CHAPTER 5

Return on Invested Capital

For most industrial entities, return on invested capital (ROIC) represents the most important measure of management ability. Projects whose ROIC exceeds their cost of capital create value, and as value-enhancing projects continue to grow, the results are reflected in the acquirer's share price. If the executives in charge of the firm's assets are consistently able to invest in such projects, this represents the most management-proven technique to reward shareholders looking to build long-term value. Improvements in ROIC are seen in companies that are able to achieve higher margins, stronger cash flow, and low cost of capital.

For entities that operate on minimal capital, we shall learn a technique that is based on ROIC but works better because as ROIC approaches zero, it results in extremely large, impractical returns, both positive and negative.

As Oracle Corporation, a very successful acquirer, wrote in its 2009 10K report: "We estimate the financial impact of any potential acquisition with regard to earnings, operating margin, cash flow, and return on invested capital targets before deciding to move forward with an acquisition."

When interest rates are low, corporate planners evaluate taking on projects they might not consider when interest rates are higher. The savings on the cost of marginal debt might make such projects worthwhile for equity holders. However, if the cost of debt is variable (i.e., tied to LIBOR) and interest rates rise, the project might become unprofitable. For this reason, such a possibility is almost always hedged, allowing the enterprise to eliminate the risk.

ROIC is becoming one of the more widely used analyst metrics. It is of particular relevance, however, when under competition with the entity's cost of capital. By itself, only a vital but often partial picture emerges. And for entities or divisions of entities that cannot earn a greater return (on projects) on their invested capital than their cost of capital, its value will decline.

The ROIC is not a measure of security valuation. An entity can continue to accept projects that exceed its cost of capital, but if its valuation multiple is excessive, its stock could very well decline in the short run.

Entities that are underleveraged may be denying shareholders a higher valuation if they decline projects having an ROIC that is greater than the after-tax yield on the excess cash and cost of debt.

Corporate managers evaluate the firm's and the business units' ROIC versus those units' cost of capital. Underperforming assets typically have a specific period to improve performance before strategic alternatives are considered. The inability to divest or improve the returns on such assets successfully in a timely manner, meaning that the unit cannot achieve its cost of capital, could have a negative effect on the entire operation of the enterprise, including its stock price. Management attention is diverted to underperforming units in the hope of turning them around or getting them ready for sale. In addition, the process of divestitures could cause strains on the remaining business segments in need of cash to expand or retool their operations.

The theory behind ROIC is to present investors and creditors with an accurate measurement of the cash-on-cash return management has been able to earn. Management needs to spend cash to purchase assets in the hope of a cash return greater than the cost to acquire those assets.

It is for this reason that the analyst should not begin with a generally accepted accounting principles (GAAP) measurement such as net income or earnings before interest, taxes, depreciation, and amortization (EBITDA) but rather with free cash flow in the computation of ROIC. Creditors, as with stockholders, expect a cash return, which may not be possible with accounting profits.

EBITDA IS INAPPROPRIATE AS A VALUATION TOOL AND IN MERGER ANALYSIS

ROIC, since it is one of the central determinants of valuation, has clear advantages over the use of EBITDA. For example, EBITDA

- Excludes important tax payments that represent a reduction in cash available
- Does not consider capital expenditure requirements for the assets being depreciated and amortized that may have to be replaced in the future
- Does not reflect changes in or cash requirements in working capital needs
- Does not reflect the significant interest expense or the cash requirements necessary to service interest or principal payments on debt

Even in a merger analysis, for which EBITDA was intended originally, its use is limited. In addition to the preceding drawbacks, it may not be useful because it

- Does not include share-based employee compensation expense, goodwill impairment charges, and other charges that can affect prospective free cash flows

- Does not include restructuring, severance, and relocation costs incurred to realize future cost savings and enhance the operations of the entity
- Does not include the impact of business-acquisition purchase accounting adjustments
- Does not reflect company sale transaction expenses and merger-related expenses
- May include other adjustments required in calculating debt covenant compliance such as pro forma adjusted EBITDA for companies acquired during the year

To begin analysis of the ROIC metric, I first look at how ROIC is commonly defined by security analysts and enterprises, as a search on EDGAR, the Securities and Exchange Commission (SEC) database, reveals. Here, too, as with free cash flow, definitions reported in financial statements differ for filers, making comparability often difficult to impossible. As with free cash flow, many firm's tailor-make an ROIC definition, attempting to both place themselves in a favorable light and adjust for peculiarities of their business.

