



# CS FIRST BOSTON

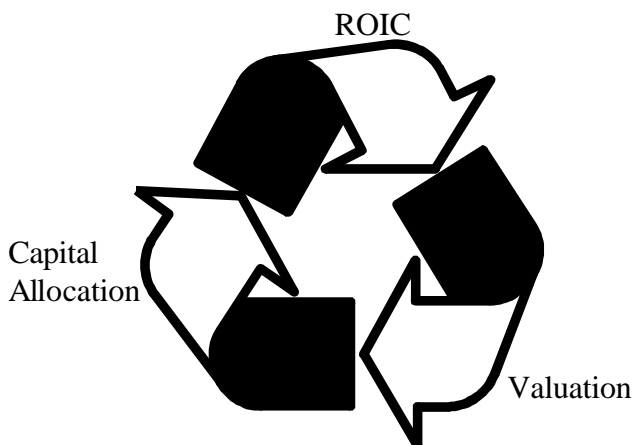
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## Plus Ça Change, Plus C'est Pareil

*"The more things change, the more they stay the same."*

Wealth Maximization Should Be Management's Prime Goal



- The correlation between return spreads and valuation is strong.
- The market recognizes and rewards high-return businesses.
- Analysts can gain a greater edge by understanding capital allocation than by predicting earnings.
- Managements must focus on maximizing shareholder value.

## Introduction

Gaining a competitive advantage in the investing business is certainly challenging. To tackle this problem, an analyst must first clearly understand what the market cares about and then decipher the drivers of shareholder wealth. Further, only to the extent that these value drivers are different from, or tangential to, the day-to-day investment chatter can they be considered of incremental informational or analytical value.

This report seeks to outline a solution to this investing challenge. We have attempted to do this in a few steps. First, we use basic statistical tools to understand the elements that best explain valuation in the packaged food industry. We then consider what our empirical evidence says about stock market behavior. Finally, we outline the facets of value that should be the focus of managers and investors alike.

Our conclusion also serves as our title: translated into English, it simply means “the more things change, the more they stay the same.” That is, companies can partake in M&A, write-offs, restructuring programs, strategic repositionings, and accounting chicanery, but at the end of the day what matters is a company’s ability to generate satisfactory cash returns on the capital it employs. Doing so consistently in the face of a rapidly changing business world requires hard work, foresight, and discipline. The philosopher Baruch Spinoza’s words ring true for managers: “All things excellent are as difficult as they are rare.”

## Study Results

We performed a regression analysis on packaged food industry data for 1995, 1990, and 1985 using the return on invested capital (ROIC) versus weighted average cost of capital (WACC) spread as the independent variable, and enterprise value to invested capital as the dependent variable. As finance theory (and common sense) would suggest, our results show that the correlation between return spreads and valuation was quite strong over a ten-year measurement period. As important, the t-statistics were impressive, demonstrating that the model has substantial explanatory power. Table 1 summarizes our r-squared and t-statistic findings, and Charts 1-3 show the actual plots. Further, all of

the empirical work we have done suggests that the ROIC to WACC spread is a better indicator of valuation than other widely used value proxies, including earnings per share growth and return on equity.<sup>1</sup>

**Table 1**  
**Return Spreads Correlate Well with Valuation**

Year	R-squared	t-statistic
1995	88%	10.3
1990	55	3.5
1985	80	6.7

Source: Published data, CS First Boston estimates.

There are two other noteworthy points about our results. First is that the y-intercept (the enterprise value/invested capital at a zero spread) remained stable over the decade we tracked. Second, the slope of the regression line steepened over the measured time series. We hypothesize why these conditions have emerged:

- The y-intercept—the point where the return on capital equals the cost of capital—remained nearly constant at about 1.6 times enterprise value to invested capital over the three measurement periods. (In theory, if the ROIC equals WACC, the enterprise value should equal 1.0 times invested capital.) We believe there are two potential explanations for this observation. The first is that invested capital may be understated as the result of inflation. Assuming that the average life of fixed assets for a food company is roughly five years—depreciation regularly represents 10% of net property plant and equipment in the industry—and that inflation equals 3%, invested capital may be understated by 15-20%. This observation, when coupled with the thesis that the market’s view of the industry has not changed dramatically in the measured period, explains both the y-intercept’s above-1.0 multiple and its consistency. Second, we believe the market is likely impounding future value creation, meaning that the present value of growth opportunities has had a positive value. This may not be an unreasonable assumption in an industry that has had, on balance, returns that exceed the cost of capital during the past decade.

<sup>1</sup>See “Packaged Food Industry Rate of Return Analysis,” July 1994.

• The slope of the regression line has steepened over the ten-year measurement period. This means that for any given positive ROIC-WACC spread, the multiple of enterprise value to invested capital has become higher over time; given a negative ROIC-WACC spread, the multiple of enterprise value to invested capital trends lower over time. Again, note that the y-intercept has not changed. We believe there are two plausible explanations for this. First, we sense there might be a “rich get richer and poor get poorer” phenomenon, justifying the fact that high-return companies are enjoying higher relative valuations and low-return companies are receiving lower multiples. In finance terms, we might say that the “competitive advantage period” is deemed to be expanding for the best competitively positioned companies, and shrinking for weak return businesses.<sup>2</sup> Second, lower interest rates—expressed more specifically in our analysis as a lower weighted average cost of capital—have had a magnifying affect on enterprise value to invested capital multiples (see Table 2).

