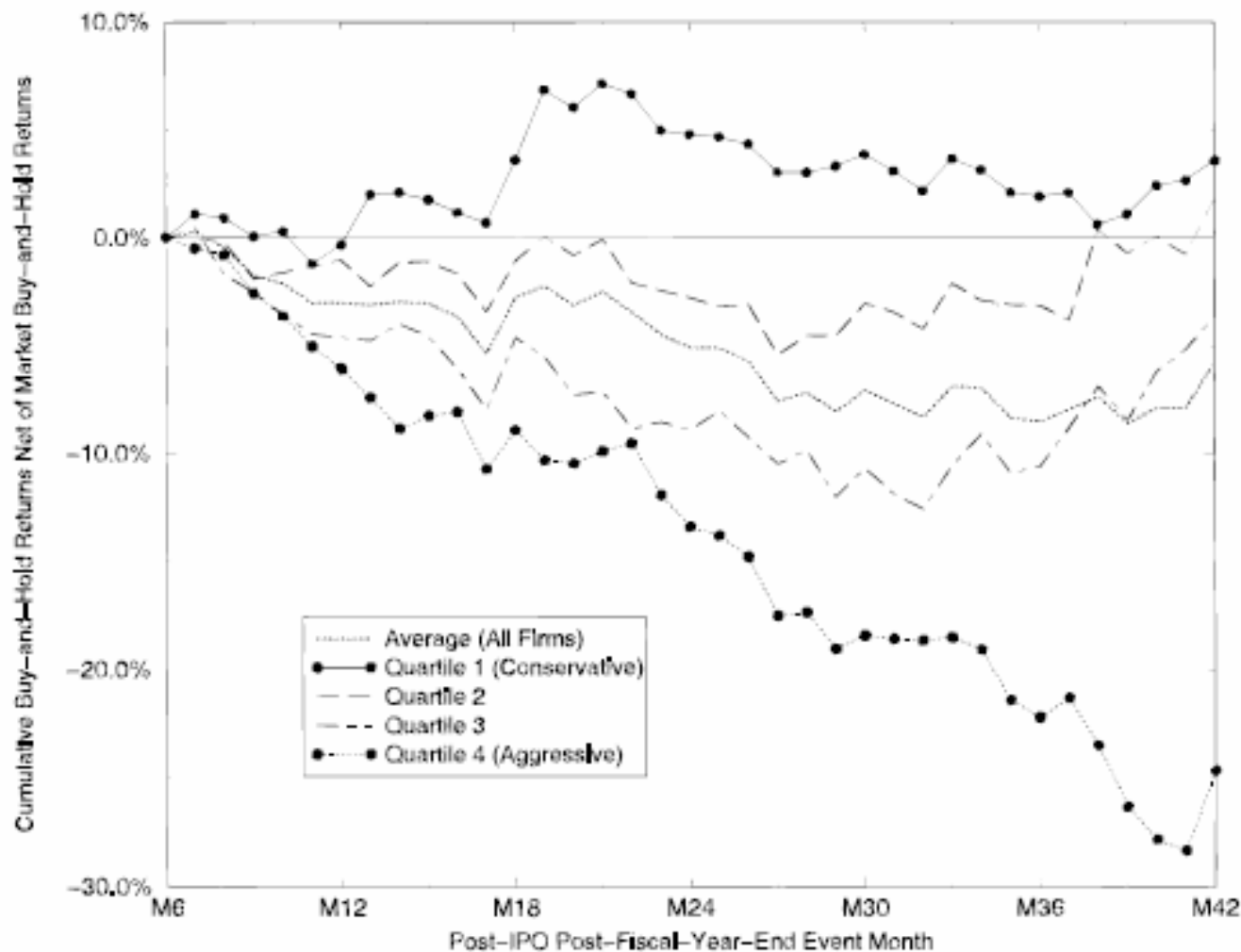
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- Reported earnings include accounting adjustments called accruals.
  - These adjustments to earnings are supposed to reflect the underlying business condition of the firm more accurately.
  - However, managers have discretion over accruals, particularly the short-term current accruals.
  - The incentives to use accruals to manage earnings can be strong, especially when we consider IPOs and SEOs.
  - Market does not seem to fully see through what accruals mean.