A search through the EDGAR database reveals a commonly used definition of ROIC to be

$$\text{ROIC} = \frac{\text{EBITDA} + \text{interest income} * (1 - \text{tax rate}) + \text{goodwill amortization}}{\text{total assets} - (\text{current liabilities} + \text{short-term debt} + \text{accumulated depreciation})}$$

National Semiconductor, has an even simpler definition, as spelled out in its 2009 10K: "We determine return on invested capital based on net operating income after tax divided by invested capital, which generally consists of total assets reduced by goodwill and non-interest-bearing liabilities."

Not only does beginning with EBITDA suffer from the shortfalls just listed, it is not a measure of distributable cash and thus is not a measure of real return to holders of equity securities. Excluding goodwill, like National Semiconductor, ignores a real cash outflow for which management is expected to earn free cash flows.

A SUPERIOR ROIC METHODOLGY USING FREE CASH FLOW

Using free cash flow as a base allows for comparability and uniformity and offers what ROIC is really supposed to capture—the cash return on cash spent for capital. A more logical definition for ROIC, and one being proposed for analyst adoption, is

$$\text{ROIC} = \frac{\text{free cash flow} - \text{net interest income}}{\text{invested capital (equity} + \text{total interest bearing debt} + \text{present value of leases} - \text{cash marketable securities)}}$$

This more precise definition includes

1. Intangible assets because those funds were used to acquire cash-producing assets.
2. All interest-bearing debt because this too was sold to purchase productive assets.
3. Present value of operating leases because this represents contractual debt in exchange for required assets needed to produce revenue, hence cash flows. To exclude operating leases would be to unfairly boost the ROIC and to distort the comparison between companies that buy assets or enter into capital leases and those which enter into operating leases.
4. Since free cash flow is used, it includes the payment of cash taxes and the elimination of other accruals.

We do not add back, as true with EBITDA-based measures, interest income to free cash flow because we are attempting to measure the cash return on productive, not financial assets.

Investors, large and sophisticated to small and naive, with the latter often dependent on and trusting of the former, often fail to understand the complicated relationship between valuation metrics and ROIC.

It is easy to want a simplified approach to investing, such as price/earnings (P/E) multiple or price/book (P/B) ratio, but quite another to be able to understand the bearings behind the numbers and why so many entities sell for what appears to be an incredibly low valuation multiple or ratio.

In essence, entities having a low ROIC or dependent on large capital expenditures resulting in small amounts of distributable cash flows deserve low valuation metrics despite their higher rates of growth in GAAP-related yardsticks. This is why many investors are fooled, having invested in low-P/E-multiple companies. It is for this reason that I advocate adoption of the ROIC metric using free cash flow as a base and, in my model portfolio, invest only in entities that have shown the ability to consistently produce an average[1] free-cash-flow yield in excess of the 10-year Treasury yield.

Under the cash-flow-based definition, goodwill, intangible assets, and all other productive assets that require cash expenditures are counted in the capital base. Operating leases also should be included in the capital base because they represent a financing decision for capital expected to return cash to the firm. I would not, however, impute an interest charge on the operating leases to deduct from free cash flow

[1]We use a three- or four-year average free cash flow in an attempt to capture part of an economic down cycle or period of softness or unusual spending for an individual entity.

because the entire lease payment is deducted in computation of free cash flow, as reported under operating activities.

