

VALUATION TOOLBOX

Linking Firms' Economic Performance to Stock Prices



Classic Companies

November 20, 2002

Samuel T. Eddins

312-345-6132

sam.eddins@csfb.com

Bartley J. Madden

312-345-6142

bart.madden@csfb.com

Ernest P. Welker

413-567-8806

ernest.welker@csfb.com

John D. Lagerman

312-345-6171

john.lagerman@csfb.com

For specific information relating to the Firm's investment banking relationships, if any, with companies mentioned in this report and for important disclosure information regarding the CSFB HOLT methodology and potential conflicts of interest, please refer to the **Disclosure Section** at the end of this report.

Improving Investment Insights

Improving Investment Insights

Classic Companies

Samuel T. Eddins
Bartley J. Madden
Ernest P. Welker
John D. Lagerman

- We use the Relative Wealth charts of companies whose track records are especially revealing of one or more “classic” performance/valuation issues.
- Situations and patterns evident in Relative Wealth charts of example companies include:
 - ▶ the full life-cycle, including successful restructuring (IBM)
 - ▶ different outcomes with high reinvestment rates (FedEx, Paychex, Wal-Mart)
 - ▶ the high-CFROI or high-growth tradeoff (Abbott Labs, Emerson Electric)
 - ▶ ROIs on incremental investments much lower than CFROIs on existing assets (Toys R Us)
 - ▶ importance of asset contraction by large companies seeking to improve “low” CFROIs (Dow Chemical, International Paper)
 - ▶ different strategies to improve CFROIs (Safeway, Inc., IBM)
 - ▶ radical improvement in business processes (Porsche)
 - ▶ acquisitive companies demand a high level of managerial skill to achieve high performance (Danaher Corp., Hanson Plc)
 - ▶ capitalizing R&D is important for measuring economic performance (Chiron Corp.)
 - ▶ brand names do not reward shareholders in the absence of economic performance (Eastman Kodak, Adolph Coors)
 - ▶ growth companies with limited internal reinvestment opportunities at high CFROIs (Campbell Soup Company, Danone Group)

Table of Contents

Executive Summary	4
Introduction.....	5
Basic Guidelines for Managing for Value	6
Full Life-Cycle, Including Successful Restructuring of Negative-Spread Firms.....	7
IBM	7
Different Outcomes with High Reinvestment Rates.....	8
With rapid growth, high CFROIs can easily decline into negative spreads: FedEx.....	8
Exceptionally skilled managements can sustain high growth while high CFROIs are maintained/improved: Paychex and Wal-Mart	9
A brief digression: forecasting fade better than the market	11
The High CFROI Or High Growth Tradeoff.....	13
Lower reinvestment for high CFROIs: Abbott Labs and Emerson Electric.....	13
ROIs on Incremental Investments Much Lower Than CFROIs on Existing Assets	15
Toys R Us	16
Importance of Asset Contraction by Large Companies Seeking to Improve “Low” CFROIs.....	18
Dow Chemical and International Paper.....	18
Different Strategies To Improve CFROIs	21
Safeway Inc.....	21
IBM	23
Radical Improvement In Business Processes.....	25
Porsche	25
Operating Performance Success is Not Achieved By Pulling Levers	27
Acquisitive Companies Demand a High Level of Managerial Skill To Achieve Sustained High Performance.....	28
Danaher Corp.....	28
Hanson Plc.....	30
Help in judging plausible forecasts	31
Capitalizing R&D Is Important For Measuring Economic Performance	32
Chiron Corp.....	33
Brand Names Do Not Reward Shareholders in the Absence of Economic Performance	36
Eastman Kodak.....	36
Adolph Coors	38
Growth Companies with Limited Internal Reinvestment Opportunities at High CFROIs.....	39
Campbell Soup Company.....	39
Danone Group	41
Appendix: Basic Concepts Summarized	43

Classic Companies

Executive Summary

Samuel T. Eddins
Bartley J. Madden
Ernest P. Welker
John D. Lagerman

This report highlights insights that can be gained from a quick study of a firm's track record of economic performance displayed as our Relative Wealth charts and interpreted from the vantage point of the competitive life-cycle framework. We use the Relative Wealth charts of companies whose track records or portions thereof are particularly revealing of one or more "classic" performance/valuation issues.

Our examples and brief descriptions will show that Relative Wealth charts are extraordinarily useful displays of competitive life-cycle variables significant for gauging a firm's economic wealth creation and market valuation. Accounting and inflation adjustments incorporated in the data provide users with *directly comparable* CFROIs, discount rates, and asset growth rates across companies with different asset structures, across national borders, and across time.

Situations and patterns evident in Relative Wealth charts of example companies include:

- the full life-cycle, including successful restructuring (IBM)
- different outcomes with high reinvestment rates (FedEx, Paychex, Wal-Mart)
- the high-CFROI® or high-growth tradeoff (Abbott Labs, Emerson Electric)
- ROIs on incremental investments much lower than CFROIs on existing assets (Toys R Us)
- importance of asset contraction by large companies seeking to improve "low" CFROIs (Dow Chemical, International Paper)
- different strategies to improve CFROIs (Safeway, Inc., IBM)
- radical improvement in business processes (Porsche)
- acquisitive companies demand a high level of managerial skill to achieve high performance (Danaher Corp., Hanson Plc)
- capitalizing R&D is important for measuring economic performance (Chiron Corp.)
- brand names do not reward shareholders in the absence of economic performance (Eastman Kodak, Adolph Coors)
- growth companies with limited internal reinvestment opportunities at high CFROIs (Campbell Soup Company, Danone Group)

Classic Companies

Samuel T. Eddins
Bartley J. Madden
Ernest P. Welker
John D. Lagerman

Introduction

This report focuses on insights that can be gained from a quick study of a firm's track record of economic performance displayed as our Relative Wealth (RW) charts and interpreted from the vantage point of the competitive life-cycle framework. (If you are not familiar with our framework, please see the appendix "Basic Concepts Summarized" for background on our model and an introductory explanation of how to interpret the RW chart.) For the purpose of this report, we use the RW charts of companies whose track records, or portions thereof, are particularly revealing of one or more "classic" performance/ valuation issues. For short, we call these "classic companies".

Only broadly do we address in this report the valuation aspect of the performance patterns described. How a stock performs versus the market during any span is a function of expectations at the beginning of the period versus subsequent actual performance and associated changes in market expectations. At a point in time, a user of RW charts can make helpful inferences of plausible market expectations based on the track records of specific firms available at that particular point in time. Sometimes firms delivering stellar CFROIs and reinvestment rates fall short of earlier, even higher investor expectations and thus underperform the market. Similarly, below-cost-of-capital firms maintaining subpar CFROIs might nonetheless surpass earlier, even more pessimistic expectations and thereby reward shareholders with positive excess returns over the relevant period.

Our examples and brief descriptions will show that RW charts are extraordinarily useful displays of competitive life-cycle variables significant for gauging a firm's economic wealth creation and market valuation. Accounting and inflation adjustments incorporated in the data provide users with *directly comparable* CFROIs, discount rates, and asset growth rates across companies with different asset structures, across national borders, and across time.

Users of RW charts can get visual readouts answering the following important valuation questions:

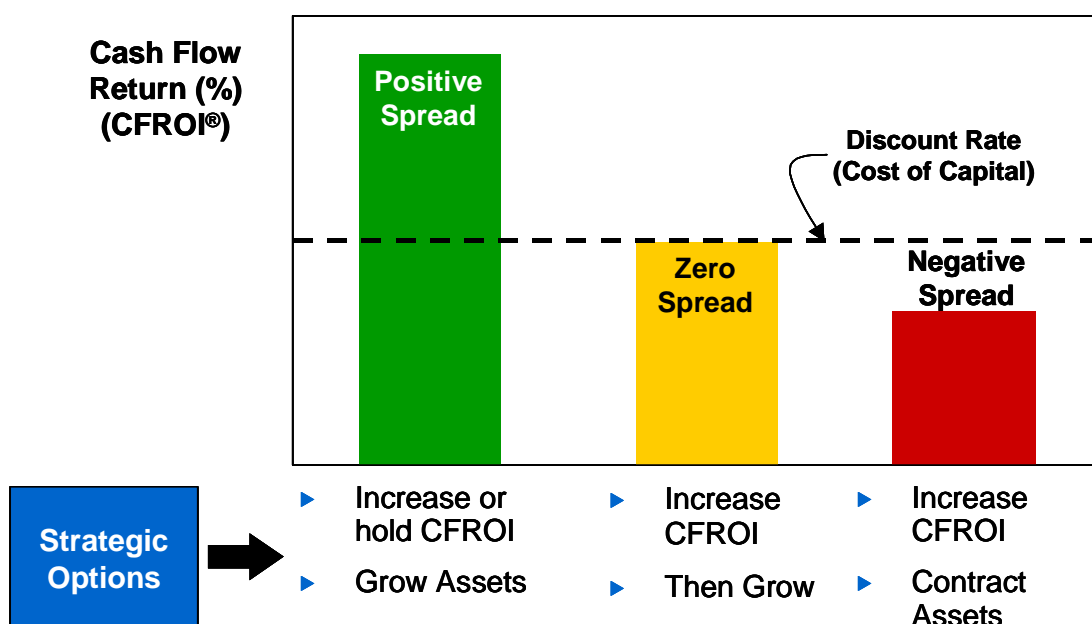
- a. What have been the levels of and trends in economic returns (CFROIs) in relation to those of the investors' discount rate?
- b. What have been the levels of and trends in actual growth rates, or reinvestment rates, and have those been above or below the firm's sustainable growth rates?
- c. Are trends in excess (positive or negative) shareholder returns understandable in terms of the firm's track records of CFROIs and growth rates?

Although RW charts offer many insights, investors and analysts can gain additional information advantages by deeper analyses, some of which can be done quickly via other tools and data included in our *ValueSearch*TM software and global database. We demonstrate some of these, too.

Basic Guidelines for Managing for Value

Figure 1 is taken from page five of “Basic Concepts Summarized”. It is reproduced here because much of the discussion in this report refers to patterns of CFROIs, CFROI spreads, and growth and to their implications.

Figure 1. Basic Strategic Options For Maximizing Shareholder Value



Source: CSFB HOLT Equity Research

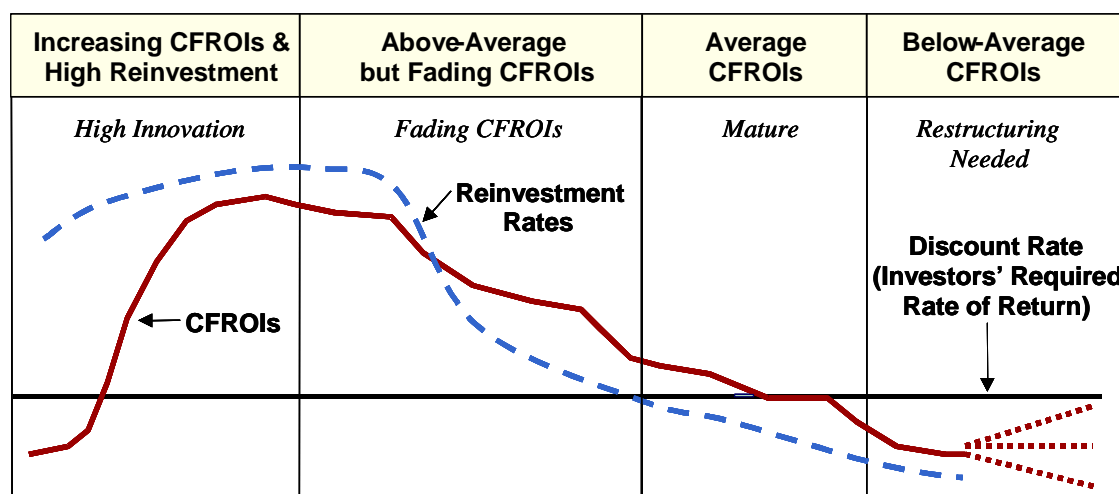
Having a business model that is consistent with these strategic choices surely will not ensure success. There is a huge minefield of potential failure points between a plausible model and its successful execution. But unless management’s business model incorporates the actions implied by these guidelines, one should immediately question if the model is plausible at all and, more fundamentally, if management really understands what is necessary to create shareholder value. This is particularly true for firms steadfastly producing negative CFROI spreads. Almost always a first step toward moving CFROIs up toward the cost of capital will require a clear break from a “business as usual” inertia and include significant divestment or write-off of below-average business units or assets. (Start-up companies are an exception; they are expected to generate negative spreads in their early phase.)

Full Life-Cycle, Including Successful Restructuring Of Negative Spread Firms

International Business Machines Corp.

The competitive life-cycle explained on page four of Basic Concepts Summarized is reproduced as Figure 2 and is clearly evident in IBM's Relative Wealth Chart displayed in Figure 3. IBM's 20-year track record shown in Figure 3 reveals IBM's trip through nearly the full competitive life-cycle over that period. Comments in the chart call attention to the "classic" patterns and relationships.

Figure 2. The Firm's Competitive Life-Cycle, Stylized

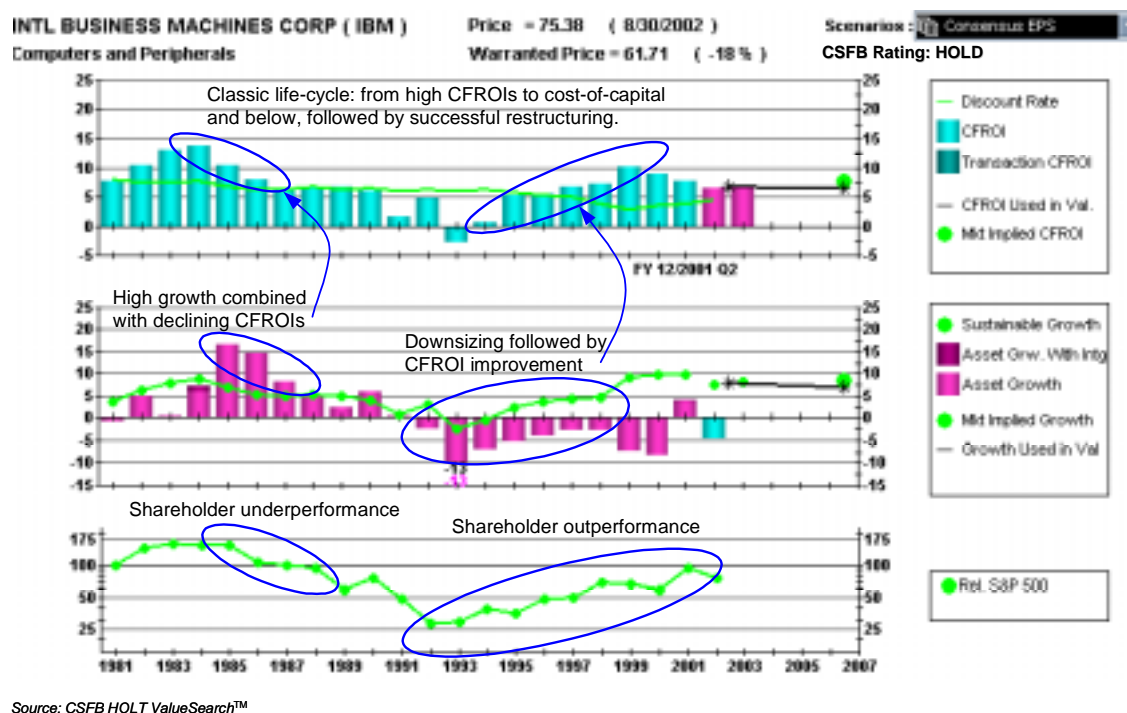


Source: CSFB HOLT Equity Research

In 1993 new management led by Louis Gerstner was installed and instituted a new strategy, or vision, rooted in network-centric computing emphasizing not only leading-edge hardware and software but also services to help customers fully exploit these networks. The transition included the sale or write-off of substantial assets and downsizing of employee counts. Not until then did CFROIs turn upward again, reaching positive-spread territory in 1997. Yet, IBM's asset base continued to shrink, not becoming positive until 2001, only to drop into contraction again thus far in 2002. Nevertheless, the trend of excess shareholder returns was sharply positive over the period 1987-2001.

IBM's track record for the past couple of years suggests that Samuel Palmisano, CEO successor to Mr. Gerstner, must struggle with this key valuation issue: Can IBM maintain or increase high positive-spread CFROIs **and** also grow? This is not new. Mr. Gerstner acknowledged early in his tenure, **after** restoring IBM to profitability, that the firm would have to demonstrate it also could grow while remaining profitable.

Figure 3. IBM Relative Wealth Chart, 1981-2001



Different Outcomes With High Reinvestment Rates

Among conclusions supported by our empirical fade, or regress-to-mean, research are these:

1. In general, competition forces above-average CFROI companies to fade down, on average, and below-average CFROI companies to fade up, on average.
2. For the same level of above-average CFROIs, firms with *lower* CFROI variability faded, on average, more *slowly* than firms with higher variability.
3. For the same level of above-average CFROI, firms with *higher* reinvestment rates were observed to fade *faster* than firms with lower reinvestment rates. Firms with high CFROIs and high reinvestment rates face two big challenges. A potential big, high-return market is a magnet for competitors. Also, the difficulty of managing a rapidly growing firm is far greater than managing a slowly growing firm.

With rapid growth, high CFROIs can easily decline into negative spreads: FedEx

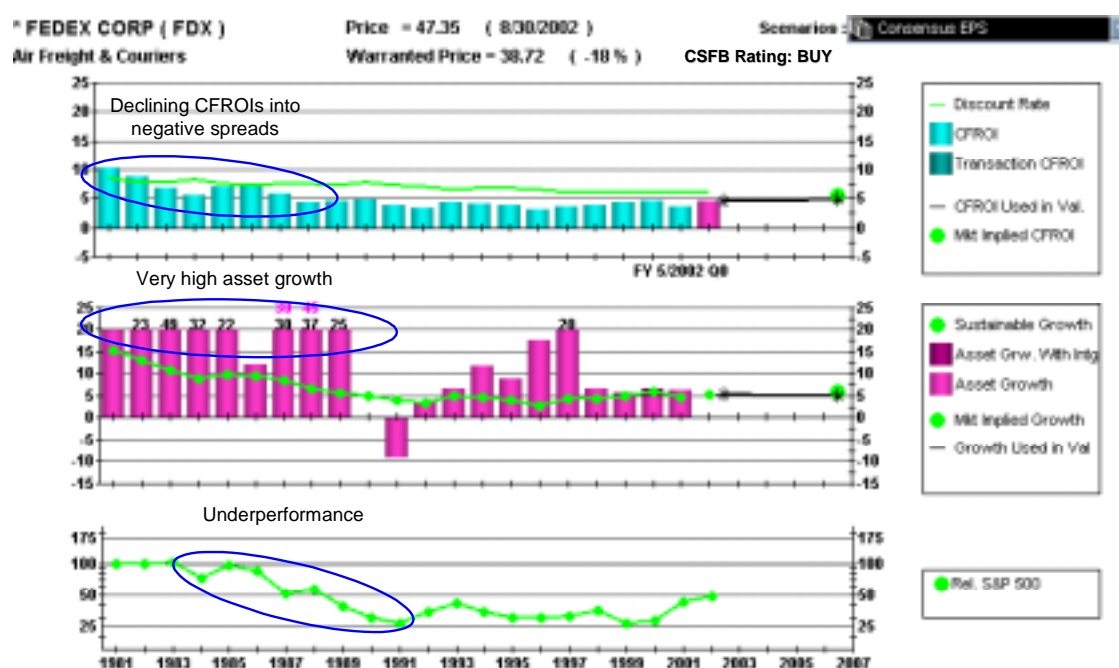
Figure 4 displays a typical pattern: companies that become successful as revealed by superior CFROIs adopt a growth strategy in an attempt to increase their cash flows and maximize shareholder value. This is consistent with the basic strategy options for maximizing shareholder value.