# Accruals ....

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- Teoh, Welch and Wong (1998, JoF) show that IPO firms systematically use discretionary current accruals to manage earnings immediate before and after the IPOs
  - Long-run performance of IPOs are systematically related to accruals
  - High accruals → lower long-run IPO returns
  - Low accruals → higher long-run IPO returns
  - The difference of long-run returns between high and low accruals portfolios can be as much as 30% within three years following the IPO date



**Figure 2. Cumulative buy-and-hold return net of Nasdaq composite index return of DCA quartiles by event month, in percent.** The sample is of 1,649 IPOs from the 1980–92 period. (Details are described in Table I.) Firms are divided into quartiles based on how aggressively they manage their earnings. Our measure of earnings management is the firm’s discretionary current accruals (DCA), which adjusts for industry, size, and growth. Details are described in Table II and Section I.B.

# Limited Attention

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- ENMD case (Huberman and Regev, 2001)

# Events, EMD

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- A breakthrough in cancer research was published as a scientific piece in *Nature* (Boehm et al., 1997)
  - Also reported in the popular press
    - The *Times* (Wade, 1997), November 1997.
  
- Sunday, May 3, 1998:
  - *New York Times* reports the same breakthrough in cancer research
  - Mentions ENMD, a company with licensing rights to the breakthrough.
  - The story's impact on the stock prices was immediate, large, and to a large extent permanent.

# Events, ENMD ...

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- By early November 1998, ENMD was trading at the upper 20s and lower 30s.
- On November 12, 1998, another piece of new news came to light:
- *Wall Street Journal* reports that other laboratories failed to replicate the results described earlier in the *Times* (King, 1998).
- ENMD's stock price fell from 32.625 on November 11 to close at 24.875 on November 12 –
  - ~~Still more than twice ENMD's price on May 1!~~