**Table 2**  
**How ROIC/WACC Ratio Defines Multiples**

	1985	1990	1995
ROIC-WACC spread	4.0%	4.0%	4.0%
Enterprise value/invested capital	2.05	2.36	2.52

Source: Company published data, CS First Boston estimates.

Stated differently, when the ROIC to WACC spread is positive and constant, the enterprise value to invested capital ratio will increase as WACC falls. Inversely, if the ROIC to WACC spread is negative and constant, the enterprise value to invested capital ratio declines as WACC falls.<sup>3</sup> The math behind this point is laid out in the appendix.

Although our analysis firmly suggests that the market appreciates high-return businesses, it is incorrect to conclude that a manager’s sole objective is to maximize returns on invested capital. In fact, man-

agement’s prime goal should be to maximize the difference between enterprise value and invested capital.

Table 3 outlines why this point is valid. Assume an all-equity financed company has two strategy options. It can either continue on its present course (scenario A), delivering \$20 of earnings on a \$100 invested capital base, or invest an additional \$100 into its business at an incremental rate of return of 15% (scenario B). Assuming a 10% cost of capital and 20 shares outstanding, the business is worth \$20 per share under scenario A, with a price-to-book ratio of 2.0 times and an ROIC of 20%. Under scenario B—assuming the capital addition was financed by issuing shares—the ROIC, price/book ratio and shares outstanding all get diluted. However, the value of each share rises almost 17%. This is precisely why we believe managers should avoid compensation programs linked solely to return on invested capital.

**Table 3**  
**Wealth Maximization Not Tied Solely to ROIC**

	Scenario A	Scenario B
NOPAT	\$20	\$35
Invested capital	100	200
WACC	10%	10%
ROIC	20	17.5
Value	\$200	\$350
Price/book	2.0	1.75
Shares outstanding	10	15
Value per share	\$20.00	\$23.33

### Message from the Market

We can draw two important conclusions about what our evidence says about capital markets behavior. The first is that the market recognizes and impounds value creation by granting a multiple of invested capital in excess of 1.0. This is often called the “\$1 test.” Second, the market is consistent in this regard over time, meaning it “cares about” returns on invested capital day in, day out and year in, year out.

Warren Buffett, one of America’s most successful investors, described the use of the “\$1 test” in his 1982 Berkshire Hathaway letter to shareholders. He wrote, “it is our job to select businesses with economic characteristics allowing each dollar of retained earnings to be translated eventually into at

<sup>2</sup>Competitive advantage period is the time during which a company is assumed to earn returns in excess of the cost of capital on incremental projects.

<sup>3</sup>The author is indebted to Charlie Wolf for clarifying this point. In determining the enterprise value/invested capital relationship, the *ratio* of ROIC to WACC is the key variable, not necessarily the spread itself.

least a dollar of market value.”<sup>4</sup> Buffett’s focus on this measure was particularly appropriate in the early 1980s, when interest rates, and hence capital costs, were at extraordinarily high levels. The central point is that how much or how little management invests back into the business is not as important as the concept that all capital tied up in a business pull its economic weight. Further, the market generally clearly sees whether or not this is occurring.

If Buffett’s comments from 1982 are not enough evidence of this “\$1 test” holding true over time, a glimpse at the relationship between return spreads and the enterprise value to invested capital ratio brings to life the \$1 test when analyzing a single company. Chart 4 shows the year-end spreads and enterprise value to invested capital multiples for Quaker Oats. What stands out is that the return spread and multiple were at their highest in fiscal 1994 and their lowest in fiscal 1995 (as a result of the Snapple deal). Remarkably, the market simply repriced the multiple accorded the business to adjust to the new, low-ROIC reality. The more things change, the more they stay the same.

### Message to Management

Our overriding message to management is that maximizing shareholder value should be its primary goal. There are two fundamental drivers of shareholder wealth to which managers should be sensitive. First, there should be an unrelenting focus on making sure that all the capital lodged in the business generates returns in excess of the cost of capital (or can reasonably be expected to do so), with an eye toward returning nonproductive capital back to shareholders. Second, managers should constantly seek to invest in value-creating projects and strategies. We will develop these points in more detail.

In Roger Lowenstein’s excellent book on Warren Buffett, the author recounts the exchange between Buffett and the newly appointed president of Berkshire Hathaway, Ken Chance. It was 1965 and

Buffett had just taken control of Berkshire. The stock was at \$18 per share.<sup>5</sup> Lowenstein writes:

“Then Buffett explained to Chance the basic theory of return on investment. He didn’t particularly care how much yarn Chance produced, or even how much he sold. Nor was Buffett interested in the total profit as an isolated number. What counted was the profit *as a percentage of the capital invested*. That was the yardstick by which Buffett would grade Chance’s performance.

“To Chance, who had been reared, like most managers, to think of growth as an absolute good, this idea was new. But he grasped that it was pivotal to Buffett’s capitalist credo, and Buffett put in terms that Chance could understand.

“‘I’d rather have a \$10 million business making 15 percent than a \$100 million business making 5 percent,’ Buffett said. ‘*I have other places I can put the money.*’”<sup>6</sup>

Every portfolio manager should hold managers to the same discipline, because portfolio managers *do* have other places they can put the money (i.e., other stocks). We sense that too much of the dialogue in the investment business deals with near-term accounting-based results, and that not enough attention is paid to capital allocation.