Initially the market might be encouraged by such a growth strategy, and the company's stock might outperform. But consistent with the notion of the competitive life-cycle and our empirical fade evidence, higher growth often puts downward pressure on CFROIs. If the potential market is big enough to permit a company to expand substantially, it is probably big enough to attract competitors.

FedEx proved the economic wealth creating potential of the air express business model. But UPS efficiently dominated the ground portion of light-package delivery and had good customer relationships. Adding airplanes to provide the air express component, UPS became a formidable competitor to FedEx. The competition worked to drive "monopoly" profits down, even as demand for air express delivery services exploded.

A noteworthy point for comparing the corporate performance of FedEx with that of UPS pertains to the treatment of operating leases. FedEx leases a significant portion of its planes as operating leases. The corresponding rental payments are classified as expenses under current FASB rules. UPS owns the majority of its planes outright, depreciating them over their estimated useful lives. The different accounting treatments pose a quagmire when comparing corporate performance for metrics that do not capitalize the operating lease expenses over some useful life. Rental expense is therefore capitalized within the CSFB HOLT valuation framework enabling direct comparison between firms with different accounting treatments for these assets.

Figure 4. FedEx Corporation Relative Wealth Chart

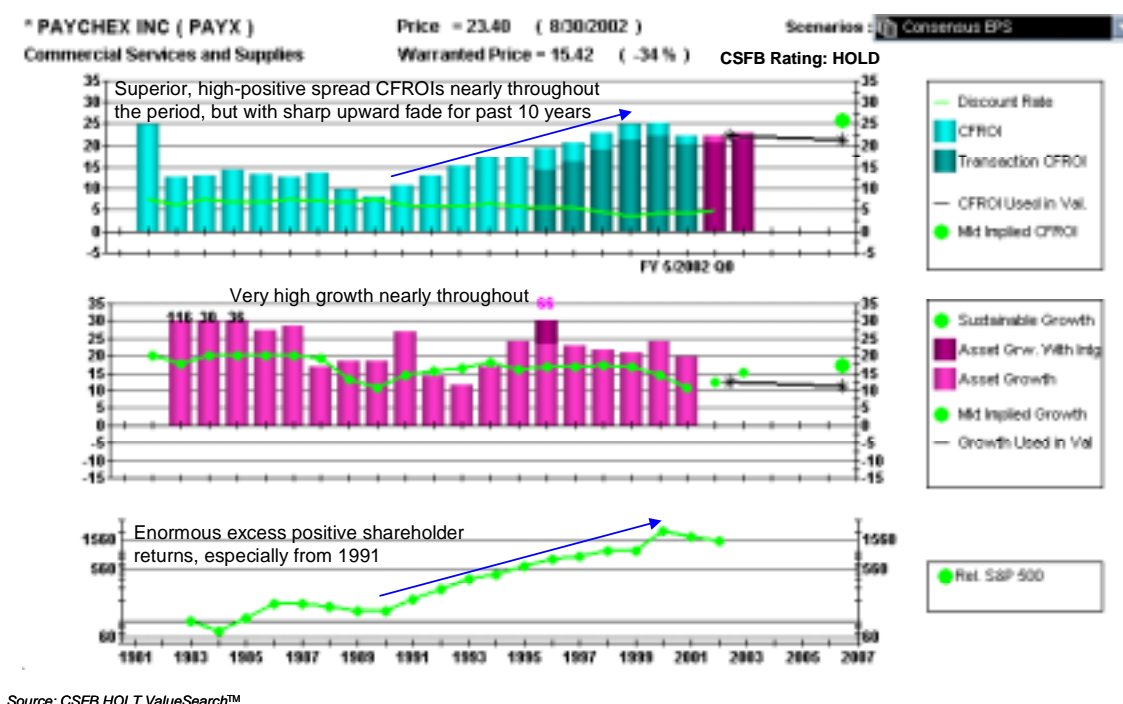


Source: CSFB HOLT ValueSearch™

Exceptionally skilled managements can sustain high growth while high CFROIs are maintained/improved: Paychex and Wal-Mart

The more RW charts one sees, the clearer it is that a very small percentage of firms are able to maintain or increase high, positive-spread CFROIs **and** grow at high rates for an extended period. Figures 5 and 6 present two companies that have track records of doing both, and their shareholders have been rewarded with huge positive excess returns. (We call your attention to the different scales for RW charts of the two companies; similar-height bars indicate higher values for Paychex than for Wal-Mart.)

Figure 5. Paychex Inc. Relative Wealth Chart



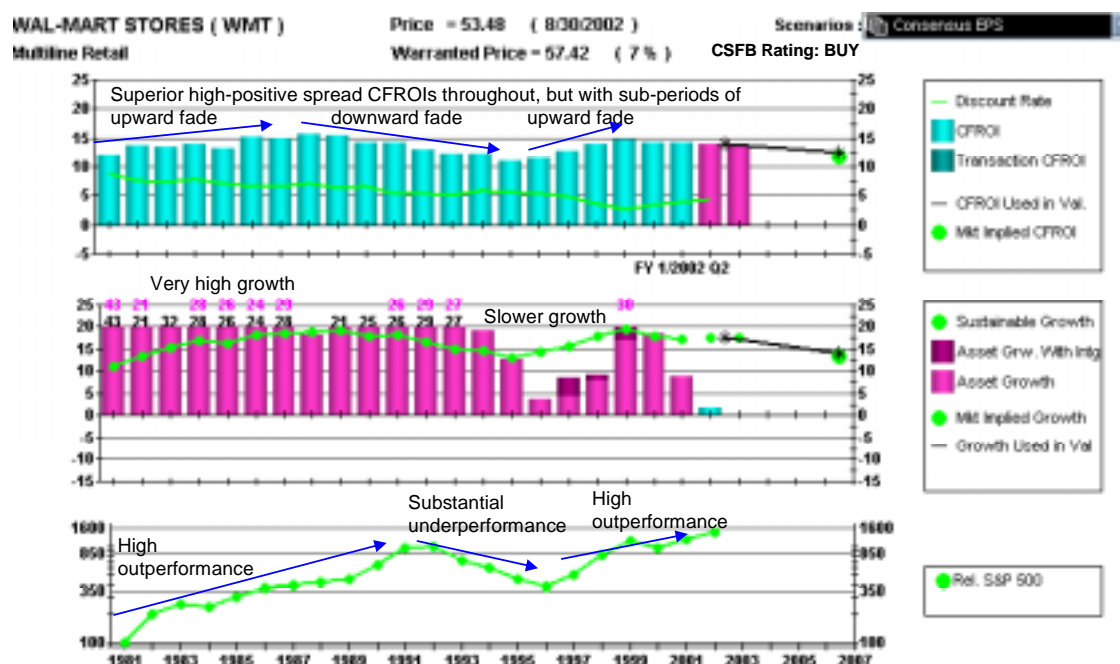
Paychex Inc. provides payroll processing and human resources and benefits outsourcing services to small and medium size companies. Its RW chart presents an opportunity to briefly comment on expectations of future performance versus achieved performance and revisions of expectations. Consider if in 1992 you were viewing Figure 5 data through 1991. You would have seen a recent downward trend of CFROIs after high and somewhat-slowing growth. That's the classic pattern reflective of regress-to-mean competitive forces and increasing difficulty in managing rapid growth.

At that time an *optimistic* forecast based on the RW chart would have been for the declining CFROIs to level off and for growth to remain relatively low. Instead, in 1992 there was a big jump in growth *and* a turnaround in CFROIs – a hugely favorable “surprise” from prior trends and plausible expectations. That would have major favorable implications for Paychex's future life-cycle and deserve an upward revision in the valuation of PAYX.

This pattern of favorable CFROI and growth surprises would be repeated for many of the following years, as higher growth was combined with higher CFROIs, even as CFROIs surpassed the prior high plateau of roughly 14 percent and moved on upward toward and past 20 percent. The associated CFROI spread widened even more, as PAYX's discount rate trended slightly downward while CFROI levels marched sharply upward. From a level of roughly 4.4 percent in 1991, positive spreads moved up to 11.3 percent in 1995 and further up to 20.9 percent in 1999, nearly 5 times the 1991 spread. All of this occurred while reinvestment continued at a high pace.

This long-continued pattern of favorable surprises from already high expectations and upward forecast revisions is the recipe for enormously high positive excess shareholder returns. You can see a repeat of it in Wal-Mart's RW chart, albeit with a more distinct temporary interruption.

Figure 6. Wal-Mart Stores Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

A brief digression: forecasting fade better than the market

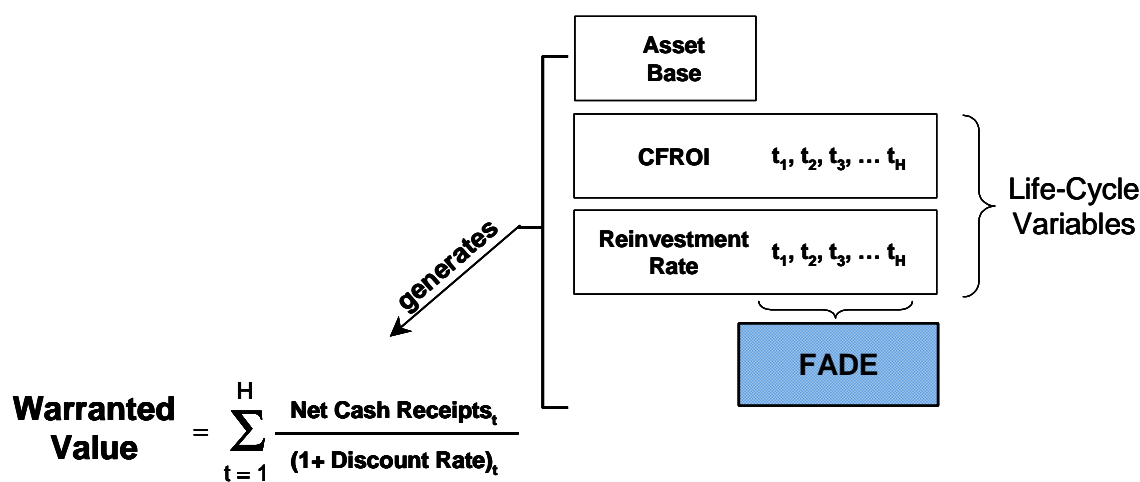
We'll pause on Wal-Mart to illustrate how life-cycle variables can aid in the buy/hold/sell decision. For this we recall a September 9, 1996 *Forbes* article titled, "Follow The Cash – HOLT Value Associates hated Wal-Mart in 1991. Its unique valuation system tells HOLT to love Wal-Mart now."

First, note that the bottom panel of Figure 6 shows that Wal-Mart significantly underperformed the market from 1991 to 1996. From year-end 1991 to month-end August 1996, Wal-Mart's stock price declined 10 percent while the S&P 500 gained 56 percent. Then Wal-Mart substantially outperformed the market: from month-end August

1996 to month-end April 2002; Wal-Mart's stock price increased 324 percent while the S&P 500 gained 65 percent.

Now consider the competitive-fade/valuation analyses behind these two valuation appraisals of Wal-Mart. Figure 7 is a variation of the valuation model presented on page 3 of Basic Concepts Summarized. Figure 7 shows a warranted value resulting from applying a discount rate to a forecasted stream of net cash receipts generated by the life-cycle variables of CFROI and reinvestment rate.

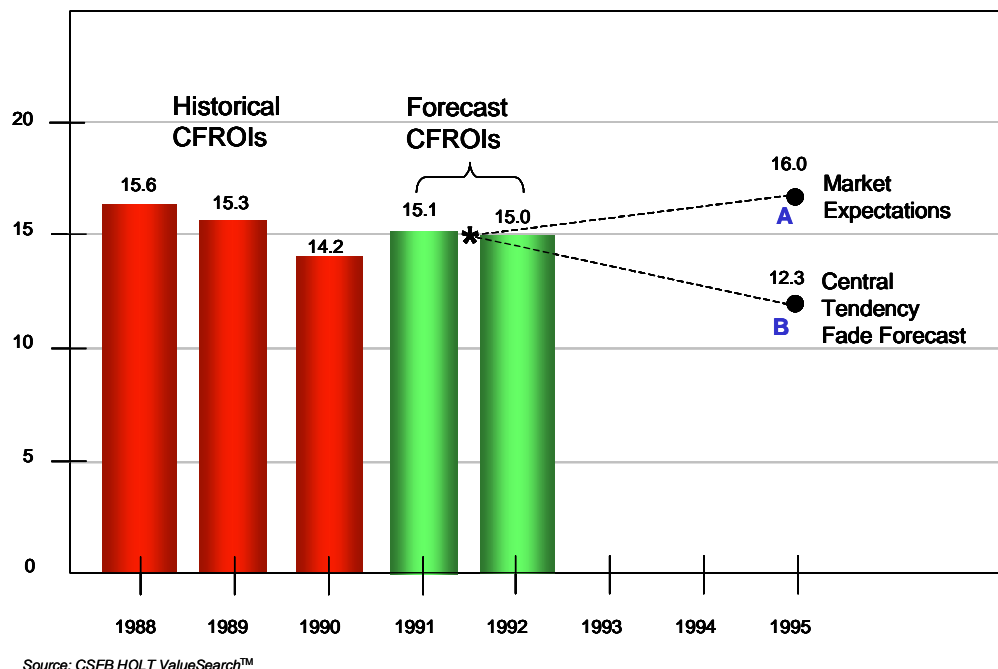
Figure 7. Valuation and Life-Cycle Variables



Source: CSFB HOLT Equity Research

Given an estimated investors' discount rate and a reinvestment rate forecast, our model will convert a known market price into a pattern of "expected" future CFROIs. Figure 8 summarizes as "market expectations" the output of this approach using data produced by our *ValueSearch*TM at year-end 1991.

Figure 8. Wal-Mart Year-End 1991 *ValueSearch*™ Data, Stock Prices \$14.92



The above figure shows that Wal-Mart's \$14.72 stock price in 1991 translated into an expected *increase* in CFROI to 16.0 percent by 1995 (point A). The model's central tendency CFROI fade forecast was for a decline to 12.3 percent (point B). Subsequently, Wal-Mart's CFROIs did decline, and the stock underperformed. By 1996, the situation had reversed, with market expectations being decidedly pessimistic. This was the basis for the *Forbes* comment, "its unique valuation system tells HOLT to love Wal-Mart now".

The lines at the right-hand side of the top and middle panes of Figures 5 and 6 indicate the forecast fade patterns for our baseline CFROI and reinvestment rates incorporated in the warranted prices for, respectively, Paychex and Wal-Mart as of the date shown in the charts. The dots at the far right scale indicate the t+5 levels of CFROI and reinvestment rates *implied* by the market prices as of the date shown. The data indicate that market expectations for CFROI and reinvestment were much more optimistic for Paychex than those embedded in our baseline pattern for Paychex, whereas the t+5 market-implied CFROI and reinvestment for Wal-Mart were quite close to our baseline pattern for Wal-Mart.

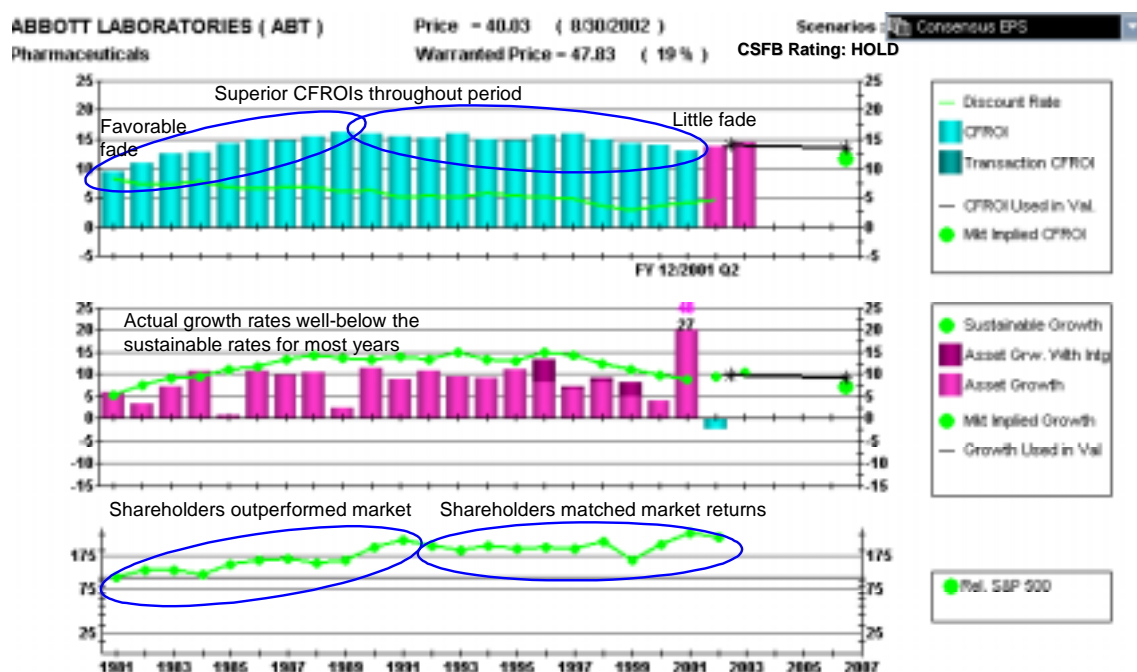
Whether the share prices of PAYX and WMT are likely to rise, fall, or change little in the future will be determined to a substantial degree by whether reported performance surprises investors favorably, unfavorably or little over the relevant period and how investors revise their expectations in the light of the new information. A buy/hold/sell decision for either thus should largely turn on the odds one gives to the direction of possible surprises.

The High CFROI® Or High Growth Tradeoff

Lower reinvestment for high CFROIs: Abbott Laboratories and Emerson Electric

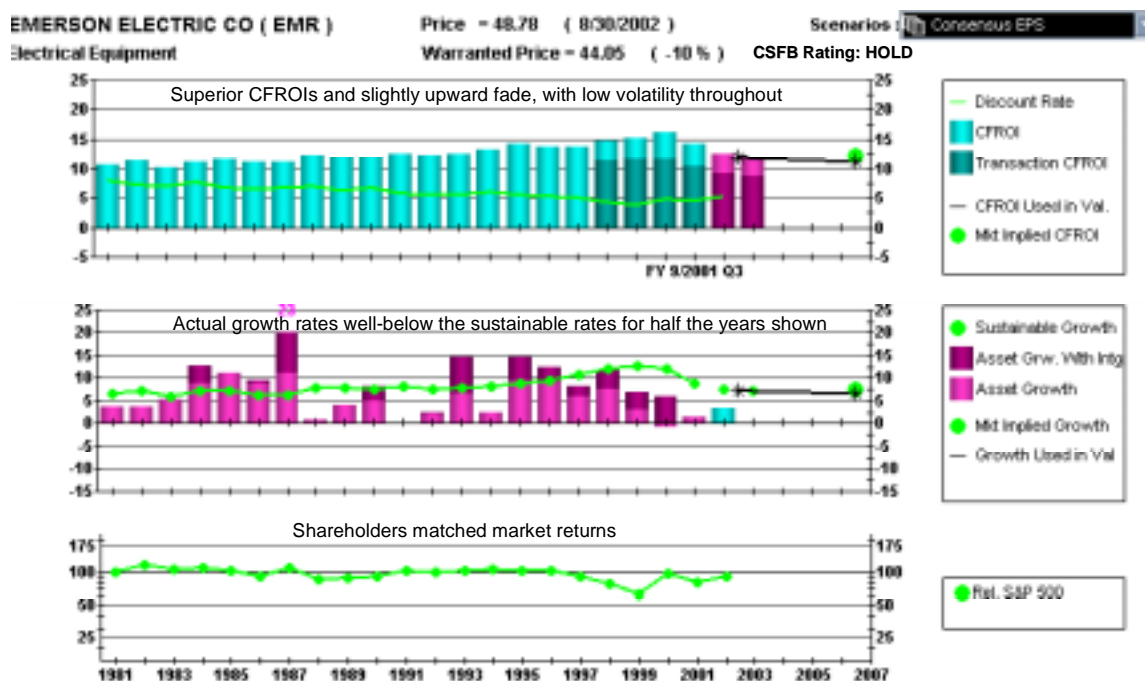
The RW charts of Abbott Labs and Emerson Electric presented as Figures 9 and 10 show 20-year histories of maintained or upward-fading superior CFROIs, much like those evident for Paychex and Wal-Mart. Indeed, over the period shown, Abbott's and Emerson's CFROIs have been even less volatile than those of Paychex and Wal-Mart. In view of the well-documented downward-fade, or regress-to-mean, returns that "average" companies experience, Abbott and Emerson have been able to regularly "beat the fade," and their managements have earned reputations for superior skills.