HOW OTHER COMPREHENSIVE INCOME FACTORS INTO ROIC ANALYSIS

I do not generally penalize the capital base resulting from pension and health care liabilities, even though they could represent true liabilities that may affect the capital structure. With ROIC, I am evaluating return on capital employed, and this liability is not due to invested capital.[2] I thus would add back to shareholders equity the comprehensive loss. If the loss represented a liability for which payment were reasonably assured, and especially if so within two years, it would affect the leverage ratio, affecting the ability of the enterprise to repay said obligation. This conceivably could cause a large markup to its cost of capital. If the entity had the financial flexibility to finance the liability, including its conversion to long-term debt, the markup to cost of capital would be less severe.

Pension and health care liabilities that run through shareholders' equity are volatile, subject to the vagaries of the financial markets, and if included, would cause unnecessarily large swings in the ROIC, reflective of the financial markets, not the company's ability to generate a return on its assets and capital. For instance, Lockheed Martin's (see example below) accrued pension liability rose from $1.2 billion to $12.2 billion during 2008 owing to a large, unrecognized actuarial loss resulting in part from a large fall in the equity markets and a drop in the discount rate used to project benefit obligations. Recognition of the funding status as of the end of the reporting period was in part due to adoption of *Statement of Financial Accounting Standards No. 158* (SFAS 158): *Employers Accounting for Defined Benefit Pension and Other Post-Retirement Plans*.

For this reason, under the cash-flow-based ROIC, the analyst must review the other comprehensive income/loss section of shareholders' equity for items not reflective of the normalized and true invested capital. Adjustments should be made as appropriate. These would include

1. Foreign-currency translation adjustments
2. Changes in fair value of a financial instrument in a cash-flow hedge
3. Actuarial gains and losses
4. Changes in the fair value of available-for-sale financial assets
5. Revaluations of property, plant, and equipment

[2] One could argue the liability is a result of human capital, but this is not the intent of ROIC.

Comprehensive income/loss consists of changes in the actuarial gains and losses associated with pension and other postretirement benefits plans and unrealized losses on derivatives. The yearly change, in most instances, skews the shareholders' equity account such that if it were included as stated, it would render a poor and inaccurate estimate of the ROIC.

EXAMPLE:

In its 2009 10K, Microsoft reported $171 million in accumulated comprehensive income, which the company added to shareholders' equity for that year. As seen from its statement of shareholder equity, the company separated other comprehensive income into three pieces. The prior year, the comprehensive income required an adjustment to shareholders' equity, which, if taken into account in the calculation of ROIC, would have had a somewhat greater impact. That accumulated comprehensive income can bounce $1 billion from year to year, as was the case between 2007 and 2008, and leaves one questioning its relevance, especially if there is no discernible trend.

Microsoft used derivatives as a cash-flow hedge:

Note 19: Other Comprehensive Income

The activity in other comprehensive income and related income tax effects were as follows:

	Year Ended June 30 (In Millions)		
	2009	**2008**	**2007**
Net unrealized gains on derivatives:			
Unrealized gains, net of tax effects of **$472**, $46, and $66	**$876**	$86	$123
Reclassification adjustment for gains included in net income, net of tax effects of **$(309)**, $(36), and $(59)	**(574)**	(68)	(109)
Net unrealized gains on derivatives	**302**	18	14
Net unrealized gains (losses) on investments:			
Unrealized gains (losses), net of tax effects of **$(142)**, $(234), and $393	**(263)**	(435)	730
Reclassification adjustment for losses (gains) included in net income, net of tax effects of **$16**, $(117), and $(217)	**30**	(218)	(404)
Net unrealized gains (losses) on investments	**(233)**	(653)	326
Translation adjustments and other	**(240)**	121	85
Other comprehensive income (loss)	**$(171)**	$(514)	$425

The components of accumulated other comprehensive income were as follows:

	Year Ended June 30 (In Millions)		
	2009	**2008**	**2007**
Net unrealized gains on derivatives	**$437**	$135	$117
Net unrealized gains on investments	**502**	735	1,388
Translation adjustments and other	**30**	270	149
Accumulated other comprehensive income	**$969**	$1,140	$1,654

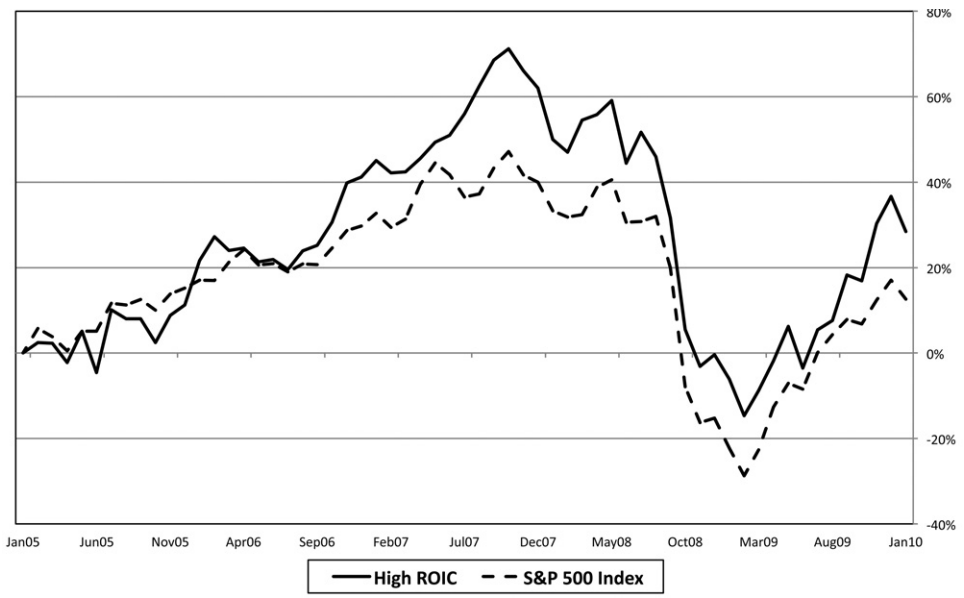
STOCKHOLDERS' EQUITY STATEMENTS

	Year Ended June 30 (In Millions)		
	2009	**2008**	**2007**
Common stock and paid-in capital			
Balance, beginning of period	**$62,849**	$60,557	$59,005
Common stock issued	**567**	3,504	6,783
Common stock repurchased	**(2,611)**	(3,022)	(6,162)
Stock-based compensation expense	**1,708**	1,479	1,550
Stock-based compensation income tax benefits (deficiencies)	**(128)**	253	(661)
Other, net	**(3)**	78	42
Balance, end of period	**62,382**	62,849	60,557
Retained deficit			
Balance, beginning of period	**(26,563)**	(29,460)	(18,901)
Cumulative effect of a change in accounting principle—adoption of FIN 48	**—**	(395)	—
Cumulative effect of a change in accounting principle—adoption of EITF 06–2	**—**	(17)	—
Net income	**14,569**	17,681	14,065
Other comprehensive income:			
Net unrealized gains on derivatives	**302**	18	14
Net unrealized gains (losses) on investments	**(233)**	(653)	326
Translation adjustments and other	**(240)**	121	85
Comprehensive income	**14,398**	17,167	14,490
Common stock cash dividends	**(4,620)**	(4,084)	(3,837)
Common stock repurchased	**(6,039)**	(9,774)	(21,212)
Balance, end of period	**(22,824)**	(26,563)	(29,460)
Total stockholders' equity	**$39,558**	$36,286	$31,097

Source: Microsoft Corp. 2009 10K.