In the same context, it is worth considering the magnitude of capital lodged in businesses that does not earn (or does not have the prospects of earning) a satisfactory return. Marakon Associates, a consulting firm that concentrates on value-based performance measuring and planning, states that, in its experience, 100% of the value created for most companies is concentrated in less than 50% of the capital employed.<sup>7</sup> This figure suggests that even within the United States—likely the most competitive economy in the world—there remains substantial opportunity to unlock value.

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<sup>5</sup>The stock rose 27% compounded annually in the subsequent 30 years.

<sup>6</sup>Roger Lowenstein, *Buffett: The Making of an American Capitalist* (New York: Random House, 1995), pp. 131-132.

<sup>7</sup>McTaggart, Kontes, Mankins, *The Value Imperative* (New York: The Free Press, 1994), p. 241.

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<sup>4</sup>Berkshire Letters to Shareholders, 1977-1983, p. 52.

The second point, a necessary corollary to the first point, is the importance of investing only in value-creating projects and strategies. This seemingly obvious comment has a couple of more subtle implications. First, managers must be sensitive to all balance sheet items that add to invested capital, not just obvious ones like capital expenditures and acquisitions. A good example is working capital, which often does not get the scrutiny it deserves. Second, we believe it is necessary to distinguish between projects and strategies. There are times when an investment outlay, viewed strictly on a net present value basis, may not provide the right answer in overall value creation. For example, a company may invest in a project that is NPV negative when the alternative strategy (i.e., doing nothing) has even less value. Hence we stress that managers invest in strategies that maximize the value of the firm. That noted, we believe too many managers hide behind the cloak of “strategic” investments as they misallocate capital. Simply stated, capital allocation, in the broadest sense of the term, is management’s central long-term task.

### Message to Analysts/Portfolio Managers

If in fact the ROIC to WACC spread (financial) is the key driver of the enterprise value to invested capital multiple (valuation), it would appear worthwhile to consider how an analyst might gain a competitive advantage. We believe the proper approach to this question is to dissect the ROIC to WACC spread into its prime components.

If one dismisses the WACC part of the equation to simplify the analysis (and we do recognize that value can be derived from good management of the right-hand side of the balance sheet), ROIC moves into the spotlight. ROIC, in turn, can be broken down into net operating profit after taxes (NOPAT)

divided by invested capital. NOPAT correlates quite well with earnings, and, as a result, does not appear to be an area where an analyst can derive a sustainable advantage. Invested capital, however, tends to get proportionately less attention, and hence may be a better area for analytical focus. In other words, analysts who dig to understand the allocation of capital and the prospective returns on the employed capital may be better able to appreciate future earnings power and the direction of valuation multiples (including multiples of earnings and cash flow).

Not surprisingly, we find that the way of gaining an edge as an investor is identical to the method of gaining a competitive advantage as a manager. Understand where the capital is going, how much is going there, and at what return that capital will be greeted. As simple as it sounds in theory, it is extraordinarily difficult to pursue in practice.

**N.B.:** CS First Boston Corporation may have, within the last three years, served as a manager or co-manager of a public offering of securities for or makes a primary market in issues of any or all of the companies mentioned. Closing prices are as of December 11, 1995:

Campbell Soup (CPB, 59, Hold)  
 ConAgra (CAG, 40<sup>1</sup>/<sub>8</sub>, Hold)  
 CPC International (CPC, 70<sup>1</sup>/<sub>4</sub>, Hold)  
 General Mills (GIS, 55<sup>1</sup>/<sub>4</sub>, Buy)  
 H.J. Heinz (HNZ, 32<sup>7</sup>/<sub>8</sub>, Hold)  
 Hershey Foods (HSY, 65, Hold)  
 Interstate Bakeries (IBC, 21<sup>1</sup>/<sub>4</sub>, Buy)  
 Kellogg (K, 77<sup>7</sup>/<sub>8</sub>, Buy)  
 McCormick (MCCRK, 23<sup>1</sup>/<sub>4</sub>, Buy)  
 Morningstar (MSTR, 8, Buy)  
 Nabisco Holdings Corporation (NA, 28<sup>3</sup>/<sub>4</sub>, Hold)  
 Quaker Oats (OAT, 36<sup>1</sup>/<sub>8</sub>, Buy)  
 Ralcorp Holdings (RAH, 24<sup>1</sup>/<sub>4</sub>, Hold)  
 Ralston Purina (RAL, 66<sup>1</sup>/<sub>4</sub>, Buy)  
 Sara Lee (SLE, 33<sup>1</sup>/<sub>4</sub>, Hold)  
 Tyson Foods (TYSNA, 24<sup>1</sup>/<sub>8</sub>, Hold)



### Glossary

#### Competitive Advantage Period (CAP)

Length of time a company can sustain returns above its cost of capital. It is a function of internal and external factors such as industry structure, competitive position, government policy, and overall market confidence. In a nuts and bolts sense, CAP represents the forecast period for a discounted cash flow model.

#### Economic Book Value (EBV)

The “steady state” value of the firm, or the value of the firm assuming no incremental value will be created. It equals the company’s most recent net operating profit after tax (NOPAT) capitalized by the company’s weighted average cost of capital minus debt. A price-to-economic-book-value ratio of 1.0 suggests the market expects no value creation. Any ratio above 1.0 assumes value creation and anything below 1.0 assumes value destruction.