Figure 9. Abbott Laboratories Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

Figure 10. Emerson Electric Co. Relative Wealth Chart



One clear difference in these economic-performance histories from those of Paychex and Wal-Mart is their growth rates. While improving or maintaining high CFROI levels and high CFROI spreads, managements of Abbott and Emerson were unable to grow their firms as fast as did the managements of Paychex and Wal-Mart. Remember, the patterns of both returns (CFROIs) and reinvestment (growth) are critical to a firm's valuation.

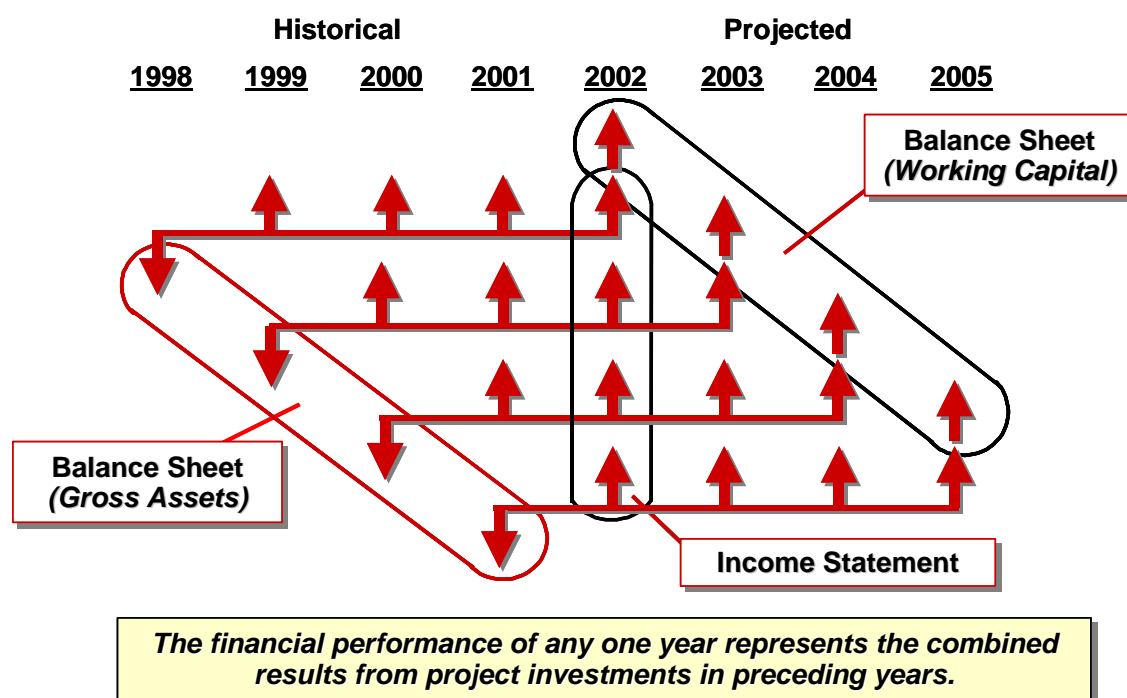
Would managements of Abbott and Emerson deserve higher grades for skill if they were able to grow their firms faster? We think the answer is clearly yes. Should they have attempted it? The answer to that is much less clear. As we wrote above, the performance records of Paychex and Wal-Mart are very, very rare. Much more often attempts to rapidly grow result in sharp downward fades of CFROIs and substantial underperformance of the firm's stock. "Growth" investors probably would be critical of Abbott's and Emerson's managements for not being more aggressive about growth, whereas "value" investors probably would give them praise for producing consistently solid and dependable performance.

The relative shareholder returns for ABT and EMR offer further evidence that economic returns and reinvestment surprises (positive or negative) relative to expectations are primarily responsible for positive, negative, or zero excess shareholder returns. For ABT, so long as CFROIs were repeatedly surprising investors by trending upward for much of the 1980s, its total return repeatedly exceeded that of the market. But once Abbott's CFROIs leveled off, its stock pretty much matched market returns, *even though Abbott continued to generate very high real economic wealth.*

For Emerson Electric, the long and slightly upward fade of high CFROIs levels and high CFROI spreads, with very little volatility, even though substantial acquisitions were made in many years, is a rare, superior record of *economic* wealth creation. EMR's stock, however, earned "only" market returns for its shareholders. Evidently, Emerson's management has been so skilled at controlling its wealth creation that the investors have been able to accurately forecast future performance and have built expectations of high economic wealth creation into EMR's share price.

ROIs on Incremental Investments Much Lower Than CFROIs on Existing Assets

At any point in time, a firm's business operations are comprised of, and the firm is invested in, a portfolio of projects initially undertaken at different points in time. Figure 11 portrays this notion of the firm as a collection of projects and shows how a firm's balance sheet and income statement capture and reflect the sum of the annual "project" layers. As is described on page two of Basic Concepts Summarized, our CFROI metric is an estimated *average* real internal rate of return earned by a firm on its portfolio of projects.



Source: CSFB HOLT Equity Research

Figure 11. Firm As A Collection of Projects

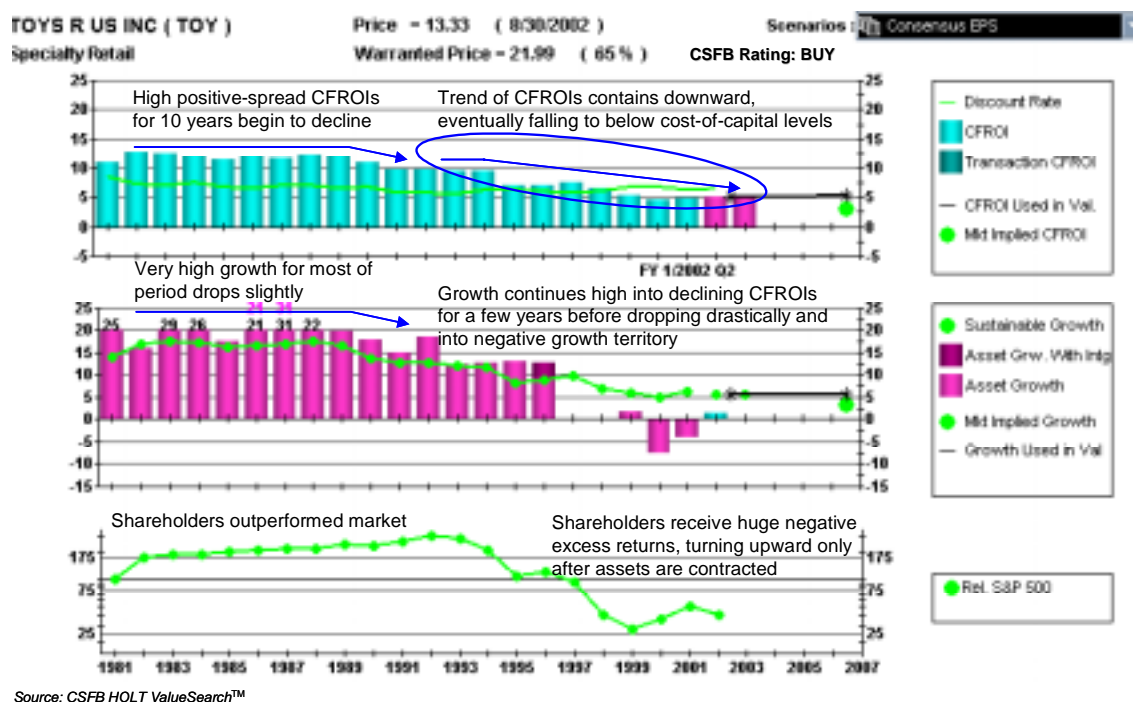
For the purpose here, the critical point is that when a company's CFROIs trend downward/upward, it may indicate that returns on *incremental* investments have been

declining/rising, with the difference in returns on incremental investments greater than indicated by the CFROI change. It is important to take this into account when assessing the plausibility of forecast CFROIs.

Toys R Us

The RW chart for Toys R Us, presented in Figure 12, reveals the potential for shareholder returns to quickly collapse when investors realize that initial decreases in CFROIs probably indicate significantly larger decreases in returns on incremental projects and the beginning of a downward trend in CFROIs. For retail-store and restaurant operations, this pattern is classic. It reflects the economic realities that in the early phase of operations the company puts stores in the most promising locations, but after a time management must accept less and less promising locations in order to continue to grow. This usually means that returns on incremental stores (projects) successively decline, dragging down the company's CFROIs.

Figure 12. Toys R Us Inc. Relative Wealth Chart



Retail operators that can beat this type of fade, Wal-Mart for example, repeatedly exceed operating-performance expectations reflected in their stock prices because investors repeatedly "refuse" to believe that this widely observed pattern of fading CFROIs will not soon become evident.

Importance of Asset Contraction by Large Companies Seeking to Improve Low CFROIs

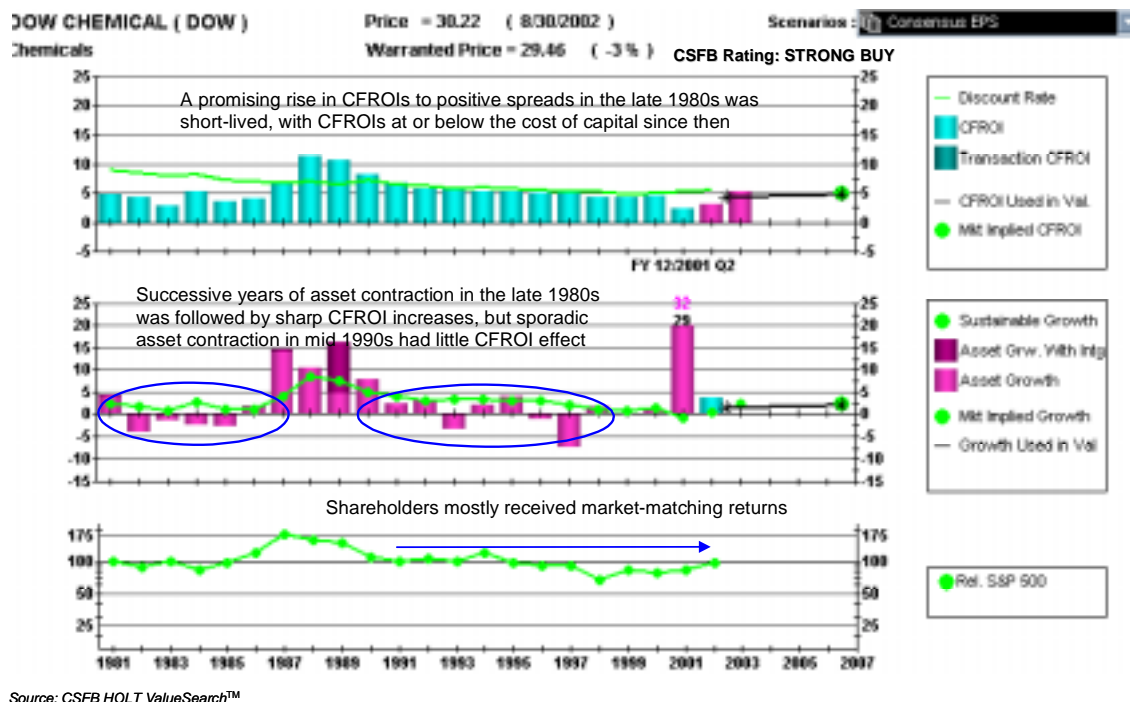
A search for turn-around successes by firms having very large asset bases earning cost-of-capital-or-below returns *without very large asset divestitures* is likely to come up with very few, if any, names. In these situations, the amount of new incremental investment is typically a small proportion of the firm's entire portfolio of projects. Thus, even if new projects earn real economic returns significantly above the firm's CFROIs, it takes a considerable period of time for the incremental investments in higher-return projects to significantly move the firms' CFROIs and to change investors' expectations.

Inertia at large firms steadfastly earning average or below-average CFROIs has deep roots. It involves entrenched rules of behavior for motivating and compensating employees, for forecasting business-unit performance, for requesting and awarding capital funds, and the like. Such a "culture" makes it extraordinarily difficult to transition gradually toward fundamental improvement via *incremental* investments in higher CFROI businesses much different from the firm's traditional ones. Not-patently-implausible arguments can always be devised as to why the risk would be too great to drastically change operations. Investors should be skeptical of promised overall returns improvement from new initiatives not accompanied by significant asset divestitures.

Dow Chemical and International Paper

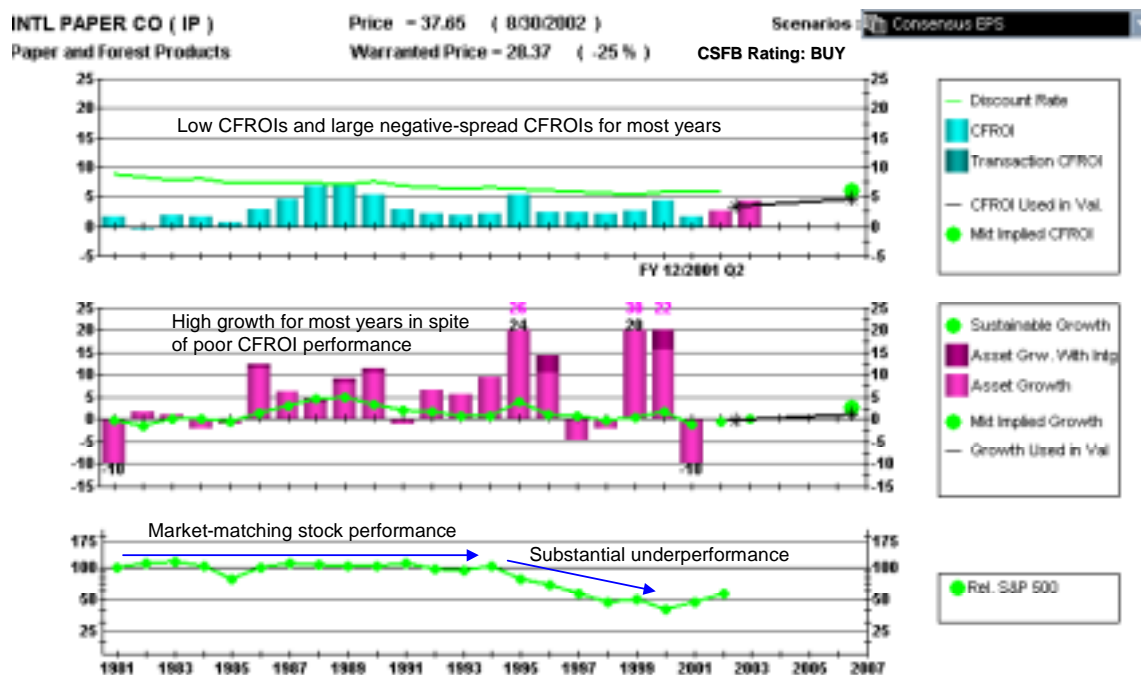
In Figure 13, Dow Chemical's RW chart, one can readily see an example of very large company unable to achieve sustained above-cost-of-capital returns. Moderate asset contraction in the early 1980s was followed by a doubling in its CFROI levels by the late 1980s, but for only a couple of years. Then it was back to cost-of-capital CFROIs by 1991, around which they've remained. Limited and sporadic asset contractions around the mid-1990s were not accompanied by noticeable CFROI improvement.

Figure 13. Dow Chemical Relative Wealth Chart



The CFROI performance of International Paper presented in Figure 14 has been significantly worse than that of Dow, being much below its cost of capital for most of the past 20 years. Instead of divesting or otherwise contracting assets, International Paper's management made successive attempts to grow the firm into profitability via both acquisitions and large internal incremental investments. Notice the number of relatively high growth bars, many of which indicate outlays for premiums paid on acquisitions.

Figure 14. International Paper Co. Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

Based on the evidence that IP's returns pretty much matched market returns from 1981 to 1994 (bottom panel) in spite of negative-spread CFROIs throughout the period (with those spreads being substantially negative for most of the years), investors evidently believed that management's growth strategy would significantly improve CFROIs (which they did for a few years near the end of the 1980s) and priced IP's shares accordingly. But by 1995, and in the face of re-established large negative spreads, investors apparently no longer believed, and IP's shares began a six-year trend of negative excess returns.

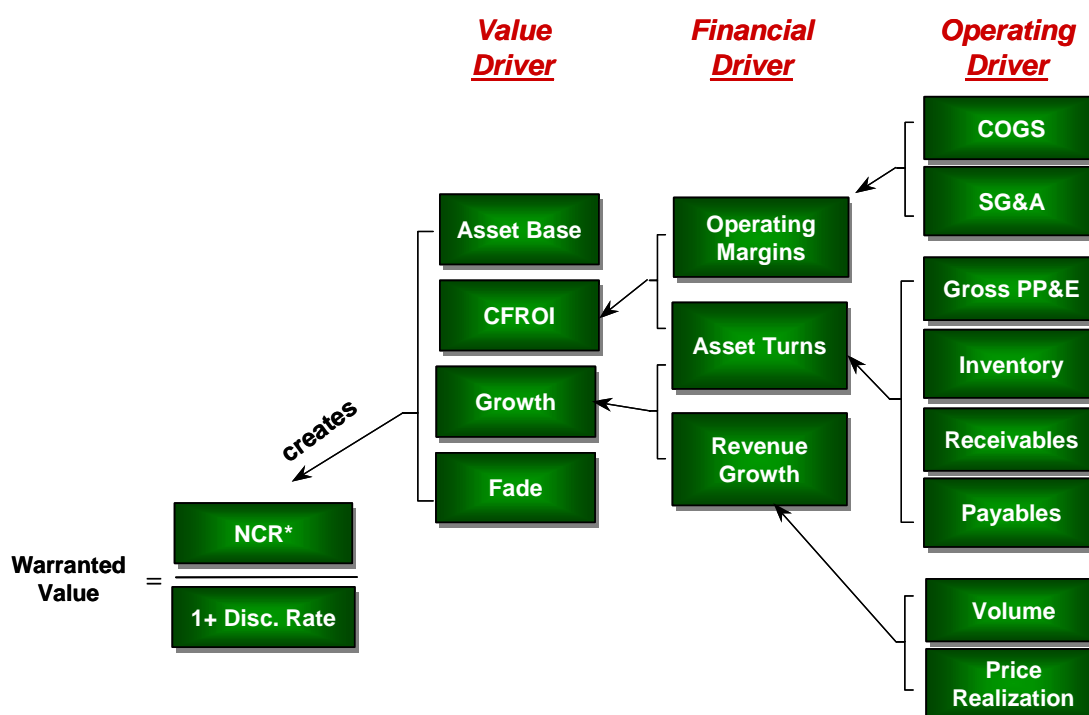
The failed attempt by International Paper to combine a turnaround with high growth has been repeated by many companies. For negative-spread companies, the chief strategic priority should be to raise returns, and for very large companies this almost always requires significant asset divestitures. In 2001, International Paper contracted assets 10 percent, and thus far in 2002 assets have changed little. The forecast CFROI bars for 2002 and 2003 reflect translations from analysts' consensus EPS forecasts for those years. They indicate that analysts as a group expect significant CFROI improvement. Investors have priced IP's shares at a level implying that IP's CFROIs will fade further *upward*, to around 6.6% 5 years hence, with asset growth at a low positive rate. That market-implied CFROI level is not unprecedented; it is about the level achieved by IP in 1988 and 1989.