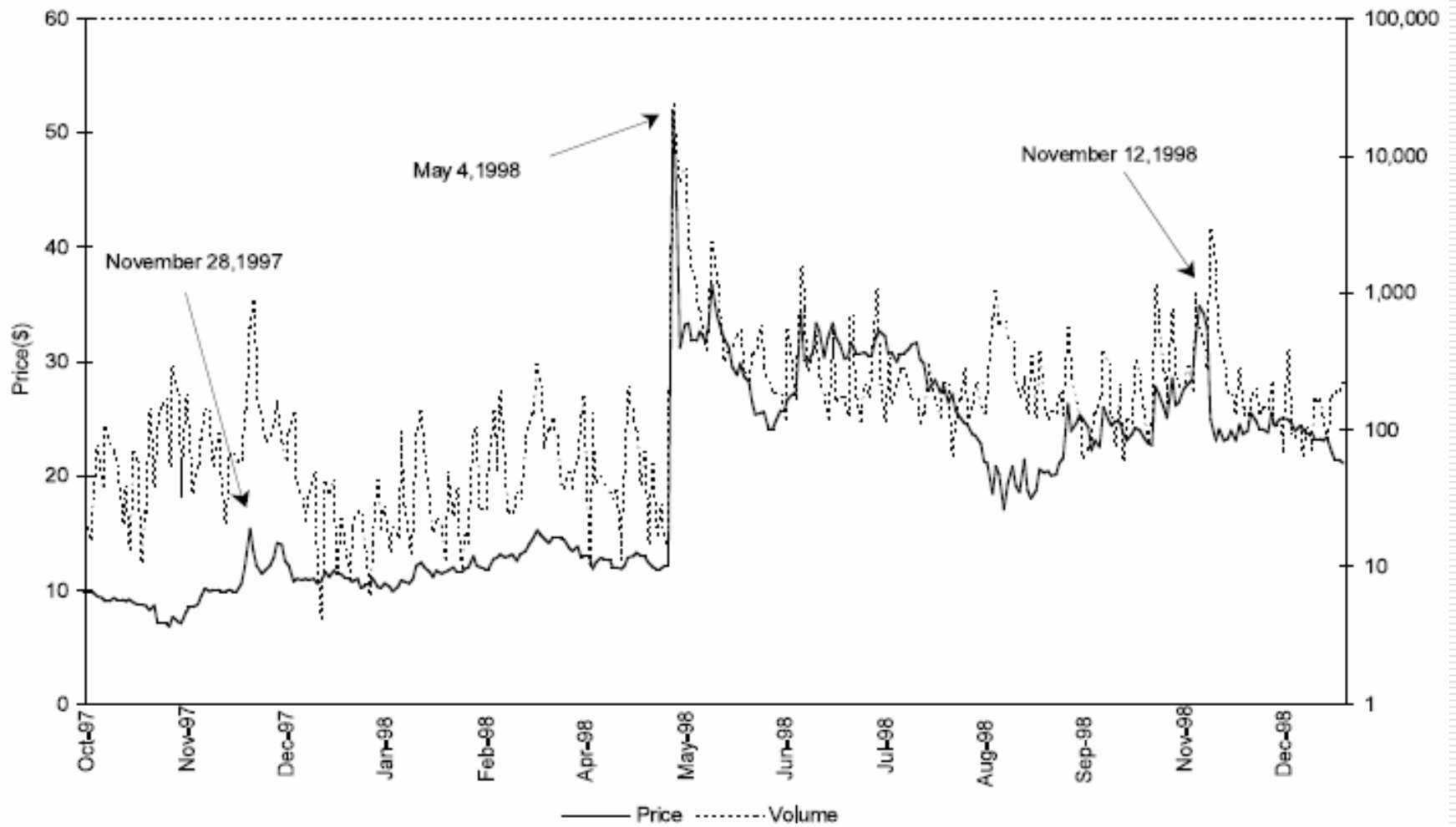


Figure 1. ENMD closing prices and trading volume, October 1, 1997, to December 30, 1998.

# MCI-MCIC

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- Based on Rashes (2001, Journal of Finance)
  - From the end of 1996 through 1997, MCI Communications was involved in several merger negotiations with other major telecommunications firms and was eventually acquired by Worldcom for more than \$20 billion.
  - Until the merger, it traded on the Nasdaq under the ticker symbol **MCIC**.

# MCI-MCIC ...

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- Massmutual Corporate Investors is a closed-end mutual fund that trades on the New York Stock Exchange under the ticker symbol **MCI**.
  - The fund has approximately \$200 million of net assets. The fund invests most of its assets in long-term corporate debt obligations and convertible securities, many of which are fairly illiquid. It does not hold, nor has it held in the past, the securities of MCIC or other major telecommunications companies.
- Investors could mistakenly associate the ticker MCI with the firm MCI Communications
  - That is what happened

**Table II**  
**Top MCI Volume Days**

The highest volume days of Massmutual Corporate Investors fund (MCI) for the sample period 11/1/96–11/13/97 are displayed in descending order. For each day, the trading volume of MCI is shown along with the return on MCI and MCI Communications (MCIC). The return for security  $j$  is defined as  $\text{Log}[(P_{j,t+1} + D_{j,t+1})/P_{j,t}]$ , where  $P_{j,t}$  and  $D_{j,t}$  are the price and dividend, respectively, for security  $j$  on day  $t$ . All returns are expressed in percentages. Any news from these days relevant to MCIC merger discussions is also displayed.