#### Economic Value Added (EVA)

Seeks to determine the “residual” income of a company by charging NOPAT with a capital charge. EVA can be positive only when a company’s NOPAT is greater than the minimum return required by capital providers for the net assets the company employs. The formula is:

$$\text{NOPAT} - (\text{invested capital} * \text{WACC})$$

#### Enterprise Value

Market value of equity (shares outstanding times stock price) plus total debt (short-term and long-term) plus preferred stock.

#### Free Cash Flow (FCF)

Represents the cash that is distributable to all claimholders. It is after tax, after capital investment (working and fixed capital spending), but before financing costs. Free cash flow is the difference between NOPAT and I. FCF is the number that is projected and discounted to a present value in a discounted cash flow model.

#### Invested Capital

Sum of the net assets a company employs to generate its cash flows. As net assets must be financed, invested capital may be calculated from either side of the balance sheet. From the asset side, invested capital equals net working capital, net PP & E, goodwill and other operating assets.

#### Investment in Future Growth (I)

Represents the change in working capital, capital expenditures (net of depreciation) and cash acquisitions a company makes on an annual basis. I represents the “fuel” a company must use to grow its NOPAT.

#### Market Value Added (MVA)

The difference between a company’s market value and its invested capital. Generally, if MVA is positive the market believes a company will generate returns above its cost of capital.

#### Net Operating Profit After Tax (NOPAT)

Represents the cash profits a company would earn if it were completely debt-free. Operating income is reduced by adjusted taxes—which incorporate the cash taxes paid and the value of the tax shield from interest expense—and is increased by the amortization of goodwill. NOPAT is the numerator for an ROIC calculation.

#### Return on Invested Capital (ROIC)

Net operating profit after tax (NOPAT) divided by average invested capital. ROIC shows a company’s cash rate of return on the sum of capital it has put to work. When compared to the weighted average cost of capital, ROIC can help determine whether or not a company is creating value for its shareholders.

#### Weighted Average Cost of Capital (WACC)

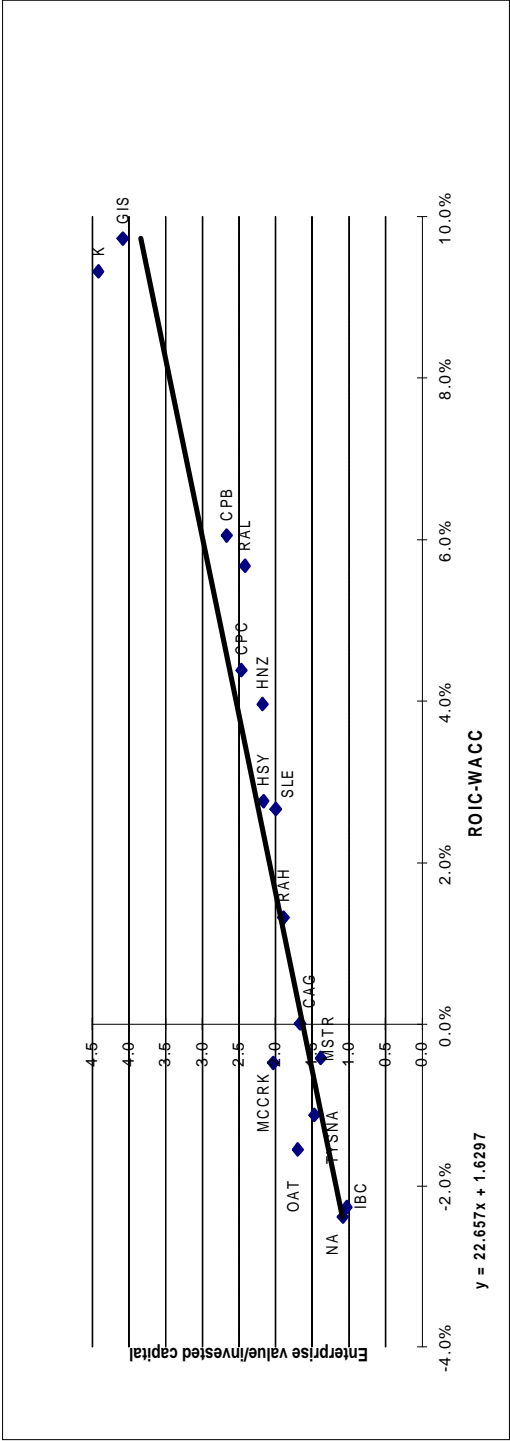
Reflects the opportunity cost for debt and equity holders, weighted for their relative contribution to a company’s capital structure. It is the minimum economic return a company must generate to compensate its debt and equity security holders for their assumed risk.

Chart 1

ROIC-WACC Versus Enterprise Value/Invested Capital, 1995

\$ in millions, except per share data

1995



Regression Statistics	
Multiple R	93.9%
R Square	88.2%
Adjusted R Square	87.4%
Standard Error	33.4%
Observations	16