Different Strategies To Improve CFROIs

The strategic paths to success or failure are numerous and varied. By the two examples here we want to illustrate how two of them appear in terms of RW charts and the Sales, Margins & Turns graphs available in *ValueSearch*TM.

Figure 15 is a modified version of a similar figure presented on page three of Basic Concepts Summarized. The modification adds to our framework's Value Drivers, (a) the Financial Drivers of Operating Margins, Asset Turns, and Revenue Growth and (b) the eight Operating Drivers underlying the three Financial Drivers. Data for the most recent 10 years for each of these items are shown in the Sales, Margins, & Turns Report of the Company Reports "View" in *ValueSearch*TM.

Figure 15. Drivers of NCRs in the CSFB HOLT Framework



*NCR = Net Cash Receipts

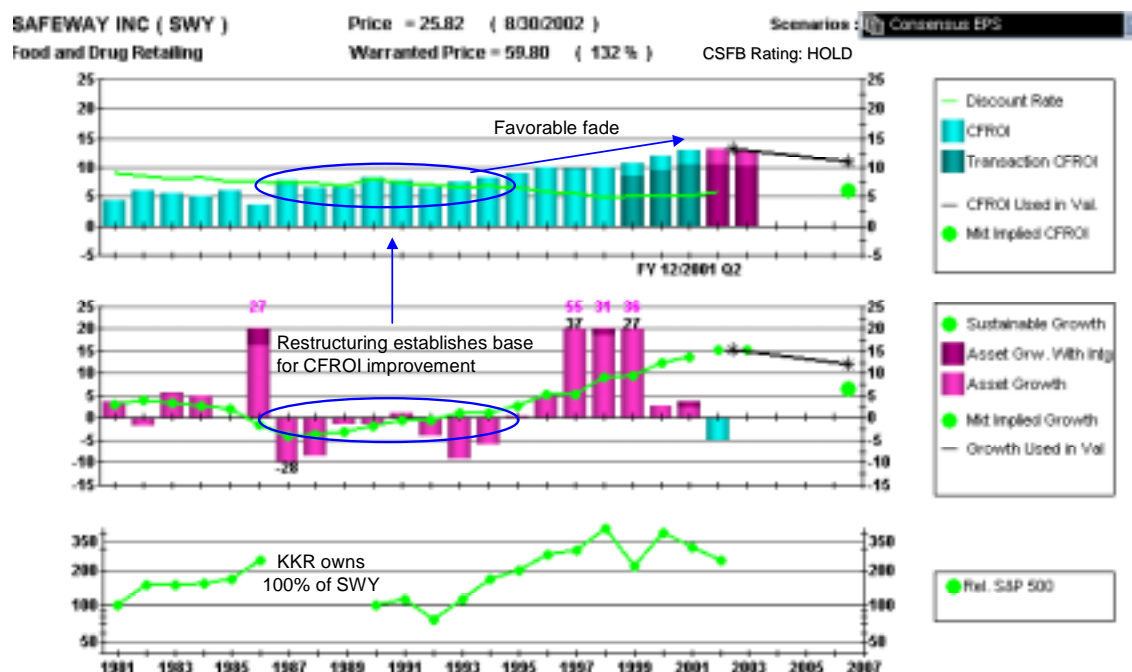
Source: CSFB HOLT Equity Research

Safeway Inc.

Longtime-underperforming firms eventually restructure on their own, are taken over and get restructured by new ownership, or they go bankrupt. The gap in the bottom panel of Safeway's RW chart shown in Figure 16 reflects the period between the time that Safeway, Inc. (formed by the leveraged buyout firm Kohlberg Kravis Roberts & Co.)

purchased Safeway Stores in November 1986 and when KKR sold to the public 20 million Safeway, Inc. common shares in April 1990.

Figure 16. Safeway Inc. Relative Wealth Chart

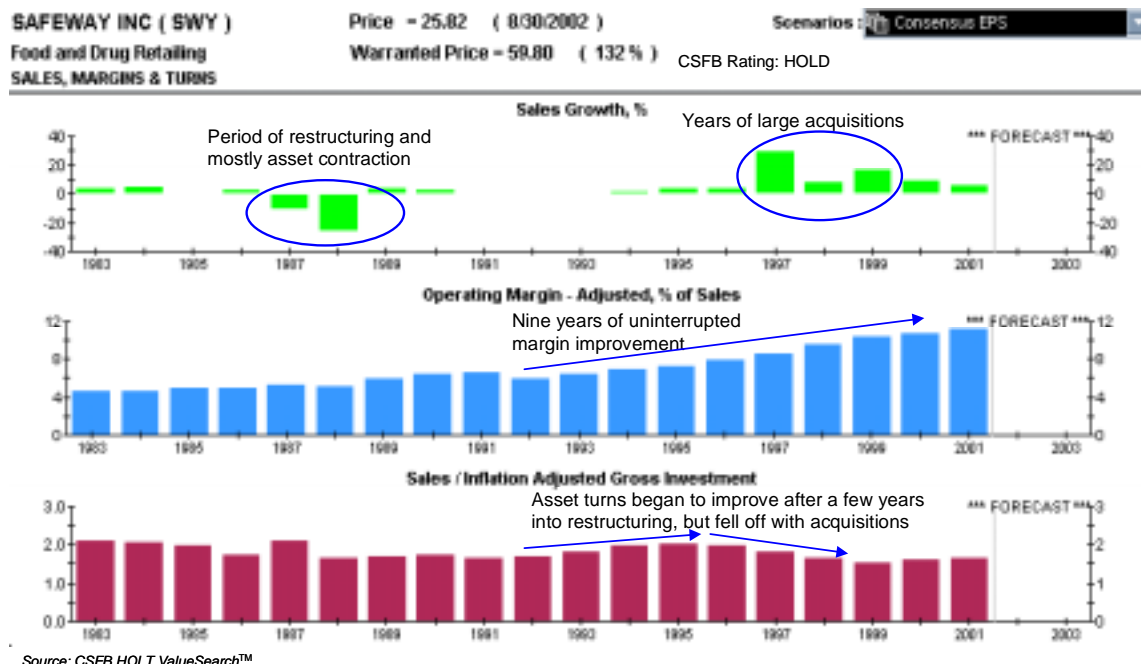


Source: CSFB HOLT ValueSearch™

Notice that shortly after the buyout, assets were contracted quite sharply, when many underperforming stores were closed as one component of a makeover of operations. CFROIs immediately jumped from a pre-acquisition range of 4-6 percent (with -2.5 percent CFROI spreads) to around a 7-8 percent range (with zero spreads), from which the CFROI levels and spreads began a long upward trend carrying through to a peak CFROI level of 13 percent and spread of 8 percent in 2001. Notice also that in the late phase of that trend, SWY made major acquisitions in the three consecutive years 1997-1999.

According to SWY's management, continued effective implementation of numerous operational initiatives have raised margins and are expected to continue to do so. Included among these initiatives are: closing underperforming stores, upgrading other stores, customizing store offerings, tests and adoptions of totally new offerings (own-branded banking kiosks, for example), enterprise-system software, lower cost of goods via membership in major purchasing group, active solicitation and company-wide adoption of floor-level best-practice recommendations, and reduction in "shrinkage".

Figure 17. Safeway Inc. Sales, Margins and Turns Chart



The gain in operating efficiency is evident in Figure 17, our sales, margins & turns graph. The middle panel shows Safeway's adjusted margins on an uninterrupted 9-year upward trend from 6.1 percent in 1992 to 11.4 percent in 2001. Asset-turns, which had begun to rise in 1993, fell back in 1997-1999, with the major acquisitions of that period.

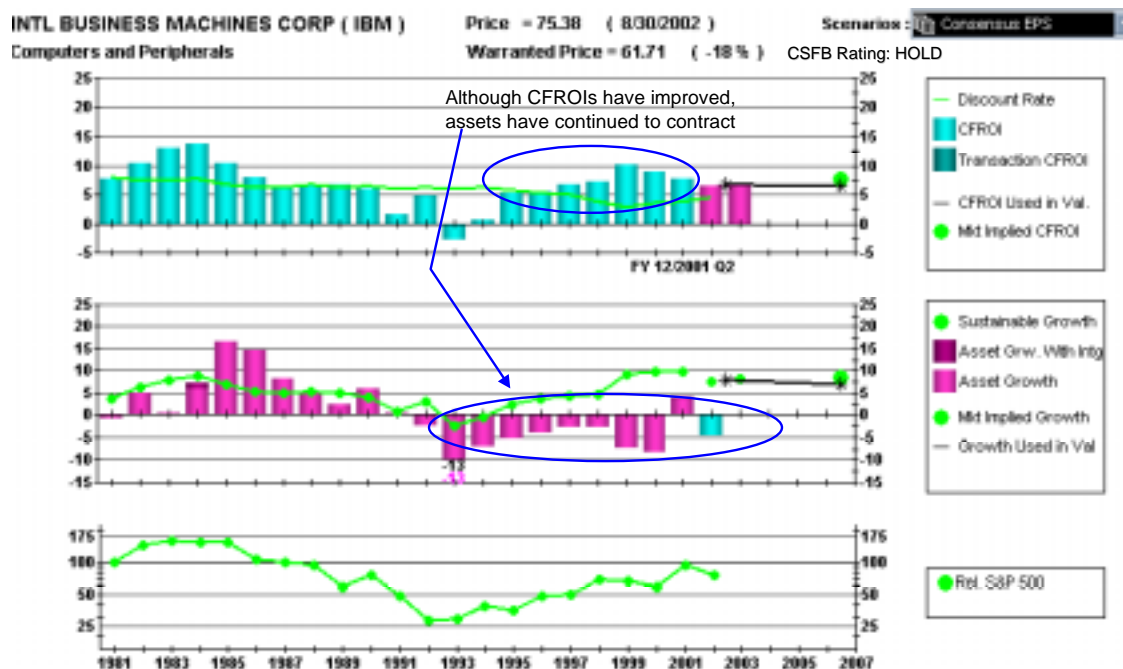
The upper panel, for percent-change in sales, shows very large decreases in 1987 and 1988, the start of the restructuring phase and asset contraction, and very large increases coincident with the late 1990s acquisitions. In most other years, sales increases were "healthy," just not very large (note the scale).

The fact that Safeway's management has succeeded in greatly improving margins even through the years of major acquisitions suggests that Safeway has created a valuable skill set. Once its effective operating practices have been fully implemented at acquired units, another average or below-average grocery-store chain could be acquired and turned into a high wealth generator under Safeway. This would enable Safeway to grow at a significantly higher rate than grocery purchases generally or even of its own, higher same-store sales growth.

IBM

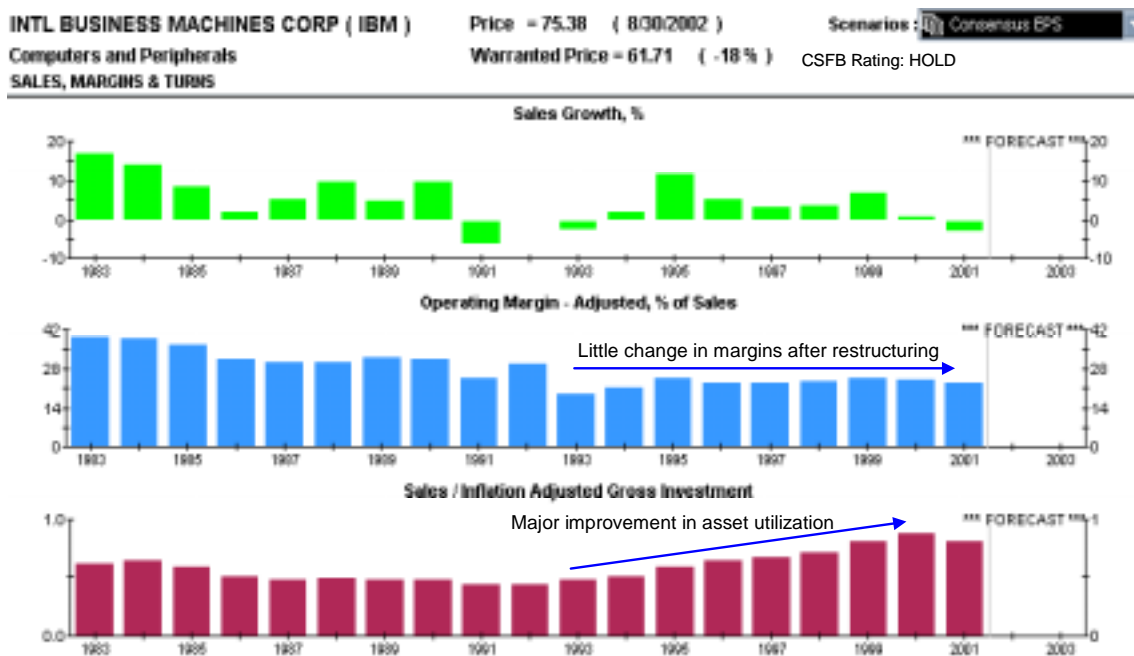
IBM's RW chart shown as Figure 3 is re-presented here as Figure 18 (but with notations relevant to the topic at hand) and as background for IBM's sales, margins & turns graph presented as Figure 19.

Figure 18. IBM Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

Figure 19. IBM Sales, Margins and Turns Chart



Source: CSFB HOLT ValueSearch™

Note that when visually comparing IBM's and SWY's sales, margins & turns charts, be mindful that each of the three panels are scaled differently. For example, the height of a bar in the top panel of Figure 20 representing IBM's sales growth has to be about twice as high as that of a Safeway bar in the upper panel of Figure 17 to represent an equal percentage change in sales. On the other hand, in the middle panel, a bar for Safeway would have to be four times as high as that of IBM to represent the same operating margin.

First we call attention to the difference between the patterns evident in the middle two panels of Figure 17 for SWY and Figure 19 for IBM. Whereas Safeway's improved CFROIs during the 1990s through 1991 were largely associated with improved margins and little change in asset turns, IBM's CFROI improvement after Mr. Gerstner took over in 1993 has been associated with little-changed margins but improved asset turns. Thus, although IBM's RW chart reveals asset contraction for all years but last year since 1993, sales growth, or revenue growth, has been positive in most of those years.

The important point is that asset contraction (middle panel of RW chart) or slow expansion even over an extended period could be favorable for valuation, perhaps indicating greater efficiency in the utilization of assets. In IBM's case, the pattern reflects Mr. Gerstner's strategic decision to focus IBM's manufacturing and servicing operations on network applications and to de-emphasize other computer-hardware manufacturing. The decline in IBM's book assets has been part of the successful (indicated by improved CFROIs) change in strategy, and is not a negative.

Another important point is that in such situations as this, asset contraction/growth (as evident in the company's RW chart) is not indicative of probable forecast revenue growth, which is critical to the generation of future net cash receipts. In such cases, a shortfall of actual growth relative to the sustainable rate would be misleading and our baseline input for growth (the sustainable rate) should be checked for plausibility against sales/revenue growth rather than asset growth/contraction.

Radical Improvement In Business Processes

Porsche AG

As mentioned above in our comments on Safeway, Inc., persistently below-average firms eventually restructure on their own, are taken over and get restructured by new ownership, or they go bankrupt. Safeway was turned around under new ownership. Porsche was turned around while still under the controlling Porsche family, but only after sharply deteriorated performance forced major change.

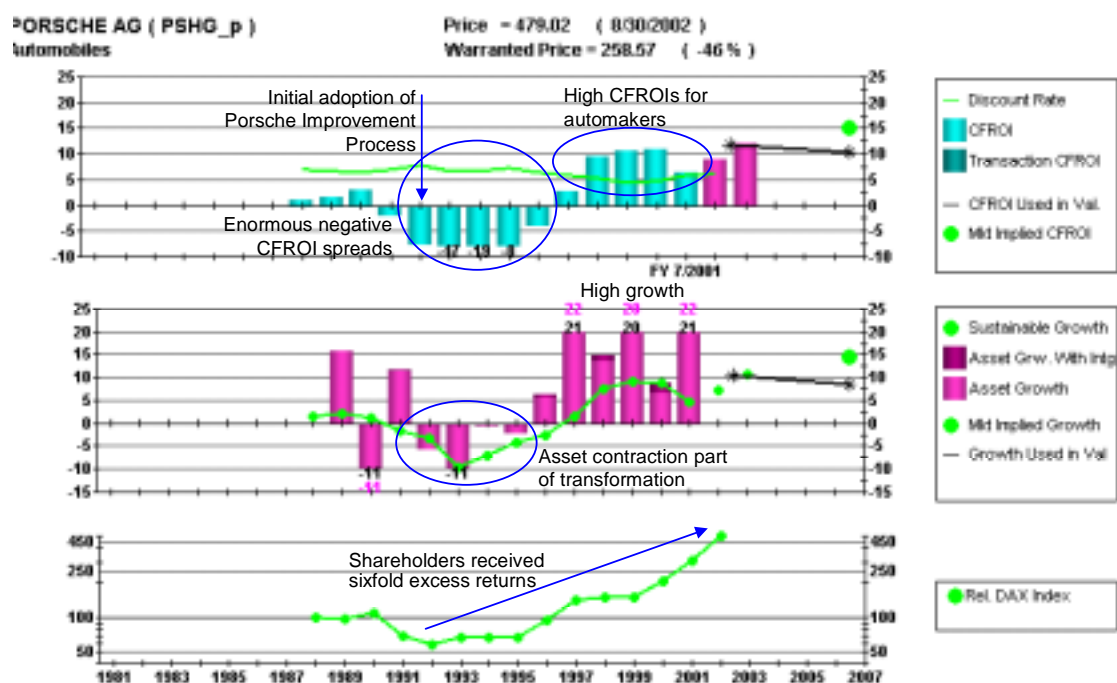
After reaching in 1986 an annual sales record of 50,000 cars worldwide, with 31,000 sold in North America, Porsche sales of its world-renowned premium sports cars fell drastically during the subsequent years as the German currency strengthened against the dollar, the U. S. fell into a recession, and Japanese car makers were earning high-quality reputations and launching luxury nameplates to challenge German luxury brands at more attractive prices. By the early 1990s, profits had effectively disappeared and losses were anticipated. In 1992 Porsche sold a world total of just under 12,000 of its cars, with only 4,000 sold in North America. According to reports, there was great doubt

both inside and outside the company that Porsche could survive as an independent company.

In October 1991, Dr. Wendelin Wiedeking was brought in as Chairman of the Board of Management with a mandate to reduce production costs so that profits could be restored without more price hikes that might further reduce sales. Wiedeking took his direct reports to Japan to learn how car manufacturers there could produce high quality vehicles at such low costs. They quickly realized that in order to become cost-competitive they would have to totally revamp operations. With Japanese consultants, Wiedeking led the implementation of Japanese “lean” processes at Porsche, a company widely thought then and now to have the most highly skilled workforce of all German car manufacturers.