MCI Volume	Date	MCI Return	MCIC Return	Merger News
59,200	11/1/96	0.68	18.56	British Telecom makes initial bid
45,500	10/1/97	2.35	18.41	Worldcom makes initial bid
40,200	8/21/97	-0.30	-18.27	British Telecom announces it is renegotiating original agreement
30,000	11/10/97	0.70	11.82	Worldcom announces definitive acquisition agreement
25,100	7/11/97	-0.31	-19.12	Rumors that British Telecom's bid may be renegotiated
24,600	10/2/97	-0.73	3.65	See 10/1/97
24,600	10/16/97	0.58	3.33	See 10/15/97
22,800	5/12/97	-1.30	2.28	European Union deems Boeing/McDonnell Douglas merger unacceptable; may place restrictions on British Telecom/MCIC combination
21,100	1/17/97	1.92	0.36	
17,300	11/4/96	0.34	1.64	See 11/1/96
16,600	4/30/97	-0.96	-0.33	See 4/29/97
16,300	11/11/97	0.42	0.00	See 11/10/97
14,600	5/30/97	-0.63	0.33	
14,300	4/29/97	2.25	0.99	Global One executive announces British Telecom/MCIC combination poses competitive "danger"
13,700	12/27/96	1.62	0.38	
13,600	7/14/97	0.46	7.07	See 7/11/97
11,900	7/28/97	0.30	-0.27	FCC says British Telecom acquisition should be approved
11,900	10/28/97	0.00	0.71	MCIC shareholders file suit over mishandling of British Telecom bid
11,700	12/26/96	0.63	0.77	
11,300	6/17/97	0.63	-0.56	
10,700	8/20/97	0.60	5.79	See 8/21/97
10,100	10/15/97	0.00	4.33	GTE announces initial bid
10,000	3/17/97	-2.56	-0.34	

# Geographical Proximity

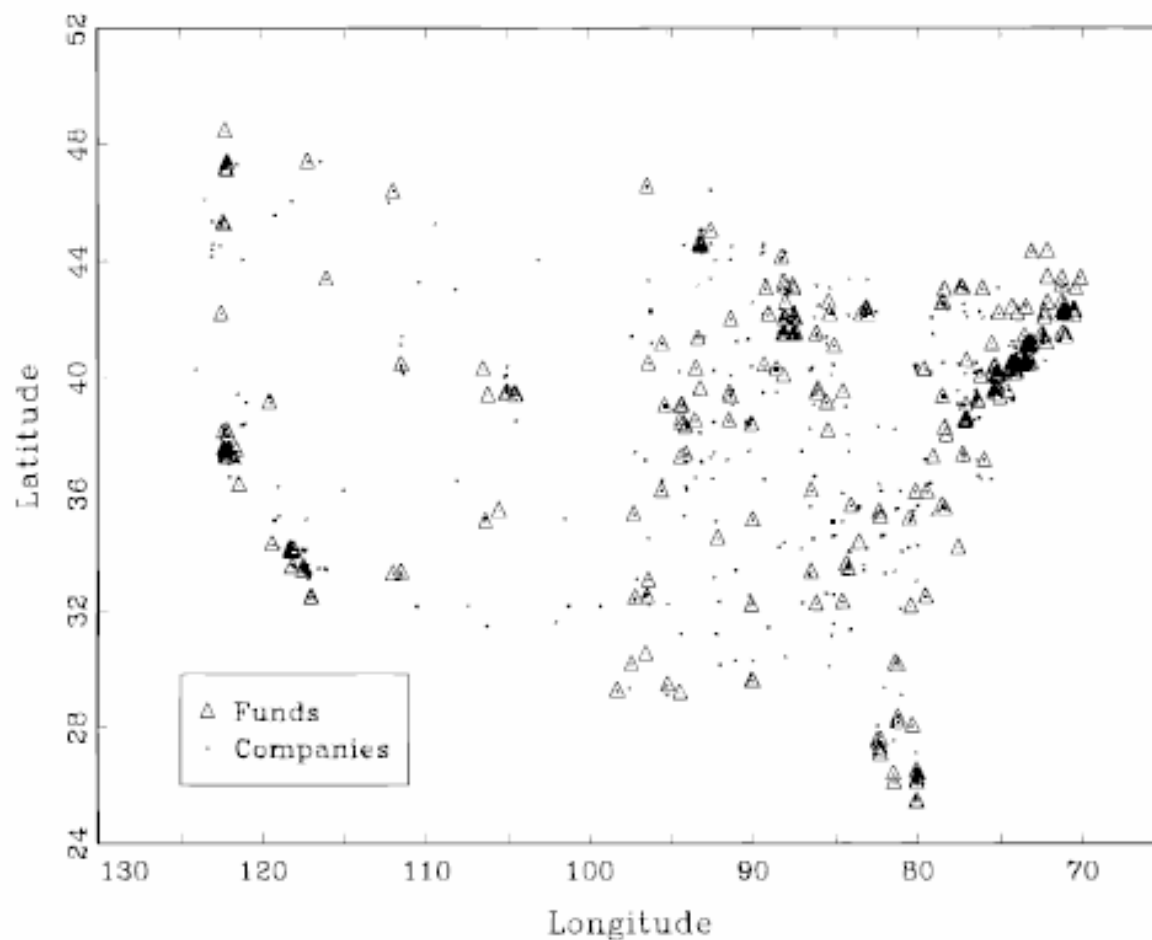
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- Loughran and Schultz (2005, JFE)
  - Rural firms (away from the major metropolitan areas)
    - Less liquid stocks,
  - Urban firms (within the major metropolitan areas)
    - More liquid stocks.
  - Information diffusion from rural areas to urban areas is not as speedy as the information diffusion within urban areas
    - Do you agree?