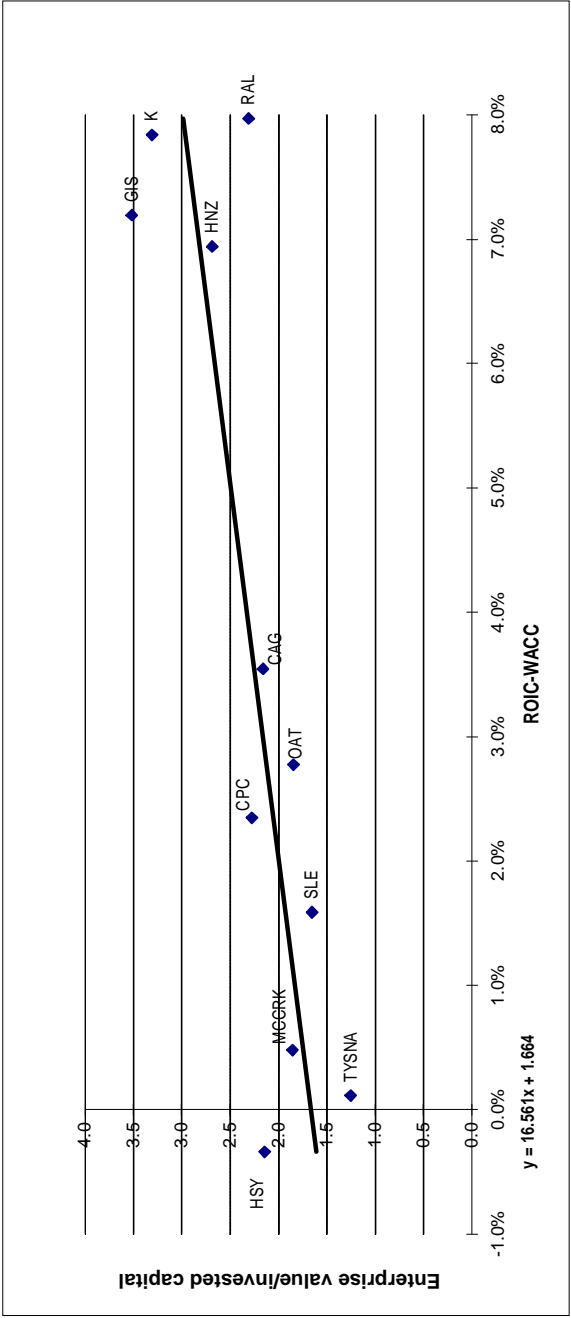
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1.6	0.1	16.6	0.0	1.4	1.8
X Variable 1	22.7	2.2	10.3	0.0	17.9	27.4

Chart 2

ROIC-WACC Versus Enterprise Value/Invested Capital, 1990

\$ in millions, except per share data

1990



Regression Statistics	
Multiple R	79.1%
R Square	62.5%
Adjusted R Square	58.3%
Standard Error	43.7%
Observations	11

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1.7	0.2	8.1	0.0	1.2	2.1
X Variable 1	16.6	4.3	3.9	0.0	6.9	26.2

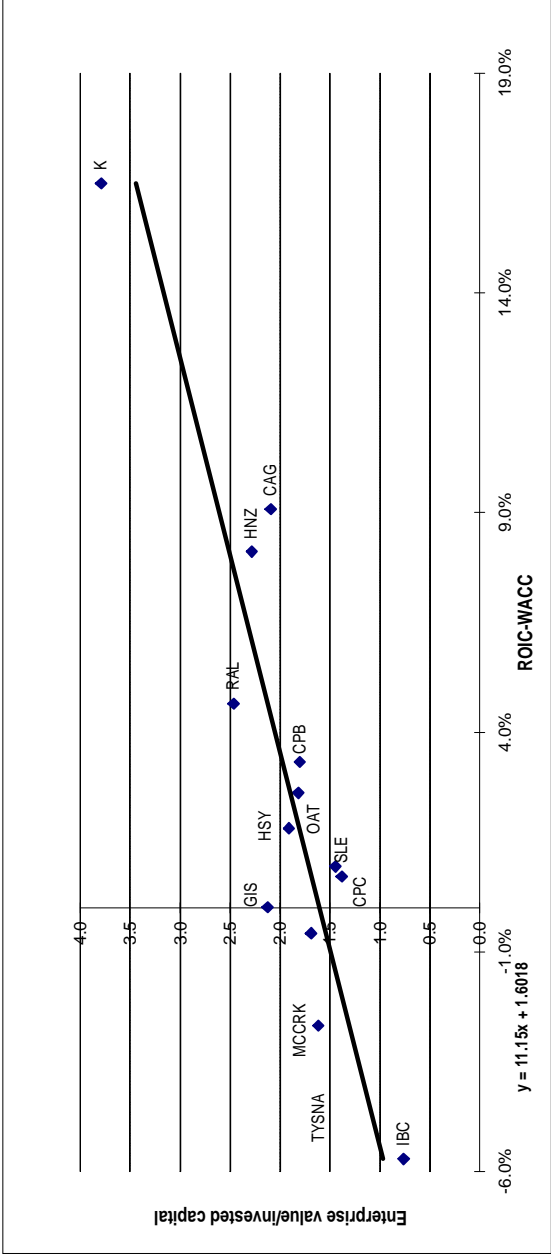


Chart 3

ROIC-WACC Versus Enterprise Value/Invested Capital, 1985

\$ in millions, except per share data

1985



Regression Statistics	
Multiple R	89.5%
R Square	80.1%
Adjusted R Square	78.3%
Standard Error	33.0%
Observations	13