Porsche’s RW chart presented in Figure 20 is a picture of a turnaround success via radical improvement in the most fundamental of business processes and structures.

Figure 20. Porsche Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

Note that Porsche’s transformation took a few years, during which time assets contracted and CFROIs became negative. Yet, the message of fundamental change underway at Porsche provided investors reason to revise their expectations upward. PSGH outperformed the market in 1993 and equaled market performance the next two years, notwithstanding the concurrent negative CFROIs and asset growth. Indeed, the negative CFROI performance later in that period was partly attributable to spending on a new model and Porsche’s practice of expensing all development costs of new models as the outlays occur.

By 1996 CFROIs, although still negative, were clearly on an improvement path and assets had begun to grow. Porsche unveiled its totally new Boxster that year, although few were available for sale until fiscal 1997. In that year, world sales of the Boxster totaled 15,876, nearly as many as the 16,507 of its 911 model. At \$40,000 in the U.S., the Boxster was only about half the price of its 911 model, yet it has greatly contributed to positive CFROI spreads in succeeding years. Porsche's shares outperformed the market by 40 percent in 1996 and 50 percent in 1997, accelerating the upward path of shareholder returns begun 3 years earlier.

Operating-performance success is not achieved by pulling levers

In Figure 15 of the preceding section, we presented variables labeled *Value Drivers*, *Financial Drivers*, and *Operating Drivers* of net cash receipts (NCR). The story of Porsche is presented in order to emphasize that the named "drivers" are not the equivalent of levers that can be pulled to generate NCRs; rather, those drivers reflect the result of the firm's *operating practices* in their many dimensions. Often one will read or hear management say it intends to improve results by, for example, cutting operating expenses by some percentage, without explaining how and why such cuts will improve NCRs in the long-run as well as the very short run.

Contrast that type of pull-the-lever approach to Porsche's change-in-processes approach. Quotations are from Porsche's 1993/94 Annual Report.

The Porsche Improvement Process, known as PIP, has been implemented across the board, from management down to the shop floor, in every sector of the company. Comprehensive staff training, with the aim of continually improving the transparency of the company, is an integral part of this policy.

In building this company "Kaizen" culture of institutional permanent improvement, the main focus is on its application to the company, not on perceived rules or recipes. The objective behind the process is to ensure that measures for problem-solving, rationalization and quality improvement are taken rapidly by those on the spot, so shifting responsibility to those who can exert a direct influence on value creation and who have the necessary skills to do so; nobody knows more about a job than the person who has to carry it out.

PIP is crucial in all measures taken to make full use of the inherent creative potentials.

"The Backseat Driver" column of *Forbes* magazine dated November 18, 1996, reported production-efficiency gains under PIP in these words, "To give an idea of what's happened since, it took 120 hours to build a Porsche in 1991, 95 hours in 1993, 76 hours last year, and should take 45 hours next year, when the Boxster is running with the 911." Similar efficiency improvements occurred in many other areas.

The success evident in Porsche's RW chart is testimony to Wiedeking's superior managerial skill and to what is possible even in a highly competitive industry like

automobiles and a powerfully unionized country like Germany when radical improvement in business processes and structures become the driving force of change.

Acquisitive Companies Demand a High Level Of Managerial Skill To Achieve Sustained High Performance

As mentioned earlier, high managerial skill is required to achieve sustained significantly above-average CFROIs coupled with high growth. To achieve such a superior record of economic performance when growth involves acquisitions takes another set of superior managerial skills. One important skill is picking acquisition companies/assets that will be good fits and then executing on the fits. Another is negotiating a price that will result in wealth-creating performance for the *acquiror's* shareholders.

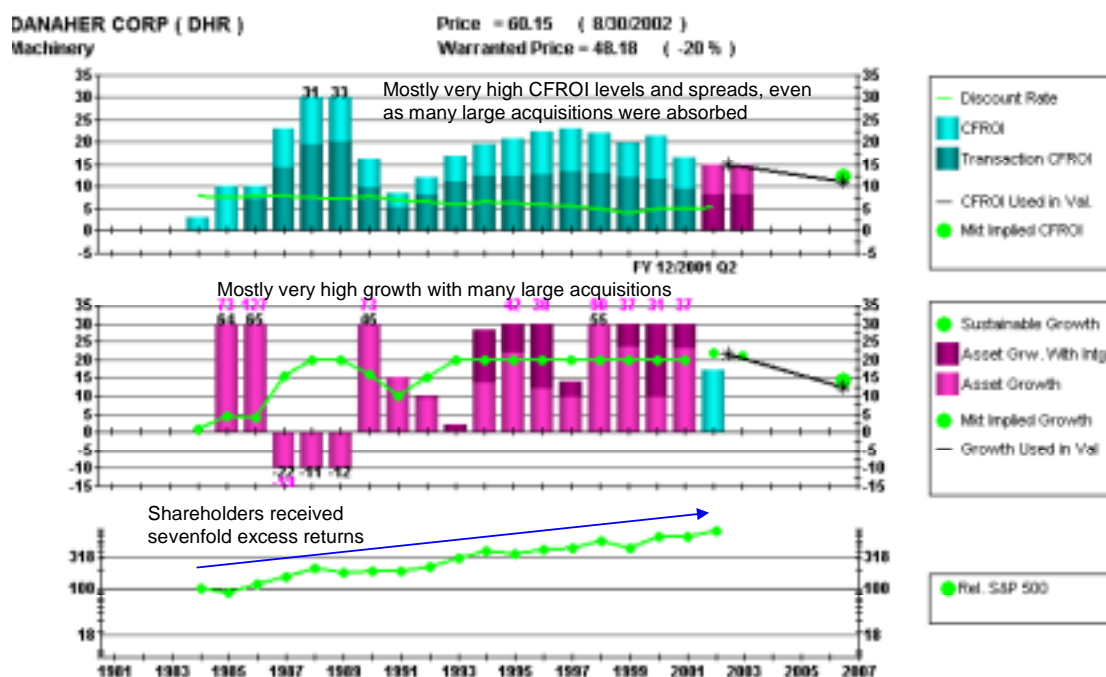
For readers unfamiliar with “Transaction CFROI” in the top panel and “Asset Growth With Intangibles” in the middle panel of our Relative Wealth charts, those items reflect larger acquisitions for which premiums were paid. If accounted for as purchases, goodwill would have been recorded in accordance with GAAP for the difference between the purchase prices and the “fair value” of the assets acquired; if accounted for as a pooling under earlier GAAP rules, we estimated goodwill amounts.

Transaction CFROI is primarily useful as an indicator that acquisitions have been significant and should be considered in a valuation analysis. A *transaction* CFROI makes a rough adjustment to the standard CFROI, based on *operating* assets, by multiplying CFROI by the ratio of operating assets to operating assets plus goodwill. Differences in these two measures identifies if goodwill is substantial and alerts investors to the importance of analyzing possible future acquisitions. The standard CFROI is helpful for gauging the effectiveness of management in generating cash from the assets available to it and for judging the plausibility of forecast CFROIs from *organic* growth.

Danaher Corp

Figure 21 is the RW chart of Danaher Corp (DHR), a diversified manufacturing company that has been highly acquisitive for many years. From a revenue level of \$750 million in 1989, Danaher increased revenues to \$3.8 billion in 2001. The superior skills of Danaher's management at selecting good-fit acquisitions and at turning them into or integrating them into high economic wealth producing operations are obvious in the top two panels. Those reveal sustained, albeit somewhat varied, very high CFROIs and extraordinarily high growth. Shareholders were rewarded with a sevenfold excess-return payoff.

Figure 21. Danaher Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

In the growth panel, note the very high rates of sustainable growth and the high number of years with off-the-chart growth rates. Much of that growth was associated with acquisitions of companies whose performance levels were less than stellar and whose valuations reflected such. Danaher was willing to pay premiums to those valuations because DHR's management was confident it could turn those mediocre performers into superior performers. The CFROI levels and spreads evident in Figure 21 is compelling evidence that Danaher's management has a high skill level at selecting acquisitions, negotiating prices, and – especially – effectively integrating and operating them.

From DHR's 2001 Annual Report, one gets a sense of what's behind DHR's impressive record. Notice the kinship that DHR's DBS has with Porsche's PIP, discussed in the preceding section.

ACQUISITIONS

Sound strategic acquisitions complement our organic growth initiatives, accelerating our overall growth rates and improving our competitive positions. Our powerful cash flow generations gives us the ability to pursue an active program, however, we recognize that superior cash flow generation without disciplined allocation of that capital does not benefit shareholders.

Our capital allocation philosophy is clear. First, we look for acquisitions that offer strong strategic fits with Danaher, either bolt-

on transactions to our existing companies or platform-establishing acquisitions that bring in “Danaher-like” businesses where our skills and abilities can create value. Second, we scrutinize return on invested capital (ROIC) on all acquisitions. Our minimum hurdle rate is ten percent after-tax ROIC within three years on average with bolt-on’s frequently reaching this threshold more quickly and platform-establishing transactions taking a little longer, but not exceeding five years. Regardless of our businesses’ current rate of return we are always, in the spirit of *kaizen*, looking to increase it. And third, EPS accretion is important.

DBS

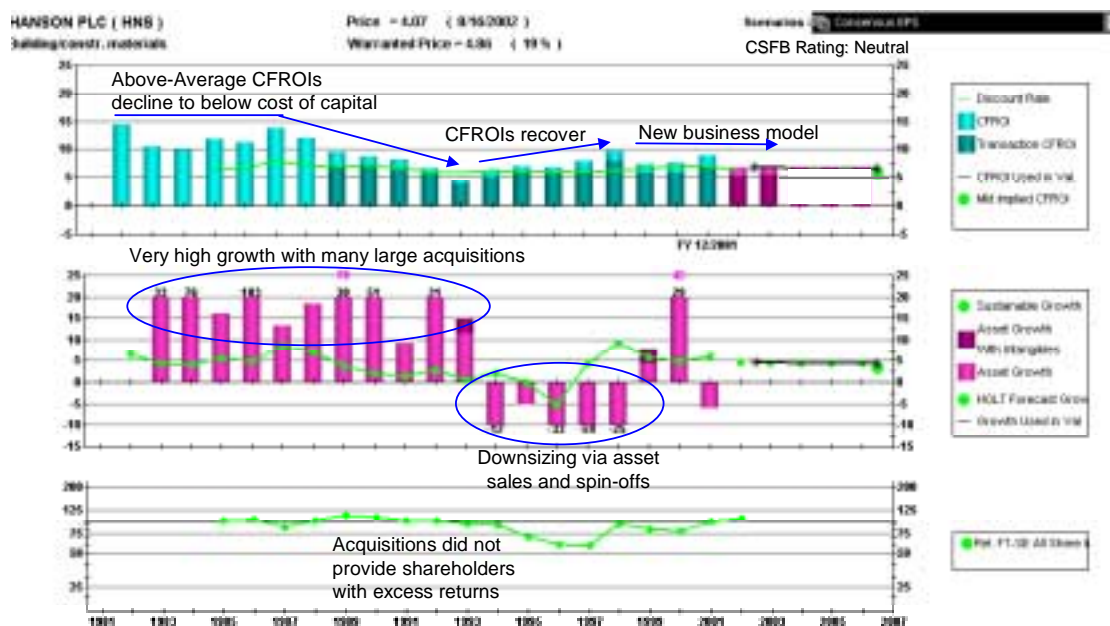
The bedrock of our company is the Danaher Business System (DBS). DBS tools give all of our operating executives the means with which to strive for world-class quality, delivery and cost benchmarks and deliver superior customer satisfaction and profitable sales growth.

DBS continues to broaden and deepen its impact on our organization. We apply the *kaizen* mindset to all functions, from manufacturing to sales to human resources, to drive real improvements in all of our processes. But more than a mere set of manufacturing productivity tools, DBS really is a system in which exceptional people conceive superior business plans and execute them by sustainable processes. This is how Danaher has been able to produce superior financial performance year after year - performance which serves to attract talented people to Danaher.

Hanson PLC

Founded in 1964, U.K.-based Hanson PLC (HNS) adopted the holding-company model used to build many big-name conglomerates of the time. The growth panel of Hanson’s RW chart (Figure 22) reveals a rapidly growing and highly acquisitive company through 1993, with some of that growth reflecting goodwill premiums. Reported sales rose from £1.148 billion in 1982 to £9.668 billion in 1993.

Figure 22. Hanson PLC Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

As is evident in the top panel, Hanson generated above-average CFROIs in the early period shown in the chart, but during the final six years of its high-growth period, CFROIs declined from a level well above Hanson's cost of capital to significantly below. Shareholder returns (bottom panel) mostly matched the market during the acquisition binge that lasted until 1993.

Management elected to jettison its conglomerate strategy and, packaging 34 of its smaller diverse U.S. companies into a newly created U.S. Industries, Inc., Hanson distributed USI's stock to its shareholders in May 1995. In January 1996, Hanson announced plans to demerge into four separate corporations, each for one of its four major lines of business – chemicals, consumer, energy, and building materials & equipment – with Hanson retaining only the last. The major parts of the others were spun off to shareholders as, respectively, Millennium Chemicals, Inc., Imperial Tobacco Group PLC, (both in October 1996) and The Energy Group PLC (February 1997).

Hanson's Annual Report for 1997 states:

Hanson is a building materials company. Our principal businesses are ... producing aggregates and related products for the UK and US markets... and bricks in both the UK and continental Europe. ...1997 was a year of transition for Hanson PLC as the final demerger was completed, a number of non-core disposals made and others earmarked for the near future. The development of the business during the coming years will be through a combination of bolt-on acquisitions, asset exchanges and productivity enhancing capital expenditure.

In 1997 sales had dropped to £2.418 billion, one-fourth the amount of sales in 1993.

Fast-forward to the 2001 Annual Report:

In the five years since the demerger in February 1997 we have expanded rapidly through acquisition. We have completed over 50 bolt-on acquisitions and our total expenditure has been in excess of £2.5bn.... The largest addition to the portfolio, in 2000, was Pioneer [for £1.73 billion] which transformed Hanson into the world's largest producer of aggregates and third largest producer of ready-mix concrete. ...We are focused exclusively on heavy building materials and aim to lead on margins and efficiency, operate internationally in selected markets which have good long term prospects, establish strong local market positions through bolt-on acquisitions and capital investment with strict investment criteria, [and] share best practices and management expertise.

As is noted in Figure 22, CFROIs jumped up to cost-of-capital and somewhat above levels during the period of downsizing and refocusing, but have since stabilized near there.

Help in judging plausible forecasts

Now consider, what would an investor's reactions likely be to news of another major acquisition by HNS and by DHR? Granting that Hanson's management has set the firm on a focused path that seems sensible, it has yet to demonstrate high skill in selecting its acquisition targets for its new business model, in not paying too much for them, and/or in integrating them into a consistent high economic wealth-creating whole. In contrast, investors have for Danaher a performance history consistent enough for judging the plausibility of forecasts, even when major acquisitions are announced. There remains plenty of room for different views about a reasonable forecast for, say, the next five years, yet Danaher's history can be helpful to investors in judging if a current price offers more upside or downside potential.

The dots at the far right side of the top and middle panels of RW charts indicate the t+5 CFROI level and growth rate implied by the market price of the company's stock on the date indicated. For DHR the dots indicate that the share price of \$60.15 on August 30, 2002 is consistent with investor expectations of 12.5 percent CFROIs and a 14 percent asset growth rate five years from that date.

The implied CFROI downward-fade rates, although somewhat slower than in our baseline model, nonetheless reflect the expectation that the recent downward trend in Danaher's CFROIs is going to continue and that the growth rate also is going to drop considerably. This implies that DHR's management is not going to be able to continue to overcome the competitive life-cycle forces to anywhere close to the degree it has in the past. If it can overcome those, the superior performance will likely favorably surprise the market and DHR will likely continue to generate positive excess shareholder returns.

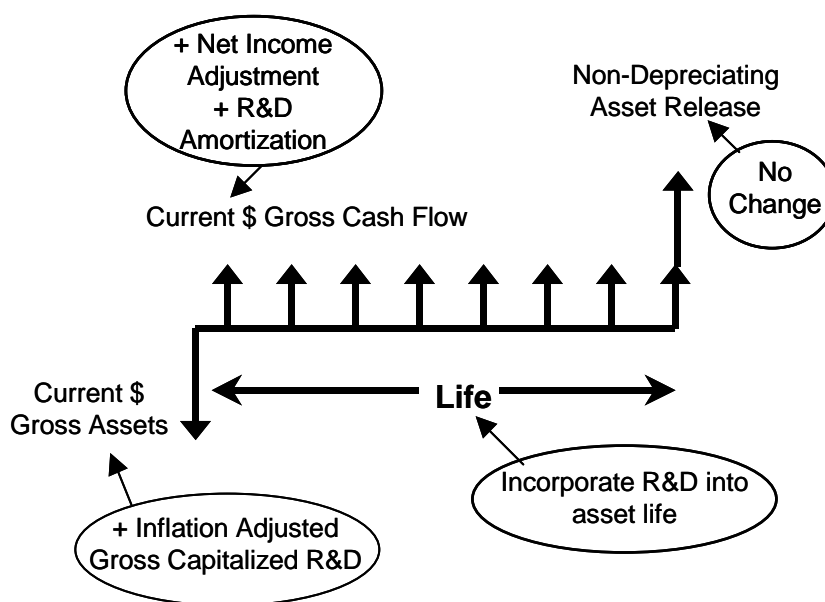
Capitalizing R&D is Important for Measuring Economic Performance

Our approach to capitalizing and amortizing research & development outlays is based on the premise that such expenditures generally have an economic life of more than one year, which logically makes them long-term assets.

For a high-growth firm having substantial amounts of R&D outlays, a switch to capitalizing and amortizing R&D would typically result in higher reported earnings, because R&D amortization in a given year for such a firm is less than expensed R&D outlays. Users of earnings-based valuations models would tend to calculate higher target stock prices owing to the higher reported earnings.

But the effects are more complex than earnings alone can capture. For a particular company, CFROIs can increase or decrease depending on the interrelated effects of R&D capitalization on gross cash flow, asset life, and gross assets. Figure 23 shows the R&D adjustments we make for our CFROI calculation. Real asset growth rates and sustainable growth rates will typically be higher for R&D-intensive companies after these adjustments.

Figure 23. Effects On CFROI Components From Capitalizing R&D



Source: CSFB HOLT Equity Research

The bottom line is that capitalizing and amortizing R&D not only makes more economic sense but also aids in understanding R&D-intensive company performance and valuation.

Chiron Corp.

Chiron Corp. serves particularly well for illustrating the importance of capitalizing and amortizing R&D. One reason is that Chiron's annual outlays for R&D have always exceeded its reported accounting capital expenditures, in some years by very high multiples (see Figure 24). To not capitalize the R&D of such companies means that the firm's accounting-based financial statements give a grossly distorted picture of the underlying economics.

To illustrate, with Capex (see Figure 23) for the 3-years ended 2001 averaging \$61.3 million, down from an average of \$108.0 million for the 3 prior years, it appears that Chiron has sharply cut back on investment projects. But average R&D outlays for the same 3-year periods *increased* to \$297.0 million from \$265.4 million, indicating Chiron has continued to increase its commitment to that type of long-term investment.