# Geographical Proximity ...

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- Mutual fund managers are more likely to hold stocks of firms located relatively close to the fund (Coval and Moskowitz, 1999, JF).
  
- Do managers who are closer to the underlying holdings perform better?
  - Yes (Coval and Moskowitz, 2001, JPE).



**Figure 1. Geographic distribution of U.S. firms and investment managers.** Plot of the location of the 1,189 investment fund managers in our sample and the headquarters location of the 2,736 different companies they hold. The horizontal axis contains the actual longitude, converted to degree values, of the fund manager and corporate headquarters location. The vertical axis contains the actual latitude degree values. Latitude and longitude coordinates were obtained from the *U.S. Census Bureau's Gazetteer Place and Zip code Database*. A small amount of random noise was added to each location, so that the mass of funds and companies locating in a given area can be gauged, rather than a single point appearing for New York, for example.

# Tangible/Intangible Information

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- Daniel and Titman (2006, JF)

- Tangible Returns

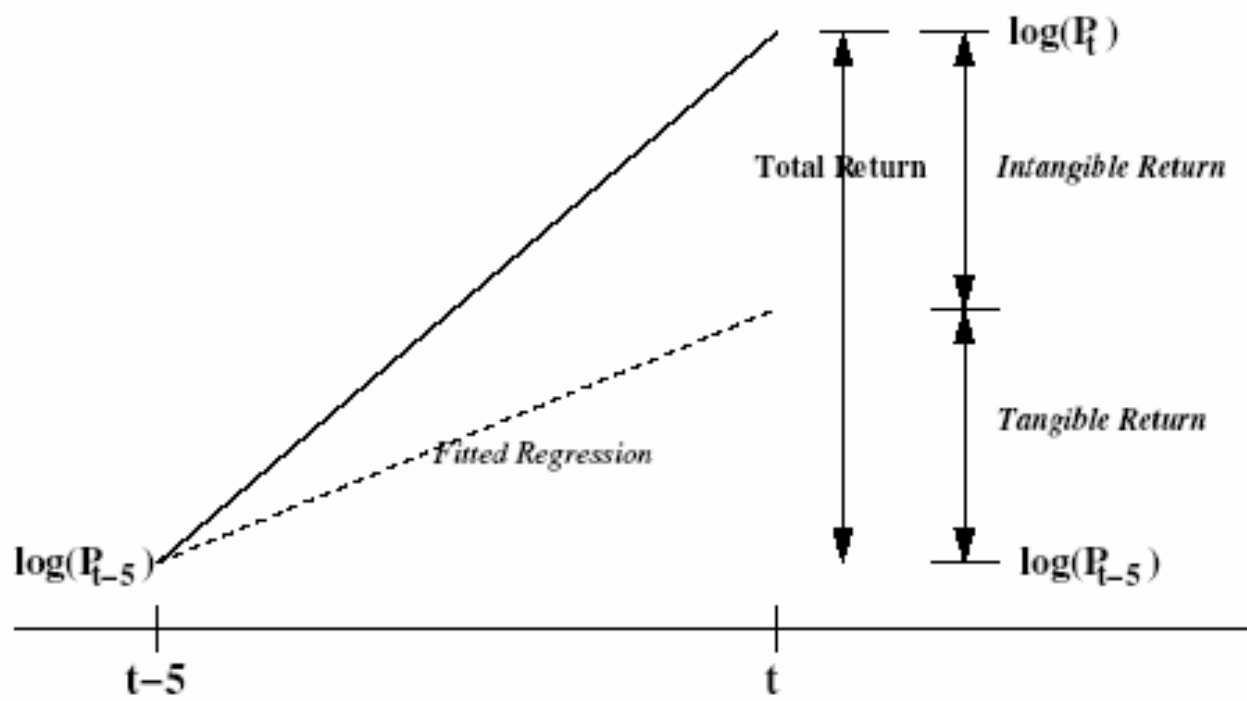
- Fraction of the past returns related to fundamental growth rates (such as book value of equity's growth rates, sales growth rates, etc)