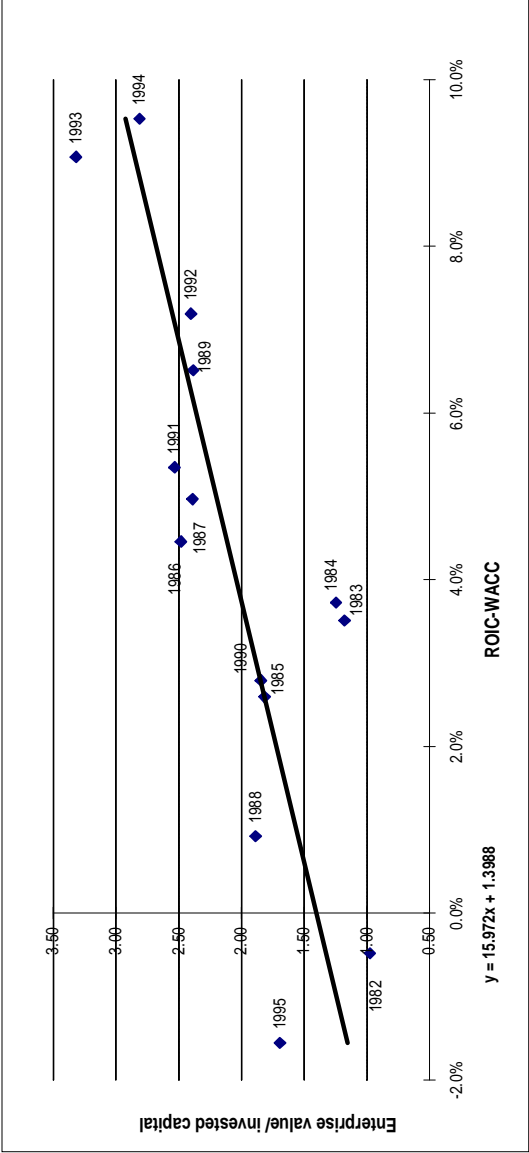
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1.6	0.1	15.3	0.0	1.4	1.8
X Variable 1	11.2	1.7	6.7	0.0	7.5	14.8

Chart 4

ROIC-WACC Versus Enterprise Value/Invested Capital, Quaker Oats

\$ in millions, except per share data

Quaker Oats: 1982-1995



Regression Statistics	
Multiple R	78.5%
R Square	61.6%
Adjusted R Square	58.4%
Standard Error	43.0%
Observations	14

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1.4	0.2	7.3	0.0	1.0	1.8
X Variable 1	16.0	3.6	4.4	0.0	8.0	23.9

# Plus Ça Change, Plus C'est Pareil

**Table 4**

## Support Data, 1995

\$ in millions, except per share data

### FISCAL

#### 1995

Company	Price*	Shares (MM)*	Total Debt	Preferred Stock	Enterprise Value	NOPAT	Invested Capital	ROIC	WACC	ROIC-WACC Spread	Enterprise Value/ Invested Capital Multiple
Campbell Soup	A 46.75	249	1,722.0	0.0	13,362.8	837.6	5,016.00	16.7%	10.6%	6.1%	2.7 X
ConAgra	A 32.88	245	2,567.90	354.9	10,977.2	741.58	6,597.00	11.2%	11.2%	0.0%	1.7 X
CPC International	E 66.38	146	1,710.0	0.0	11,400.8	667.34	4,633.00	14.4%	10.0%	4.4%	2.5 X
General Mills **	A 50.00	159	1,607.5	0.0	9,557.5	499.37	2,343.9	21.3%	11.6%	9.7%	4.1 X
H.J. Heinz	A 42.38	260	3,401.1	0.0	14,418.6	957.50	6,631.41	14.4%	10.5%	4.0%	2.2 X
Hershey Foods	E 59.75	81	504.5	0.0	5,344.2	321.60	2,467.32	13.0%	10.3%	2.8%	2.2 X
Interstate Bakeries	A 14.63	20	213	0.0	505.7	36.08	490.32	7.4%	9.6%	-2.3%	1.0 X
Kellogg	E 72.25	219	591.5	0.0	16,414.3	774.70	3,718.40	20.8%	11.5%	9.3%	4.4 X
McCormick	E 24.75	81	733.3	0.0	2,738.0	134.63	1,348.17	10.0%	10.5%	-0.5%	2.0 X
Morningstar	E 7.75	15	61.9	0.0	178.1	12.69	128.66	9.9%	10.3%	-0.4%	1.4 X
Nabisco Holdings Corp.	E 27.00	265	4,660.0	0.0	11,815.0	701.50	10,944.00	6.4%	8.8%	-2.4%	1.1 X
Quaker Oats	A 32.75	134	1,652.0	0.0	6,030.7	331.75	3,562.90	9.3%	10.9%	-1.6%	1.7 X
Ralcorp Holdings	E 23.00	34	379.4	0.0	1,161.4	63.50	614.10	10.3%	9.0%	1.3%	1.9 X
Ralston Purina	A 58.13	101	2,049.4	0.0	7,920.0	490.75	3,273.28	15.0%	9.3%	5.7%	2.4 X
Sara Lee	A 28.25	481	2,597.0	300.0	16,475.5	1,169.62	8,258.00	14.2%	11.5%	2.7%	2.0 X
Tyson Foods	E 23.88	145	1,557.9	0.0	5,020.5	306.04	3,423.77	8.9%	10.1%	-1.1%	1.5 X
Group Averages	38.16	165	1,625.5	40.9	8,332.5	502.89	3,965.64	12.7%	10.4%	2.4%	2.2 X

\* Price and Shares as of October 31, 1995 for estimates.

\*\* Price as of May 30, 1995.