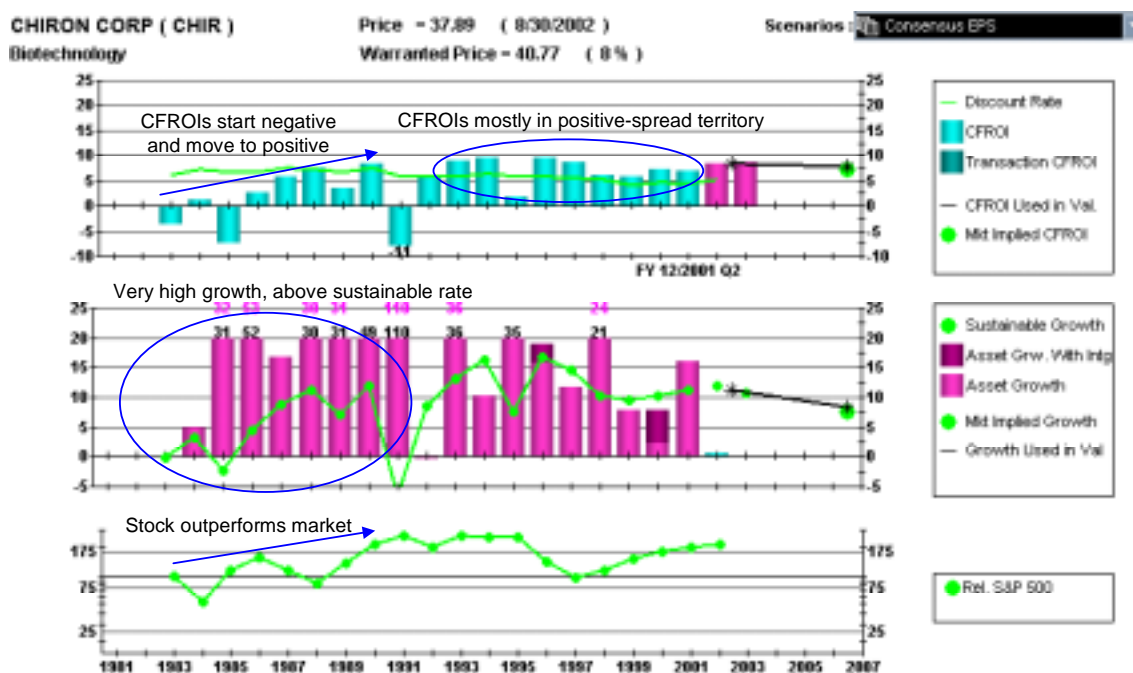
Figure 24. Chiron Corp. Capex and R&D Expense

<u>Year</u>	<u>Capital Expenditures (\$ millions)</u>	<u>R&D Expense (\$ millions)</u>	<u>R&D Multiple of Capex</u>
2001	64.88	344.41	5.3
2000	54.35	292.94	5.4
1999	64.59	253.70	3.9
1998	126.30	232.35	1.8
1997	77.52	296.45	3.8
1996	120.16	267.30	2.2
1995	101.05	343.75	3.4
1994	105.69	166.18	1.6
1993	115.18	140.03	1.2
1992	24.74	142.93	5.8
1991	14.33	79.40	5.5
1990	8.80	50.20	5.7
1989	5.26	46.10	8.8
1988	4.31	38.82	9.0
1987	13.30	28.14	2.1
1986	6.46	17.12	2.7
1985	1.97	4.22	2.1
1984	2.90	7.60	2.6
1983	1.75	5.61	3.2
	<u>\$913.54</u>	<u>\$2,757.25</u>	

Another reason for Chiron's selection as an R&D Classic Company is that the period covered by its RW chart includes early years when Chiron was in the start-up phase of the generalized competitive life-cycle. In Figure 25, Chiron's standard RW chart (*with* R&D capitalized) neatly reveals the characteristics of start-ups that the market expects

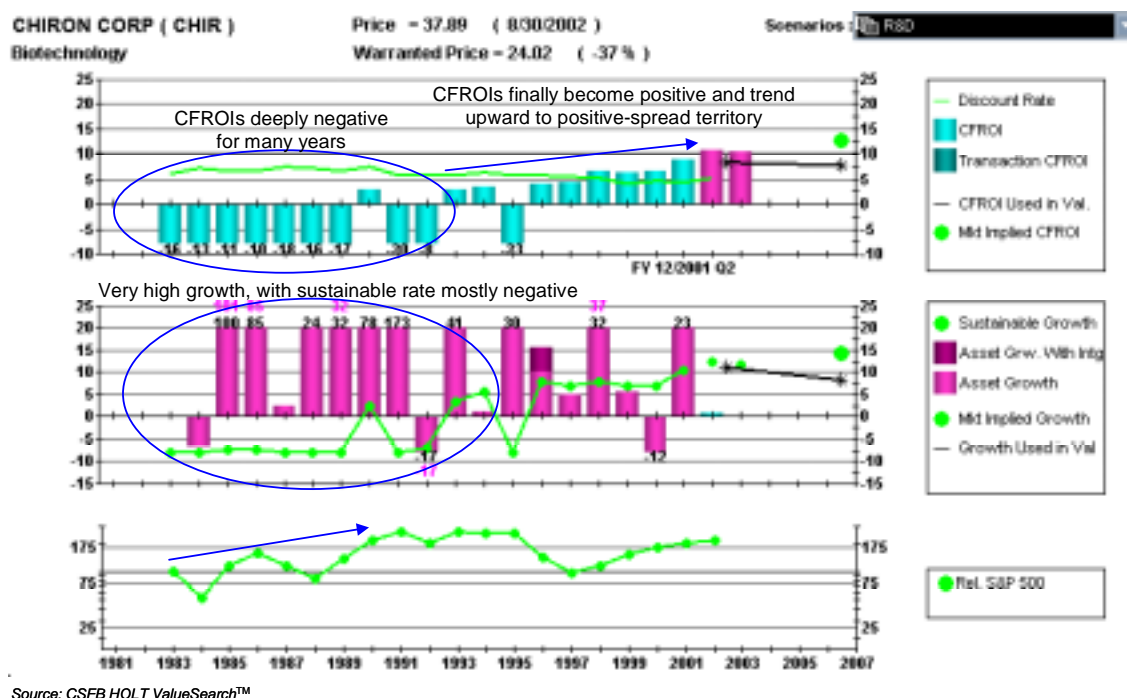
to become successful cash generators. Notice that initially CFROIs are negative but then trend upward into positive territory, although for Chiron still negative in relation to the firm's cost-of-capital (investors' discount rate). The rate of real asset growth is far above the sustainable rate. Yet, even with absolutely negative or negative-spread CFROIs, the trend of shareholders' excess returns was upward.

Figure 25. Chiron Corp Relative Wealth Chart With Capitalized R&D



Source: CSFB HOLT ValueSearch™

Figure 26. Chiron Corp Relative Wealth Chart Without Capitalized R&D



In comparison, Chiron's RW chart *without* our treatment for capitalizing R&D, that is, with R&D outlays fully expensed (Figure 26), shows deeply negative CFROIs for 10 of the first 11 years. With negative CFROIs, the sustainable growth rate is also negative for 10 of the first 11 years. From our vantage point, there is nothing in this "history" that might account for the outperformance of Chiron's stock.

As Chiron moved into the later years of its start-up phase and beyond that, CFROIs *with* R&D capitalized became clearly positive, with positive-spreads in many years (Figure 25). CFROIs *without* R&D capitalized (Figure 26) did not become clearly positive until later, from which they trended upward and reached positive-spread territory only in the late 1990s.

Here we simply want to show how different the performance of an R&D-intensive company can appear with and without R&D capitalized. As with inflation adjustments, while the importance of the R&D adjustment may seem greater or smaller at various times and in different situations, the adjustment is always needed for a clearer understanding of economic developments at the firm, for making better forecasts and plausibility checks of forecasted CFROIs and growth, and for making comparisons across time, companies, and borders.

Brand Names Do Not Reward Shareholders In the Absence of Economic Performance

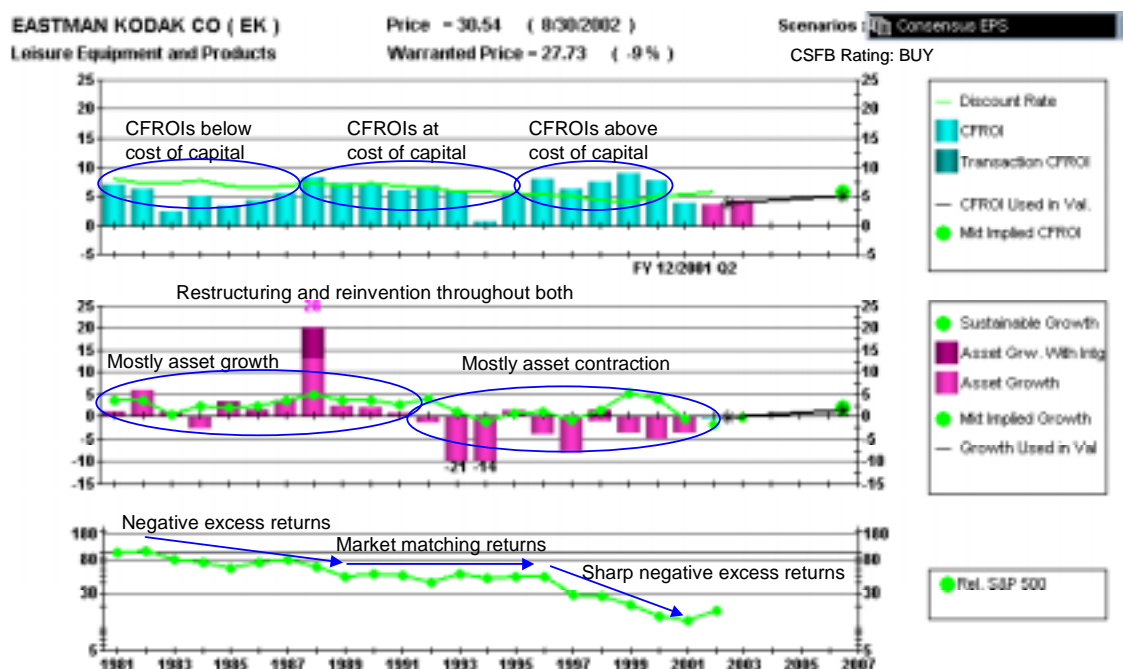
As the value of manufacturing output in the more advanced economies has diminished as a proportion of total economic output, increasing attention has been given to the value of intangible, or soft, assets. Many companies, some very large, now outsource most manufacturing and logistical activities associated with their products, becoming essentially design, engineering, marketing, and managing service-companies for their brands.

As with R&D, it seems clear that *some* portion of brand-building outlays generate benefits over more than one year and thus should be capitalized. Indeed, CSFB HOLT has this topic on its research agenda, with the objective of developing a practical, economically based method that aids in understanding these types of companies and their share prices. For now, we point out by examples that a good brand does not translate into high value unless management utilizes the brand to produce real economic wealth.

Eastman Kodak Company

Kodak is a world-recognized brand with a high-quality reputation. Yet the bottom panel of Kodak's RW chart in Figure 27, reveals that 90 percent or so of shareholder wealth has been lost over the past 20 years.

Figure 27. Eastman Kodak Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

In the growth panel, two clearly distinct periods are evident. For roughly the first half of the 20 years, Kodak's growth rate was mostly positive at somewhat below its sustainable rate, and in the second half assets contracted nearly all years.

Early in the 20-year period, CFROI levels were declining and spreads were negative. Then CFROIs rose to zero-spread territory, but not to positive-spread levels. After the early years of asset contraction, CFROIs rose to positive-spread levels. Apparently investors were encouraged by Kodak's restructuring efforts, reflected in positive spread CFROIs, as from 1990 to 1996 EK's shares produced market-matching returns, after a long period of mostly negative excess returns. But EK returned to generating negative excess shareholder returns as investors correctly anticipated that EK's CFROIs would revert to below-average.

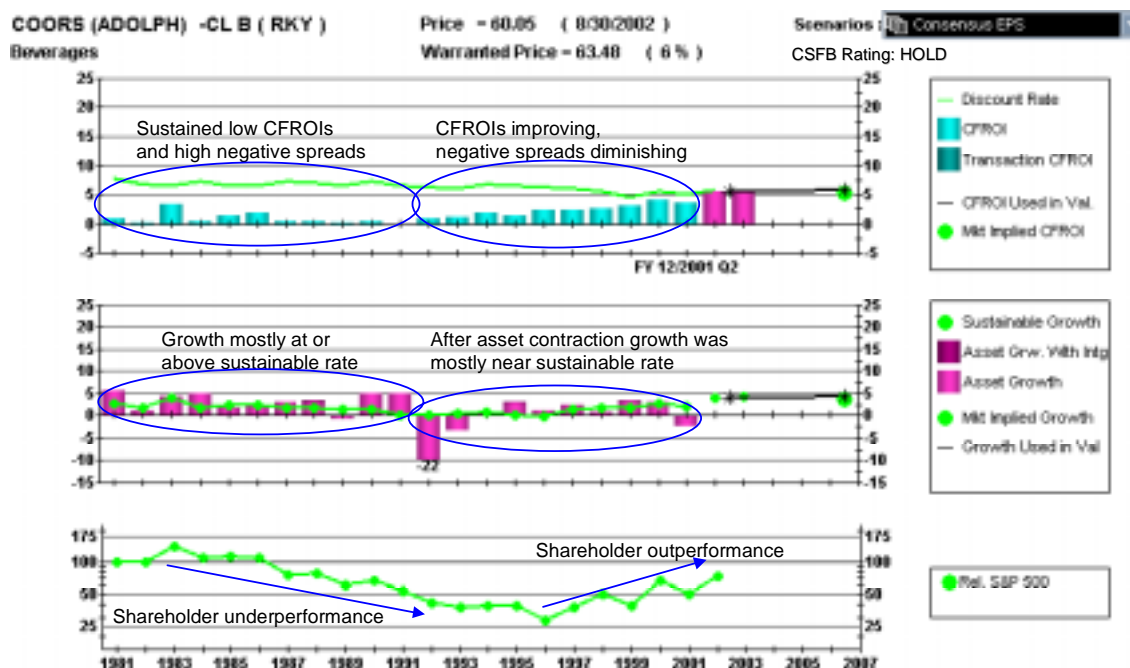
One of Kodak's competitors, Polaroid Corporation, also is a major brand name. Like Kodak, Polaroid delivered mostly negative CFROI spreads for the 20 years preceding its Chapter 11 bankruptcy filing in October 2001. In July 2002, the U.S. Bankruptcy Court approved the purchase of substantially all of Polaroid's business by a private equity investment company for \$255 million cash plus a 35 percent interest in the new company. All of it was to benefit unsecured creditors; none would go to Polaroid's stockholders. Presumably all or nearly all of that consideration was paid for intangible assets, as secured creditors had claims on Polaroid's tangible assets. But how much of that was for the Polaroid brand versus, say, technology or customer relationships is unknown.

Adolph Coors Co.

The RW chart for Coors, Figure 28, displays a record clearly revealing that a major brand noted for quality has value with investors that is directly tied to the firm's economic performance.

For about the first half of the period shown, Coors was following a strategy of volume growth in an effort to gain sufficient size and economies of scale to compete successfully as a national brand at a time of consolidation among beer makers. As reasonable as that strategy might have been from some perspectives, it was at odds with the basic rules for wealth creation. With very low CFROI levels and high negative CFROI spreads, every additional dollar of investment by Coors was producing considerably less in economic wealth. Through much of the period, its shareholders reaped negative excess returns.

Figure 28. Coors Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

According to Coors' 10-K, "In 1993, company management focused on the need to balance volume gains with improved returns to shareholders and a number of steps were taken toward that end. Highlights for 1993 include the following: additions of new senior management personnel; profitability improvement initiatives; initial restructuring of field sales operations to drive decision-making and accountability closer to the retail level; the announcement and/or introduction of seven new products; and the announcement of an agreement in principle to purchase a 500,000 barrel brewery in Spain. The company also revised its executive compensation plan to strengthen the link between incentive compensation and improved returns, beginning in 1994."

As part of its restructuring, Coors spun off at the end of 1992 a number of its non-core businesses in a tax-free distribution to shareholders and sold most of the assets of selected other non-core operations. As is evident in the growth panel of Figure 28, such transactions resulted in asset contractions in both 1992 and 1993. CFROIs, though still very low, began an upward trend coincident with the restructuring. That trend has continued into forecast CFROIs for the next two years. Although the CFROI improvement has yet to produce positive CFROI spreads, the negative spread has been small recently. Management at Coors has been moving that good brand toward being an economic wealth-creating engine as well as a consumer-pleasing beer maker.

Although CFROI spreads remained negative, excess shareholder returns turned positive in 1997 and have continued in an upward trend path since, suggesting Coors' improving performance has surpassed expectations built into earlier prices. The market-implied

CFROI dot at t+5 indicates that investors now expect CFROIs to continue trending upward, in line with our model's baseline algorithms.

Growth Companies with Limited Internal Reinvestment Opportunities at High CFROIs

As described in preceding sections, firms generating high positive-spread CFROIs should seek to grow. In this sense they are “growth” companies. Here we look at firms with RW charts showing long histories of high positive-spread CFROIs but low rates of growth. They are “growth companies that can’t grow”.

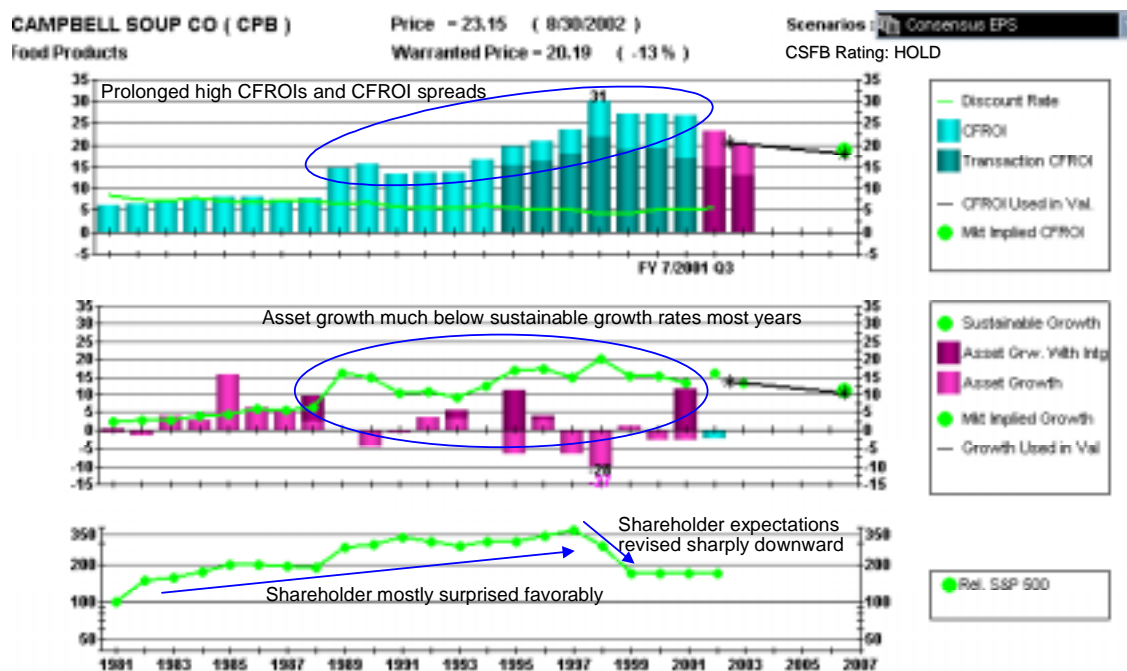
Managements of such companies often are urged to make acquisitions and/or to undertake new strategic initiatives to grow faster. The advice is sound in the abstract, but its adoption often fails to benefit shareholders because the economic returns of the new projects pull down the average return on all projects constituting the firm's businesses – that is, the firm's CFROIs fade rapidly.