- Intangible Returns

- Fraction of the past returns unrelated to firm fundamentals

- Composite issuance measure (CI)

- Change in outstanding shares due to share issues, share repurchase, exercise of stocks options etc
  - Excludes those changes related to stock dividends, stock splits, etc
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# Tangible/Intangible ...

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- Tangible Returns

- Unrelated to future returns

- Intangible Returns

- Negatively related to future returns

- Composite Issuance Measures

- Negatively related to future returns

# Tangible/Intangible ...

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- ❑ MKT is the market portfolio
- ❑ SMB is the Small Minus Big, L/S portfolio
- ❑ UMD is the Winner minus Loser, L/S portfolio
- ❑ ISU is the composite Issuance L/S portfolio
- ❑ ACR is the Accrual L/S portfolio
- ❑ HML is the High book/mkt Minus Low book/mkt portfolio

# Tangible/Intangible ...

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MKT	Portfolio Weights (%)					ACR	<i>Ex-Post</i> Sharpe ratio
	SMB	HML	UMD	ISU			
100.00	–	–	–	–	–	–	0.090
75.07	24.93	–	–	–	–	–	0.093
28.19	14.63	57.18	–	–	–	–	0.232
21.13	10.16	41.92	26.79	–	–	–	0.342
18.82	15.33	13.87	9.55	42.44	–	–	0.448
17.35	14.47	12.32	8.18	36.65	11.04	–	0.461

# Piotroski 2000

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## □ Financial Performance Signals

### ■ Profitability

- ROA, CFO,  $\Delta$ ROA, Accrual
- Leverage, Liquidity, and Source of Funds
- $\Delta$ Lev,  $\Delta$ Liquid,  $\Delta$ Offer

### ■ Operating Efficiency

- $\Delta$ Margin,  $\Delta$ Turn

### ■ Composite Score – Sum of:

- F\_ROA, F\_CFO, F\_ $\Delta$ ROA, F\_Accrual
- F\_ $\Delta$ Lev, F\_ $\Delta$ Liquid, F\_ $\Delta$ Offer
- F\_ $\Delta$ Margin, F\_ $\Delta$ Turn

# Piotroski 2000 ....

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- Portfolio formation
  - Take all fiscal year ending in a calendar year
  - Measure returns from month 6 to 17
  - Group firms into
    - B/M quintiles
    - Size terciles
    - Low aggregate score (0 or 1)
    - High aggregate score (8 or 9)