## Plus Ça Change, Plus C'est Pareil

**Table 5**

**Support Data, 1990**

\$ in millions, except per share data

Company	Share Price	Shares (MM)	Total Debt	Preferred Stock	Enterprise Value	NOPAT	Invested Capital	ROIC	WACC	ROIC-WACC Spread	Enterprise Value/ Invested Capital Multiple	
ConAgra	20.50	184.09	1,018.30	2.2	4,794.3	342.75	2,219.49	15.4%	11.9%	3.5%	2.2 X	
CPC International	41.63	150.91	1,585.20	0.0	7,867.6	472.72	3,463.00	13.7%	11.3%	2.4%	2.3 X	
General Mills	40.31	163.20	872.10	0.0	7,450.7	410.94	2,119.40	19.4%	12.2%	7.2%	3.5 X	
H.J. Heinz	31.13	259.44	1,256.61	0.0	9,333.0	650.92	3,473.60	18.7%	11.8%	6.9%	2.7 X	
Hershey Foods	37.50	90.19	297.80	0.0	3,679.9	199.99	1,714.65	11.7%	12.0%	-0.3%	2.1 X	
Kellogg	37.94	241.32	678.20	0.0	9,833.9	595.87	2,973.90	20.0%	12.2%	7.8%	3.3 X	
McCormick	11.50	83.72	241.90	0.0	1,204.7	81.72	649.63	12.6%	12.1%	0.5%	1.9 X	
Quaker Oats	23.88	151.18	1,115.80	0.0	4,725.2	347.89	2,563.10	13.6%	10.8%	2.8%	1.8 X	
Ralston Purina	49.57	111.35	2,363.60	0.0	7,883.2	634.23	3,415.60	18.6%	10.6%	8.0%	2.3 X	
Sara Lee	14.57	460.68	1,867.00	300.0	8,876.8	691.55	5,365.00	12.9%	11.3%	1.6%	1.7 X	
Tyson Foods	13.00	136.60	1,020.5	0.0	2,796.3	240.96	2,228.08	10.8%	10.7%	0.1%	1.3 X	
Group Averages	26.79	169.39	1,026.42	25.2	5,703.8	389.13	2,515.45	13.9%	10.6%	3.4%	2.1 X	

## Plus Ça Change, Plus C'est Pareil

**Table 6**

**Support Data, 1985**

\$ in millions, except per share data

Company	Share Price	Shares (MM)	Total Debt	Preferred Stock	Enterprise Value	NOPAT	Invested Capital	ROIC	WACC	ROIC-WACC Spread	Enterprise Value/ Invested Capital Multiple	
Campbell Soup	9.32	258.58	389.26	0.0	2,799.2	256.96	1,555.56	16.5%	13.2%	3.3%	1.8 X	
ConAgra	7.55	149.02	283.84	23.6	1,432.5	153.96	684.94	22.5%	13.4%	9.1%	2.1 X	
CPC International	12.84	194.54	749.10	0.0	3,247.0	287.98	2,357.60	12.2%	11.5%	0.7%	1.4 X	
General Mills	15.00	177.76	888.70	0.0	3,555.1	213.13	1,675.40	12.7%	12.7%	0.0%	2.1 X	
H.J. Heinz	11.94	266.82	463.41	0.0	3,649.2	342.31	1,598.48	21.4%	13.3%	8.1%	2.3 X	
Hershey Foods	17.13	94.01	119.79	0.0	1,729.7	131.26	904.60	14.5%	12.7%	1.8%	1.9 X	
Interstate Bakeries	12.50	3.70	41.50	0.0	87.8	6.69	115.57	5.8%	11.5%	-5.7%	0.8 X	
Kellogg	16.97	246.74	427.40	0.0	4,614.6	354.26	1,217.80	29.1%	12.6%	16.5%	3.8 X	
McCormick	4.42	98.00	151.30	0.0	584.6	41.68	346.54	12.0%	12.6%	-0.6%	1.7 X	
Quaker Oats	13.03	161.28	336.20	0.0	2,437.9	209.87	1,343.10	15.6%	13.0%	2.6%	1.8 X	
Ralston Purina	22.94	160.37	930.30	0.0	4,609.2	321.09	1,872.70	17.1%	12.5%	4.6%	2.5 X	
Sara Lee	5.39	428.05	624.65	75.0	3,006.8	288.89	2,086.67	13.8%	12.9%	0.9%	1.4 X	
Tyson Foods	3.58	127.60	140.80	0.0	597.6	36.06	370.82	9.7%	12.4%	-2.7%	1.6 X	
Group Averages	11.74	182.04	426.63	7.6	2,488.6	203.39	1,240.75	15.6%	12.6%	3.0%	1.9 X	