Management and firm cultures suited to maintaining successful operations in low-growth environments may be quite unsuited for high-growth environments. Thus, when “growth companies that can’t grow” announce major new undertakings to grow faster, analysts and investors should reflexively be skeptical of success. Optimism that high growth will be achieved without sacrificing high returns should replace this skepticism only if a hard-nosed assessment of management's skill and the firm's new positioning puts the odds clearly in its favor.

Campbell Soup Co.

Campbell Soup's RW chart reveals the distinguishing characteristics of a can't-grow growth company: a prolonged period of high positive-spread CFROIs accompanied by actual growth rates well-below sustainable growth rates.

Figure 29. Campbell Soup Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

If firms don't reinvest the cash they generate, the cash must be applied to one or more of: increased cash holdings, debt reduction, dividend increase, and/or stock repurchase. Equity investors will be hesitant to pay up for a claim on a firm's superior cash generating power if the firm doesn't plowback most of the cash it generates.

In our baseline warranted value calculation, *forecast* operating-asset growth is driven by the forecast "sustainable growth rate", which itself is driven by forecast CFROIs. Notice that the forecast growth rates used in the calculation of the warranted stock price of \$20.19 are far above the actual growth rates for the period circled, except for 1995 and 2001 when large acquisitions were made. This suggests that the forecast baseline growth rates are too high. Users would want to test the price effects of more plausible growth rates.

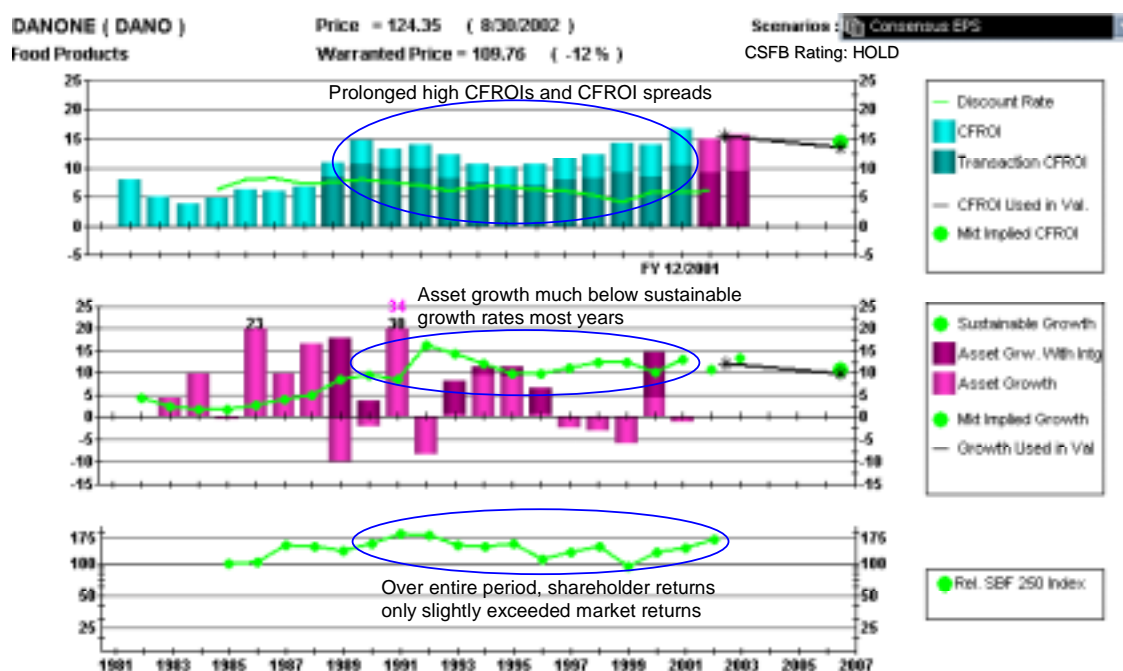
By "eyeball" and excluding acquisitions and/or possible effects of new initiatives at the company, single-digit growth rates close to the economy's growth seem more plausible than the sustainable rates used for our baseline warranted price. The effect of lower growth rates on CPB's price can be quickly tested via the Sensitivity feature of our ValueSearch™ software. With real asset growth of 4 percent for the next 10 years and with our baseline fade for a firm with Campbell's characteristics taken over 10 years rather than 5 years, the "target" price for CPB falls to \$15.28 from \$20.19 as of the date of the RW chart.

Danone Group

Danone, founded in 1899, is domiciled in France and operates globally through three core businesses: Fresh Dairy Products, Beverages, and Cereal, Biscuits and Snacks. It manufactures and markets under numerous brand names in various regions and countries. In the U.S., its Danone yogurt brand is well known, as is its Evian bottled water brand. World sales in 2001 totaled 14.470 billion euros. As a percent of sales, Dairy accounts for nearly 50 percent, Beverages nearly 30 percent, and Cereal, Biscuits and Snacks slightly over 20 percent.

Danone's RW chart, too, has the characteristics of a growth company that can't grow, although Danone's CFROI and real asset growth history is clouded by the many acquisitions it has made in an attempt grow faster.

Figure 30. Danone Group Relative Wealth Chart



Source: CSFB HOLT ValueSearch™

As with Campbell Soup, the t+5 CFROI and asset growth rate implied by Danone's share price as of the RW chart date are only slightly above those used in our baseline warranted price calculation. This is evident by the green dots (which indicate the market-implied values) at the far-right side of the top and middle panels falling slightly above the black stars (which indicate the values used in our warranted share price calculation). Not surprisingly, our warranted share price is somewhat less than the market price as of the RW chart date.

Is Danone likely to grow as fast as suggested by our sustainable growth rates and implied by the current market price? Based on Danone's track record, that seems

unlikely unless Danone makes substantial acquisitions in the coming years. And if Danone does so, how much will it pay for the acquisitions and what ROIs will Danone earn on those incremental investments once they become part of Danone's portfolio of businesses? These questions call for an assessment of top management's acquisition skills, which require detailed analysis of Danone's prior acquisitions.

If Danone does not make further acquisitions, its history suggests that its future growth rates are likely to be considerably below the sustainable rates used in our warranted price calculation. In the past five years and excluding acquisitions, Danone's real assets contracted four of the five years. In the preceding 5 years, without acquisitions real assets grew an average of about 3 percent. If we use real asset growth of 3 percent for the next 10 years and with our baseline fade for a firm with Danone's characteristics taken over 10 years rather than 5 years, the "target" price for DANO falls to 85.82 euros from 109.76 euros as of the date of the RW chart.

Plainly, analysis of management's acquisition skill is highly important to the investment decision for Danone.

Disclosure Section

The person(s) responsible for preparing this report received compensation that is based upon various factors including CSFB's total revenues, a portion of which is generated by CSFB's investment banking activities.

The CSFB Holt methodology does not assign ratings to a security. It is an analytical tool that involves use of a set of proprietary quantitative algorithms and warranted value calculations, collectively called the CSFB Holt valuation model, that are consistently applied to all the companies included in its database. Third-party data (including consensus earnings estimates) is systematically translated into a number of default variables and incorporated into the algorithms available in the CSFB Holt valuation model. The source financial statement, pricing, and earnings data provided by outside data vendors is subject to quality control and may also be adjusted to more closely measure the underlying economics of firm performance. These adjustments provide consistency when analyzing a single company across time, or analyzing multiple companies across industries or national borders. The default scenario that is produced by the CSFB Holt valuation model establishes the baseline valuation for a security, and a user then may adjust the default variables to produce alternative scenarios, any of which could occur. Additional information about the CSFB Holt methodology is available on request.

CSFB and/or its affiliates have managed or co-managed a public offering of securities for the subject company (RKY, DOW, IP, SWY, TOY, WMT, IBM) within the past 12 months.

CSFB and/or its affiliates have received investment banking related compensation from the subject company (CHIR, DANO.PA, DOW, FDX, IMT.L, IP, SWY, TOY, WMT, EK, IBM, USI) within the past 12 months.

CSFB and/or its affiliates expect to receive or intend to seek investment banking related compensation from the subject company (ABT, RKY, CPB, CHIR, DANO.PA, DOW, EMR, FDX, IMT.L, IP, MCH, PAYX, SWY, TOY, WMT, DHR, EK, IBM, USI, HNS.L, PRD) within the next 3 months.

As of the date of this report, CSFB makes a market in the securities of the subject company (CHIR, DANO.PA, IP, PAYX).

As of the end of the preceding month, CSFB and its affiliates beneficially own 1% or more of a class of common equity securities of (FDX).

As of the date of this report, Pershing Trading Company, a CSFB affiliate, makes a market in the securities of the subject company (CHIR, PAYX).

As of the date of this report, Pershing Trading Company, a CSFB affiliate, acts as a specialist on a regional exchange in the securities of the subject company (ABT, DOW, EMR, FDX, IP, SWY, TOY, WMT, EK, IBM).

Credit Suisse First Boston (Europe) Limited (CSFB) acts as broker to WMT.

The CSFB Holt methodology does not assign a price target to a security. The default scenario that is produced by the CSFB Holt valuation model establishes a warranted price for a security, and as the third-party data is updated, the warranted price may also change. The default variables may also be adjusted to produce alternative warranted prices, any of which could occur. Additional information about the CSFB Holt methodology is available on request.

This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Credit Suisse First Boston or its subsidiaries or affiliates (collectively "CSFB") to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to CSFB. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of CSFB. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of CSFB.

The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. CSFB may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. The contents of this report does/do not constitute investment advice to any person and CSFB will not treat recipients as its customers by virtue of their receiving the report.

Information and opinions presented in this report have been obtained or derived from sources believed by CSFB to be reliable, but CSFB makes no representation as to their accuracy or completeness and CSFB accepts no liability for loss arising from the use of the material presented in this report unless such liability arises under specific statutes or regulations. This report is not to be relied upon in substitution for the exercise of independent judgment. CSFB may have issued other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. Those reports reflect the different assumptions, views and analytical methods of the analysts who prepared them.

CSFB may, to the extent permitted by law, participate or invest in financing transactions with the issuer(s) of the securities referred to in this report, perform services for or solicit business from such issuers, and/or have a position or effect transactions in the securities or options thereon. In addition, it may make markets in the securities mentioned in the material presented in this report. CSFB may, to the extent permitted by law, act upon or use the information or opinions presented herein, or the research or analysis on which they are based, before the material is published. CSFB may have, within the last three years, served as manager or co-manager of a public offering of securities for, or currently may make a primary market in issues of, any or all of the companies mentioned in this report. Additional information is available on request.

Some investments referred to in the research will be offered solely by a single entity and in the case of some investments solely by CSFB, or an associate of CSFB.

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgement at its original date of publication by CSFB and are subject to change. The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADR's, the values of which are influenced by currency volatility, effectively assume this risk.

Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct its/their own investigation and analysis of the product and consult with its/their own professional advisers as to the risks involved in making such a purchase.

Some investments discussed in the research may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. In the case of some investments the potential losses may exceed the amount of initial investment, in such circumstances you may be required to pay more money to support those losses. Income yields from investments may fluctuate and in consequence initial capital paid to make the investment may be used as part of that income yield.

Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed. The investments and services contained or referred to in this report may not be suitable for you, it is recommended you consult an independent investment advisor if you are in doubt about those investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice nor a representation that any investment or strategy is suitable or appropriate to your individual circumstances. Nothing in the report constitutes a personal recommendation to you. CSFB does not advise on the tax consequences of investments. You are advised to contact an independent tax adviser. Please note the bases and levels of taxation may change.

This report may contain hyperlinks to websites. CSFB has not reviewed the linked site and takes no responsibility for the content contained therein. The link is provided solely for your convenience and information and the content of the linked

site does not in any way form part of this document. Following the link through this report or CSFB's website shall be at your own risk.

This report is issued in Europe (except Switzerland) by Credit Suisse First Boston (Europe) Limited, One Cabot Square, London E14 4QJ, England, which is regulated in the United Kingdom by The Financial Services Authority ("FSA"). This report is being distributed in the United States by Credit Suisse First Boston Corporation; in Switzerland by Credit Suisse First Boston; in Canada by Credit Suisse First Boston Securities Canada, Inc.; in Brazil by Banco de Investimentos Credit Suisse Boston S.A.; in Japan by Credit Suisse First Boston Securities (Japan) Limited; elsewhere in Asia/Pacific by whichever of the following is the appropriately authorised entity in the relevant jurisdiction: Credit Suisse First Boston (Hong Kong) Limited, Credit Suisse First Boston Australia Equities Limited, Credit Suisse First Boston (Thailand) Limited, CSFB Research (Malaysia) Sdn Bhd, Credit Suisse First Boston Singapore Branch and elsewhere in the world by the relevant authorised affiliate of the above. Research on Taiwanese securities produced by Credit Suisse First Boston, Taipei Branch has been prepared and/or reviewed by a registered Senior Business Person.

In jurisdictions where CSFB is not already registered or licensed to trade in securities, transactions will only be effected in accordance with applicable securities legislation, which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements. Non-U.S. customers wishing to effect a transaction should contact a CSFB entity in their local jurisdiction unless governing law permits otherwise. U.S. customers wishing to effect a transaction should do so only by contacting a representative at Credit Suisse First Boston Corporation in the U.S.

Please note that this report was originally prepared and issued by CSFB for distribution to their market professional and institutional investor customers. Recipients who are not market professional or institutional investor customers of CSFB should seek the advice of their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents. This research may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA or in respect of which the protections of the FSA for private customers and or the UK compensation scheme may not be available, and further details as to where this may be the case are available upon request in respect of this report.

Principal is not guaranteed in the case of equities because equity prices are variable.

Copyright Credit Suisse First Boston, and its subsidiaries and affiliates, 2002. All rights reserved.

APPENDIX

BASIC CONCEPTS SUMMARIZED

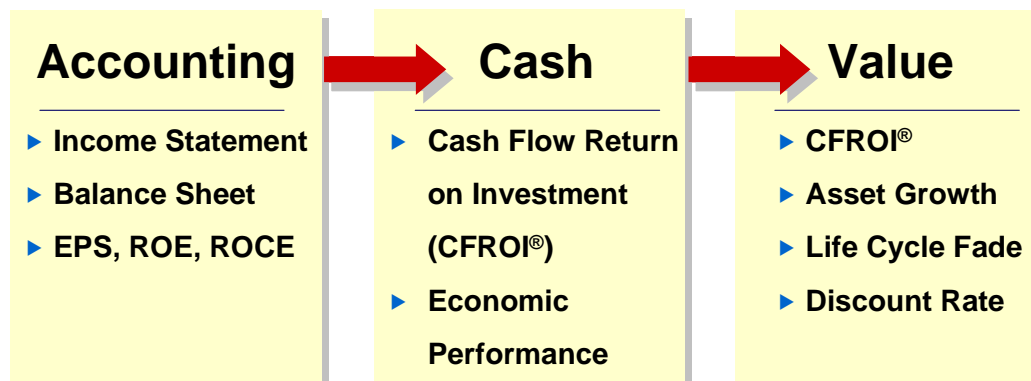
April 26, 2002

ernest.welker@csfb.com
bart.madden@csfb.com

Ernest P. Welker
Bartley J. Madden

The Market Values Firms on Expected Cash Flows

A key premise of our model is that a firm's market value is ultimately determined by its creation/destruction of economic wealth. Cash flows generated from economic activities (investment projects) are a superior measure of economic performance than are traditional accounting measures of performance, because accounting data can misrepresent the underlying economics of business activities.



Having uncovered over time a number of such distortions (the effort continues), CSFB HOLT has made adjustments to reported income statement and balance sheet items in developing cash-based measures of performance more closely approximating the underlying economics. With these improvements, we can more effectively estimate a firm's value from levels of, and life-cycle patterns of change in, CFROIs, operating assets, and discount rates.

Source: CSFB HOLT Equity Research

Some accounting issues for which we have made adjustments that are incorporated in our database include: inflation, depreciation methods, treatment of non-operating investments, revaluation of assets, rental expense, write-downs/write-offs, R&D capitalization, special items, inventory valuation methods, acquisition goodwill, fair-value markup to acquired plant, pensions, special reserves, and regional- and industry-specific conventions.

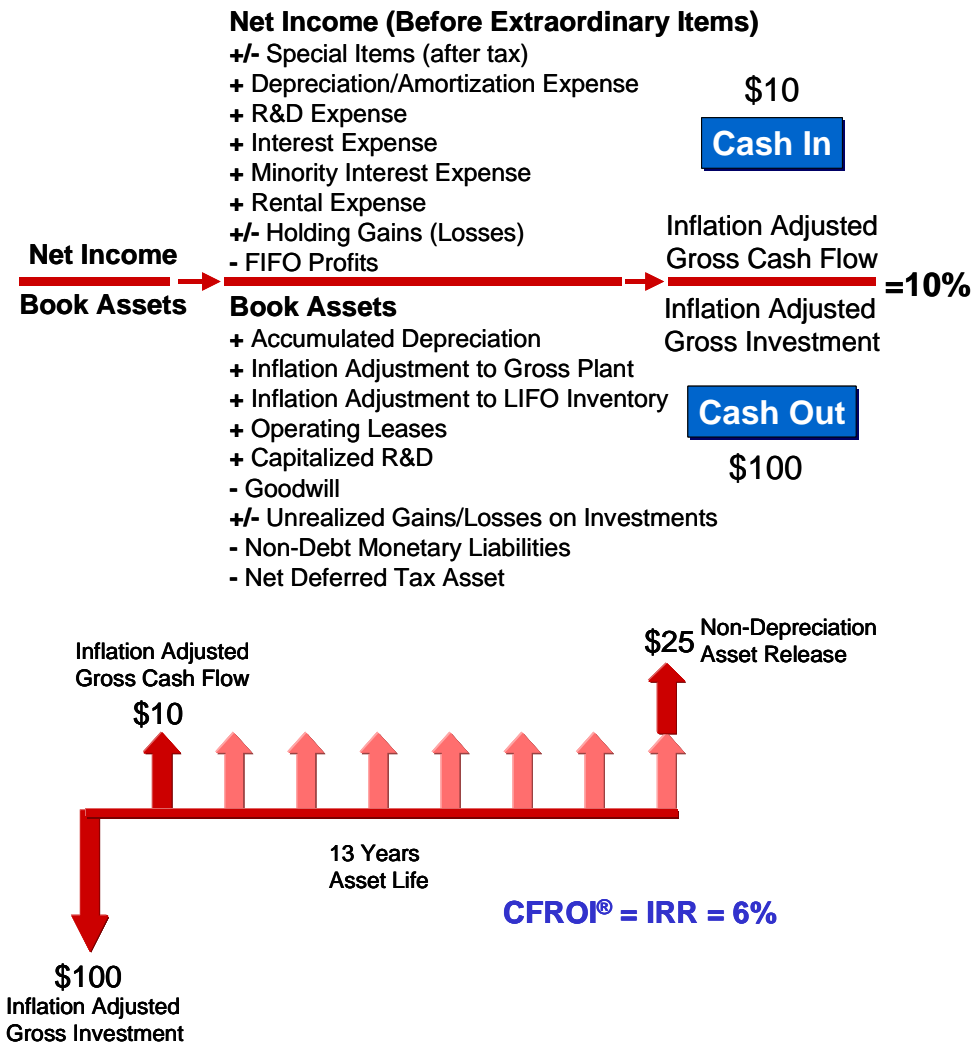
In the absence of needed adjustments, measured performance departs from economic performance by varying amounts for a single company across time, and among companies across industries, across national borders, and across time. This makes performance comparisons important to the valuation of companies much more difficult.

CFROI® As A Proxy For Economic Return

For capital budgeting purposes, the economic profile of a project is specified as the forecasted amounts and timing of all cash outflows and inflows over the estimated project life. An internal rate of return (IRR) then can be calculated, and it is interpreted as the project's ROI. If all cash flow amounts are stated in monetary units of equal purchasing power, the project ROI is a *real* ROI.