# Piotroski 2000 ....

**TABLE 1**

*Financial and Return Characteristics of High Book-to-Market Firms  
(14,043 Firm-Year Observations between 1976 and 1996)*

<b>Panel A: Financial Characteristics</b>				
Variable	Mean	Median	Standard Deviation	Proportion with Positive Signal
<i>MVE</i> <sup>a</sup>	188.500	14.365	1015.39	n/a
<i>ASSETS</i> <sup>b</sup>	1043.99	57.561	6653.48	n/a
<i>BM</i> <sup>c</sup>	2.444	1.721	34.66	n/a
<i>ROA</i> <sup>d</sup>	-0.0054	0.0128	0.1067	0.632
$\Delta$ <i>ROA</i> <sup>e</sup>	-0.0096	-0.0047	0.2171	0.432
$\Delta$ <i>MARGIN</i> <sup>f</sup>	-0.0324	-0.0034	1.9306	0.454
<i>CFO</i> <sup>g</sup>	0.0498	0.0532	0.1332	0.755
$\Delta$ <i>LIQUID</i> <sup>h</sup>	-0.0078	0	0.1133	0.384
$\Delta$ <i>LEVER</i> <sup>i</sup>	0.0024	0	0.0932	0.498
$\Delta$ <i>TURN</i> <sup>j</sup>	0.0119	0.0068	0.5851	0.534
<i>ACCRUAL</i> <sup>k</sup>	-0.0552	-0.0481	0.1388	0.780

# Piotroski 2000 ....

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## Panel B: Buy-and-Hold Returns from a High Book-to-Market Investment Strategy

Returns <sup>1</sup>	Mean	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	Percentage Positive
One-Year Returns							
Raw	0.239	-0.391	-0.150	0.105	0.438	0.902	0.610
Market-Adjusted	0.059	-0.560	-0.317	-0.061	0.255	0.708	0.437
Two-Year Returns							
Raw	0.479	-0.517	-0.179	0.231	0.750	1.579	0.646
Market-Adjusted	0.127	-0.872	-0.517	-0.111	0.394	1.205	0.432

# Piotroski 2000 Table 3A

<b>Panel A: One-Year Raw Returns<sup>a</sup></b>								
	Mean	10%	25%	Median	75%	90%	% Positive	<i>n</i>
All Firms	0.239	-0.391	-0.150	0.105	0.438	0.902	0.610	14,043
<i>F_SCORE</i>								
0	0.112	-0.638	-0.302	0.000	0.511	1.051	0.491	57
1	0.073	-0.590	-0.298	-0.042	0.253	0.741	0.454	339
2	0.159	-0.512	-0.278	0.024	0.369	0.898	0.520	859
3	0.159	-0.513	-0.250	0.034	0.368	0.867	0.535	1618
4	0.202	-0.412	-0.181	0.070	0.412	0.875	0.573	2462
5	0.234	-0.375	-0.146	0.114	0.447	0.900	0.616	2787
6	0.294	-0.333	-0.107	0.143	0.470	0.908	0.651	2579
7	0.304	-0.294	-0.070	0.164	0.487	0.941	0.681	1894
8	0.304	-0.265	-0.066	0.163	0.483	0.922	0.675	1115
9	0.341	-0.272	-0.102	0.167	0.506	1.200	0.661	333
Low Score	0.078	-0.589	-0.300	-0.027	0.270	0.773	0.460	396
High Score	0.313	-0.267	-0.074	0.166	0.484	0.955	0.672	1448

# Piotroski 2000 Table 3B

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## Panel B: One-Year Market-Adjusted Returns<sup>b</sup>