## Plus Ça Change, Plus C'est Pareil

**Table 7**

**Support Data, Quaker Oats**

\$ in millions, except per share data

**Company:** *Quaker*

Year	Share Price	Shares (MM)	Total Debt	Preferred Stock	Enterprise Value	NOPAT	Invested Capital	ROIC	WACC	ROIC-WACC Spread	Enterprise Value/ Invested Capital Multiple
1982	5.00	156.8	350.5	0.0	1,134.6	162.98	1,166.7	14.0%	14.5%	-0.5%	0.97 X
1983	6.38	159.5	343.0	0.0	1,359.7	185.62	1,154.4	16.1%	12.6%	3.5%	1.18 X
1984	7.97	162.0	417.2	0.0	1,708.2	239.64	1,374.8	17.4%	13.7%	3.7%	1.24 X
1985	13.03	161.3	336.2	0.0	2,437.7	209.87	1,343.1	15.6%	13.0%	2.6%	1.81 X
1986	19.63	156.1	598.2	0.0	3,662.4	218.91	1,475.1	14.8%	10.4%	4.5%	2.48 X
1987	26.38	159.0	1,096.4	0.0	5,289.0	335.40	2,215.1	15.1%	10.2%	5.0%	2.39 X
1988	22.31	158.8	641.0	0.0	4,183.8	275.00	2,219.1	12.4%	11.5%	0.9%	1.89 X
1989	31.13	157.5	900.8	0.0	5,804.2	432.73	2,434.0	17.8%	11.3%	6.5%	2.38 X
1990	23.88	151.2	1,115.8	0.0	4,725.2	347.89	2,563.1	13.6%	10.8%	2.8%	1.84 X
1991	31.00	152.7	814.7	0.0	5,547.2	359.93	2,189.3	16.4%	11.1%	5.4%	2.53 X
1992	28.38	146.8	807.6	0.0	4,973.1	371.10	2,071.3	17.9%	10.7%	7.2%	2.40 X
1993	37.88	144.0	809.5	0.0	6,261.6	364.96	1,887.7	19.3%	10.3%	9.1%	3.32 X
1994	34.88	135.4	1,016.2	0.0	5,739.0	406.01	2,040.9	19.9%	10.4%	9.5%	2.81 X
1995	32.75	133.7	1,652.0	0.0	6,030.7	331.75	3,562.90	9.3%	10.9%	-1.6%	1.69 X

**Table 8**  
**Market/Book When ROIC Equals WACC**

\$ in millions, except per share data

	Year 1	Year 2	Year 3	Year 4	Year 5	Perpetuity
<b>Invested capital</b>	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>ROIC</b>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
<b>WACC</b>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
<b>EVA</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>Perpetuity factor</b>						8.333
<b>Discount factor</b>	0.893	0.797	0.712	0.636	0.567	4.729
<b>PV EVA</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>Sum PV EVA</b>	\$0					
<b>Beginning capital</b>	\$1,000					
<b>Enterprise value</b>	\$1,000					
<b>Market/book</b>	1.00					

If ROIC = WACC, then the level of WACC does not matter, and the market/book is always 1.0.



**Table 9**  
**Market/Book When ROIC Is Less Than WACC**

\$ in millions, except per share data

	Year 1	Year 2	Year 3	Year 4	Year 5	Perpetuity
<b>Invested capital</b>	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>ROIC</b>	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>WACC</b>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
<b>EVA</b>	(\$30)	(\$30)	(\$30)	(\$30)	(\$30)	(\$30)
<b>Perpetuity factor</b>						8.333
<b>Discount factor</b>	0.893	0.797	0.712	0.636	0.567	4.729
<b>PV EVA</b>	(\$27)	(\$24)	(\$21)	(\$19)	(\$17)	(\$142)
<b>Sum PV EVA</b>	(\$250)					
<b>Beginning capital</b>	\$1,000					
<b>Enterprise value</b>	\$750					
<b>Market/book</b>	0.75					

	Year 1	Year 2	Year 3	Year 4	Year 5	Perpetuity
<b>Invested capital</b>	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>ROIC</b>	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
<b>WACC</b>	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>EVA</b>	(\$30)	(\$30)	(\$30)	(\$30)	(\$30)	(\$30)
<b>Perpetuity factor</b>						11.111
<b>Discount factor</b>	0.893	0.797	0.712	0.636	0.567	7.221
<b>PV EVA</b>	(\$27)	(\$24)	(\$21)	(\$19)	(\$17)	(\$217)
<b>Sum PV EVA</b>	(\$325)					
<b>Beginning capital</b>	\$1,000					
<b>Enterprise value</b>	\$675					
<b>Market/book</b>	0.68					

If (ROIC-WACC) < 0 and remains constant, then the market/book ratio decreases as the WACC falls. The ratio of ROIC to WACC defines market/book, not just the spread.



**Table 10**  
**Market/Book When ROIC Is Greater Than WACC**

\$ in millions, except per share data

	Year 1	Year 2	Year 3	Year 4	Year 5	Perpetuity
<b>Invested capital</b>	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>ROIC</b>	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
<b>WACC</b>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
<b>EVA</b>	\$60	\$60	\$60	\$60	\$60	\$60
<b>Perpetuity factor</b>						8.333
<b>Discount factor</b>	0.893	0.797	0.712	0.636	0.567	4.729
<b>PV EVA</b>	\$54	\$48	\$43	\$38	\$34	\$284
<b>Sum PV EVA</b>	\$500					
<b>Beginning capital</b>	\$1,000					
<b>Enterprise value</b>	\$1,500					
<b>Market/book</b>	1.50					

If  $(\text{ROIC} - \text{WACC}) > 0$  and remains constant, then the market/book ratio increases as the WACC falls. The ratio of ROIC to WACC defines market/book, not just the spread.

	Year 1	Year 2	Year 3	Year 4	Year 5	Perpetuity
<b>Invested capital</b>	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>ROIC</b>	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
<b>WACC</b>	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>EVA</b>	\$60	\$60	\$60	\$60	\$60	\$60
<b>Perpetuity factor</b>						11.111
<b>Discount factor</b>	0.893	0.797	0.712	0.636	0.567	7.221
<b>PV EVA</b>	\$54	\$48	\$43	\$38	\$34	\$433
<b>Sum PV EVA</b>	\$650					
<b>Beginning capital</b>	\$1,000					
<b>Enterprise value</b>	\$1,650					
<b>Market/book</b>	1.65					









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