CSFB HOLT's CFROI® (Cash Flow Return On Investment) is an estimated firm-level IRR-type real ROI. And just as a single-project ROI is taken as a proxy for its economic return, the CFROI for established firms approximates the average real ROIs being achieved on the firm's ongoing projects represented in the firm's total amount of operating assets and is a proxy for the firm's economic return.

To understand the calculation of a CFROI, first think of a ratio having a numerator in the amount of the inflation-adjusted cash flows available to all suppliers of capital and a denominator in the amount of the inflation-adjusted gross investment made with those funds. To convert that ratio into an IRR, the finite economic lives of depreciating assets and the residual value of non-depreciating assets, such as land and working capital, must be taken into account. As a percent-per-year IRR, CFROI can be directly compared against the return investors demand (i.e., the firm's discount rate, or cost of capital) in order to gauge if the firm is creating or destroying economic wealth.



Source: CSFB HOLT Equity Research

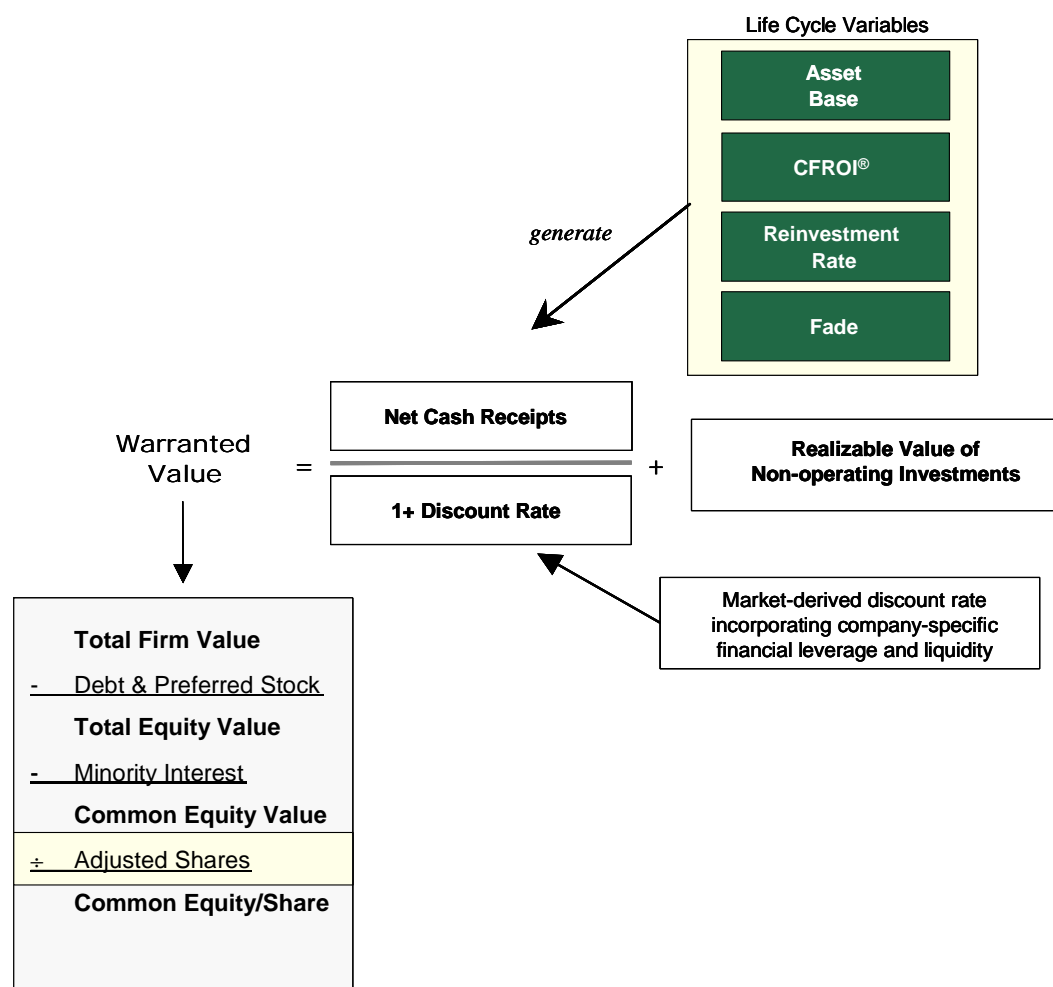
Our Valuation Model

The CSFB HOLT valuation model, at its foundation, is a type of DCF (discounted cash flow) model. Among our model's distinguishing features, along with the CFROI metric, is the way by which the forecasted stream of net cash receipts (NCRs) is generated and the method by which the firm's discount rate (DR) is estimated.

From a beginning asset base, key variables that drive the forecasted NCR stream are variables that actually generate cash flows – namely, economic returns (CFROIs), reinvestment rates (growth), and their expected patterns of change over time due to competition (fade). The competitive life-cycle is covered on the next page.

The discount rate is the rate of return investors demand for making their funds available to the firm. DRs used in our model are *real* rates, not nominal rates, so they're consistent with CFROIs. The DRs are also consistent with other aspects of our model, since base DRs are mathematically derived from known market values and from NCR streams consistent with our model. Adjustments (positive or negative) to the base rate are made for company-specific leverage and liquidity characteristics.

Major Components of CSFB HOLT Valuation Model



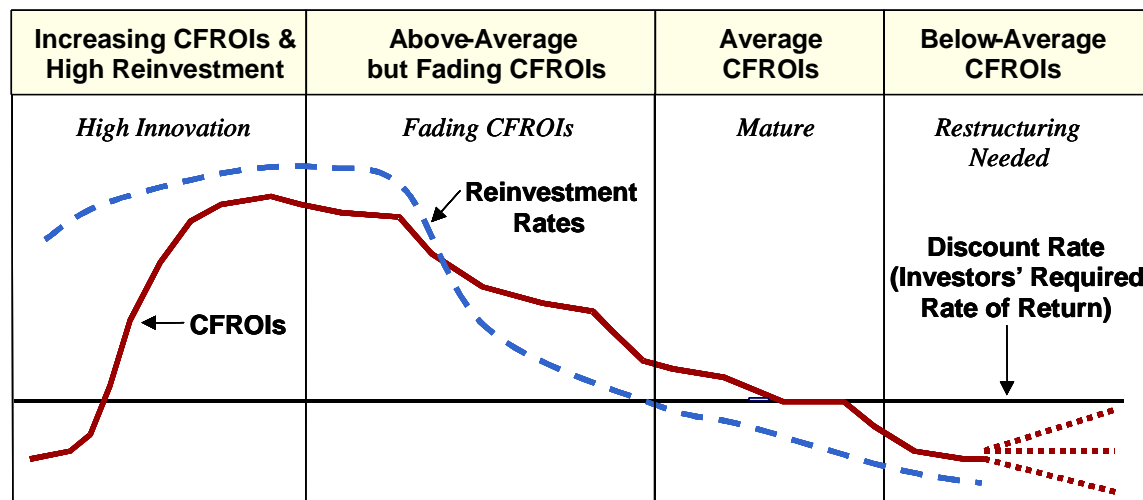
Source: CSFB HOLT Equity Research

Firm's Competitive Life-Cycle

A widely accepted economic proposition is that competition over time drives the rate of return on capital toward equality in all industries. This can be re-stated as: competition operates to diminish the spread, positive or negative, between a firm's economic return and its cost of capital. The notion can be depicted as shown nearby.

This life-cycle framework is an economically sound and practicable basis for forecasting baseline long-term patterns of change in economic returns (CFROIs) and growth (reinvestment rates), which in turn generate the path of a firm's forecasted NCR stream. It is incorporated in our model for forecasting baseline NCRs.

Firm's Competitive Life-Cycle



Source: CSFB HOLT Equity Research

Note that “fade” is upward in the early, high-innovation phase of the life-cycle. At this time, promising innovators almost always require external financing in order to ramp up operations, and their NCRs are negative. An early-stage innovative firm can have a substantial market value representing the present value of the full stream of anticipated NCRs, including large, positive NCRs later in its life-cycle. At any stage of the life-cycle, management should be taking actions that will lead to wealth maximization. Wealth is measured as the present value of future NCRs which are generated by the future life-cycle patterns of CFROIs and reinvestment rates.

The fundamental task for portfolio managers and security analysts is to compare market expectations for future life-cycle performance (CFROIs and reinvestment rates) with their best estimates of firms' future corporate performance. Critical to this analysis is life cycle histories for the firm being analyzed and its competitors. CSFB HOLT's Relative Wealth Charts display these histories, including baseline forecasts and implied market expectations so that plausibility judgments are much improved.

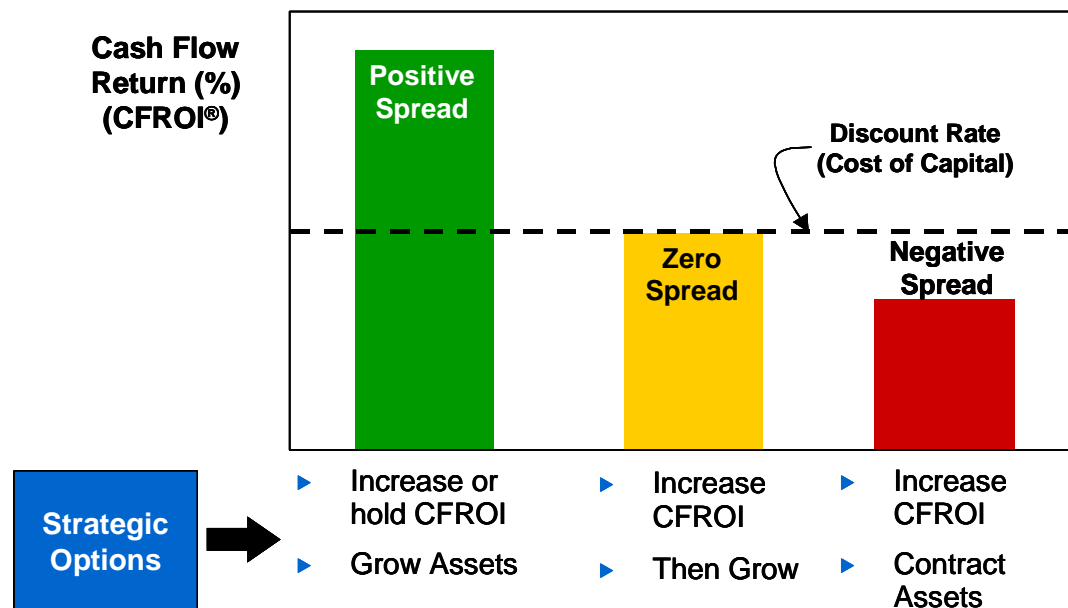
Economic Wealth Creation Strategies

For a firm to create real economic wealth, and thus for a firm to justify a market value in excess of its realizable liquidation value, the firm has to produce economic returns in excess of its cost of capital. In our model, that means the firm's CFROIs must be higher than its discount rates – that is, it must have a positive CFROI spread. Indeed, the relationship of a firm's CFROI to its discount rate indicates the appropriate strategies for wealth creation.

All else equal, when the CFROI spread is positive, more growth will create additional economic wealth and warrant a higher total market valuation. But the competitive life-cycle reminds us that if there is a high-return opportunity in a large or potentially large market, competition will *tend to* arise and force returns down toward the average more quickly.

When CFROIs are at the discount rate, an additional \$1 of capital investment creates only \$1 of economic wealth. In this situation, shareholders are just as well off in having their capital returned via dividends or share repurchases as in having the company make additional capital expenditures in zero spread businesses.

When firms are in the “final” life-cycle phase, with a negative CFROI spread, each new dollar of investment destroys wealth. Raising the CFROI should have first priority, and this often means contracting assets (selling, spinning off or closing negative-spread operations). Almost always, a business-as-usual approach will mean slow death for such firms at this stage.

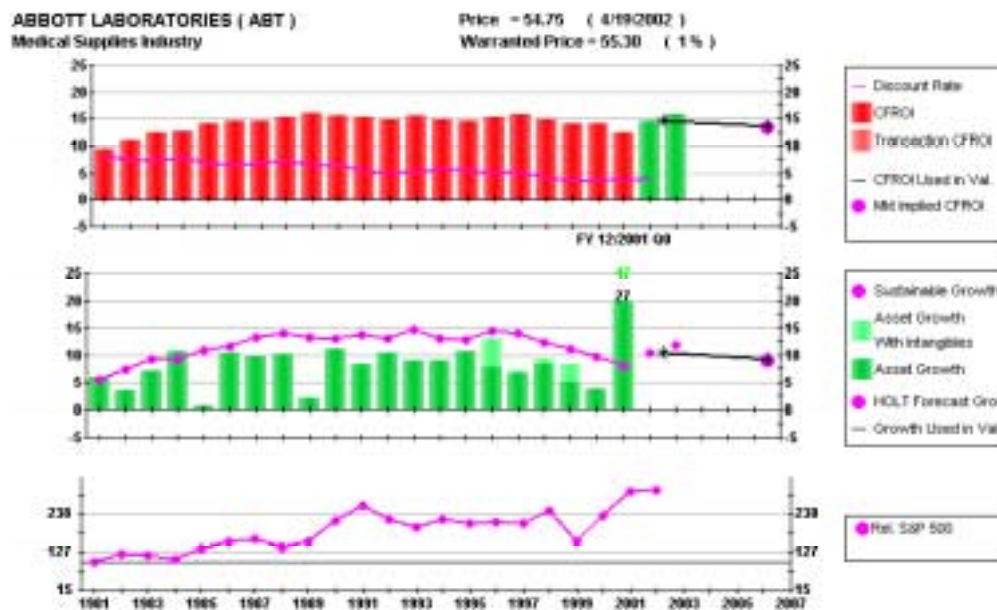


Source: CSFB HOLT Equity Research

The Relative Wealth Chart (RWC)

Our RWC enables users (a) to immediately see the company's history, forecasted near-term future, and market-implied future in terms of the key economic wealth-creating variables, (b) to consider the firm's life-cycle status, and (c) to assess the implications of those for changes in the valuation of its stock price.

Top Panel: From a CFROI level of about 8% in 1980, Abbott Labs (ABT) nearly doubled its CFROIs to about 15% by the late 1980s and has been able to maintain them near that level, successfully warding off life-cycle forces. Over that period, ABT's DRs trended downward, contributing to a widening of the CFROI spread from 1% to 10%. The bars at the end of the historical period are of forecast CFROIs converted from consensus EPS estimates. They drive the t+1 CFROI forecast (the star between the forecast CFROI bars). Subsequent forecast CFROIs (the line) to the CFROI at t+5 (star) reflect typical fade-rate patterns revealed in empirical studies. The dot at t+5 (within the star) is the CFROI level implied by the stock price for the date shown. That its level is the same as our modeled t+5 CFROI suggests the market was expecting ABT to experience typical fade, in spite of its track record of beating the fade. If CFROIs were to fade less than implied by the current price, we would expect the stock price to rise, all else unchanged.



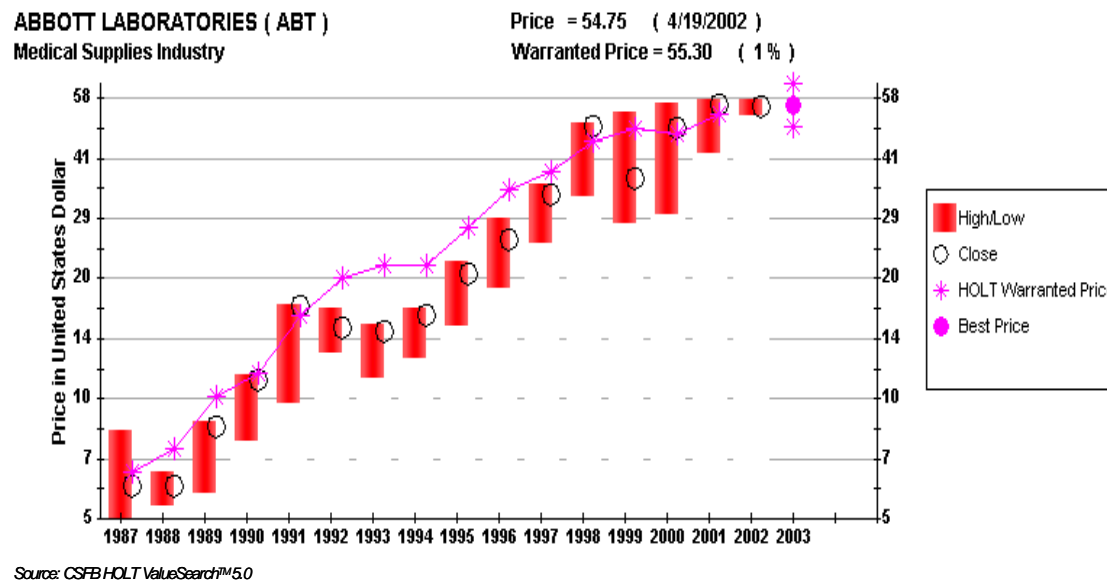
Middle Panel: "Asset Growth" is the real annual growth rate in operating assets, including acquired assets. To flag acquisition activity involving purchase accounting, "Asset Growth with Intangibles" is computed as the annual change in intangibles relative to the prior year's operating asset base. "Sustainable growth" reflects the available cash flows for reinvestment consistent with both the level of a particular year's CFROI and a continuation of existing capital structure and existing dividend payout policy. Forecast sustainable growth rates for t+1 to t+5 are derived from the forecast CFROIs. Historically, ABT's sustainable growth has exceeded its actual asset growth. A key valuation issue is the size of opportunities for future internal growth at high CFROI levels.

Bottom Panel: This is a cumulative index reflecting annual changes in the yearly excess (positive or negative) total return (capital gains/losses + dividends) on ABT's stock relative to the total return provided by the S&P 500. Periods when ABT's shares outperformed (under-performed) the S&P 500 are represented by rising (falling) trends in this index. Over the period shown, ABT shareholders' returns were somewhat more than two times greater than an investment in the S&P 500 would have produced.

The Value Chart

This display of CSFB HOLT's yearend warranted share prices (stars connected by line) together with the high-low range (bars) and yearend actual share prices (open dot) enables users to immediately see how well the share prices generated from our baseline valuation model tracked actual prices.

The stars above and below the "best" target price (black dot) represent our high and low target prices. The best target price is calculated using the "consensus" EPS estimate. The high (low) is calculated by using the highest (lowest) EPS estimate and a 100 basis point drop (increase) in the company-specific DR.



Close tracking (low deviations) indicates our model and baseline inputs "explain" share prices quite well and supports a fairly high degree of confidence in the calculated target prices.

Poor tracking (high deviations) indicates that our baseline inputs and/or algorithms don't adequately capture the firm's economics. The reason might be readily understandable. For example, ABT's sustainable growth rate was regularly higher than the actual growth rate, which – for a high positive CFROI-spread firm – would tend to produce target prices above actual prices. From data in Company Reports or from other sources, an analyst could estimate a more plausible growth rate than the sustainable growth rate, input that via Sensitivity as an override to the baseline rate, and with a press of a button see the "new" target price.

Poor tracking also might be attributable to more obscure causes. When all firms within a sector track poorly, we immediately suspect it's because of some discrepancy in reporting versus economics specific to that sector. This feedback mechanism has initiated many of our research efforts that led to adjustments now incorporated in our database.

Start-up firms and other firms with a wide range of plausible future performance paths also are not likely to track well. In those cases, the historical database and foundation components of our model can, nevertheless, serve as a useful template for organizing thought and debate regarding "forecast" scenarios and their share price implications.