All Firms	0.059	-0.560	-0.317	-0.061	0.255	0.708	0.437	14,043
<i>F_SCORE</i>								
0	-0.061	-0.710	-0.450	-0.105	0.372	0.766	0.386	57
1	-0.102	-0.796	-0.463	-0.203	0.087	0.490	0.307	339
2	-0.020	-0.686	-0.440	-0.151	0.198	0.732	0.374	859
3	-0.015	-0.691	-0.411	-0.142	0.186	0.667	0.375	1618
4	0.026	-0.581	-0.351	-0.100	0.229	0.691	0.405	2462
5	0.053	-0.543	-0.307	-0.059	0.255	0.705	0.438	2787
6	0.112	-0.493	-0.278	-0.024	0.285	0.711	0.471	2579
7	0.116	-0.466	-0.251	-0.011	0.301	0.747	0.489	1894
8	0.127	-0.462	-0.226	0.003	0.309	0.710	0.504	1115

# Piotroski 2000 Table 3B ....

**TABLE 3** — *continued*

	Mean	10%	25%	Median	75%	90%	% Positive	<i>n</i>
9	0.159	-0.459	-0.265	-0.012	0.327	0.885	0.486	333
Low Score	-0.096	-0.781	-0.460	-0.200	0.107	0.548	0.318	396
High Score	0.134	-0.462	-0.236	0.000	0.316	0.757	0.500	1448
High-All	0.075	0.098	0.081	0.061	0.061	0.049	0.063	—
<i>t</i> -Statistic/ ( <i>p</i> -Value)	3.140	—	—	(0.000)	—	—	(0.000)	—
Bootstrap Result	2/1000	0/1000	0/1000	0/1000	2/1000	126/1000	—	—
( <i>p</i> -Value)	(0.002)	(0.000)	(0.000)	(0.000)	(0.002)	(0.126)	—	—
High-Low	0.230	0.319	0.224	0.200	0.209	0.209	0.182	—
<i>t</i> -Statistic/ ( <i>p</i> -Value)	5.590	—	—	(0.000)	—	—	(0.000)	—
Bootstrap Result	0/1000	0/1000	0/1000	0/1000	0/1000	18/1000	—	—
( <i>p</i> -Value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.018)	—	—

# Piotroski 2000 Table 4

**TABLE 4**  
*One-Year Market-Adjusted Buy-and-Hold Returns to a Value Investment Strategy*  
*Based on Fundamental Signals by Size Partition<sup>a</sup>*

	Small Firms			Medium Firms			Large Firms		
	Mean	Median	<i>n</i>	Mean	Median	<i>n</i>	Mean	Median	<i>n</i>
All Firms	0.091	-0.077	8302	0.008	-0.059	3906	0.003	-0.028	1835
<i>F_SCORE</i>									
0	0.000	-0.076	32	-0.146	-0.235	17	-0.120	-0.047	8
1	-0.104	-0.227	234	-0.083	-0.228	79	-0.136	-0.073	26
2	-0.016	-0.171	582	-0.045	-0.131	218	0.031	-0.076	59
3	0.003	-0.168	1028	-0.049	-0.108	429	-0.036	-0.068	161
4	0.058	-0.116	1419	-0.024	-0.104	687	-0.002	-0.023	356
5	0.079	-0.075	1590	0.028	-0.060	808	-0.004	-0.031	389
6	0.183	-0.030	1438	0.029	-0.041	736	0.012	-0.004	405
7	0.182	0.005	1084	0.027	-0.028	540	0.028	-0.015	270
8	0.170	0.001	671	0.081	0.024	312	0.012	-0.041	132
9	0.204	-0.017	224	0.068	0.032	80	0.059	-0.045	29
Low Score	-0.091	-0.209	266	-0.094	-0.232	96	-0.132	-0.066	34
High Score	0.179	-0.007	895	0.079	0.024	392	0.020	-0.045	161
High-All	0.088	0.070	—	0.071	0.083	—	0.017	-0.017	—
<i>t</i> -Statistic/ ( <i>p</i> -Value)	2.456	(0.000)	—	2.870	(0.000)	—	0.872	(0.203)	—
High-Low	0.270	0.202	—	0.173	0.256	—	0.152	0.021	—
<i>t</i> -Statistic/ ( <i>p</i> -Value)	4.709	(0.000)	—	2.870	(0.000)	—	1.884	(0.224)	—