FIGURE 5-1

Investment Performance of High-ROIC Portfolio versus S&P 500



Entities that have exhibited a high ROIC compared with cost of capital have shown to outperform the general market. Figure 5-1 shows the investment returns of the CT Capital portfolio discussed in Chapter 9 (see Table 9–1). The companies that make up the portfolio were selected primarily because they each had an ROIC far in excess of their cost of capital. For the five-year period ending January 2010, this portfolio, equally reweighted monthly, had a total return of 28 percent versus 13 percent for the Standard and Poor's (S&P) 500 Index, a most worthy achievement. A study by McKinsey & Co. found that investors prefer investing in companies with high ROICs, even if the entity had limited prospects for growth.[3] On the other hand, as McKinsey points out, entities that have low returns on invested capital often run into financial difficulty, especially when confronted with an economic, industry, or nonsystematic downturn.

A HODGEPODGE OF METHODS CURRENTLY IN USE

A review of EDGAR filings, as well as reading through a large number of company investor presentations and security analyst reports, finds a wide range of

[3] *McKinsey Quarterly*, Balancing ROIC and Growth to Build Value, March 2006.

ROIC definitions. Goodrich is one of many companies that look to ROIC when determining bonus and incentive awards for its employees. The company's computation begins with net income and adjusts for one-time events. The inclusion of such special items allows for much management discretion, and often such special events occur all too frequently. The analyst might well question some or all of the company's special items, including the cumulative effect of an accounting change. Certainly, using free cash flow in its place would eliminate much of this discretion.

EXAMPLE:

The two equally-weighted performance measures for the Units will be Relative Total Shareholder Return, which measures Goodrich stock performance against a peer group of aerospace companies, and Return on Invested Capital, defined as net income excluding special items, divided by the average invested capital ("Adjusted ROIC"). The term "special items" includes merger-related and consolidation costs, certain gains and losses on the sale of businesses, results of discontinued operations, cumulative effect of change in accounting, asset impairment charges, and other restructuring costs. The Committee is expected to approve the specific target, threshold and maximum performance levels for each performance measure in the first quarter of 2005.

Source: Goodrich 2004 10K.

EXAMPLE:

While most entities use their effective tax rate to calculate ROIC, many entities rely on the statutory 35 percent rate, even though it differs from both the effective rate and the implied cash tax rate. To the extent that the actual cash rate is below 35 percent, a profitable firm would be understating the ROIC. For example, Cardtronics, Inc., a manufacturer of ATMs, uses a 35 percent rate in its ROIC determination, even though it has never shown an effective rate at that, or higher, level. Likewise, for the many entities having greater than a 35 percent rate, they would be overstating the ROIC. By using free cash flow, as I have shown, taxes paid at the cash rate are being considered. The following example illustrates the significant effect of the tax rate on ROIC for a company having a $100 million operating profit.

	2010	2009	2008
Operating profit ($M)	$100	$100	$100
Tax rate	35%	22%	40%
Taxes paid	35	22	40
Net profit	65	78	60
ROIC ($350M inv. cap.)	18.6%	22.2%	17.1%

EXAMPLE:

In its calculation of ROIC, Burlington Northern estimates the interest expense portion of its operating leases, which it approximates as one-third the lease expense. The company then adds that to accrued interest expense from the income statement, to which it adds to operating income. By denying interest expense as a real cost of doing business, because operating income is calculated prior to deduction of interest, Burlington Northern management is avoiding a real cost-of-capital acquisition. Burlington also included the noncash charge related to an increase in estimated asbestos liabilities, resulting in a mixture of accounting and cash approaches. The company also uses the effective tax rate, where my model, by virtue of its use of free cash flow, uses the actual taxes paid.

In the denominator, leases are capitalized because the assets underlying the obligation are necessary for cash generation. Burlington Northern also incorporates sales of accounts receivable in its capital base, even though it represents cash, which is excluded from invested capital.

TABLE 5-1

Burlington Northern: Calculation of Return on Invested Capital

	Year ended December 31		
	2006	**2005**	**2004**
Average capitalization[a]	**$21,200**	$19,831	$19,069
Operating income	**$3,517**	$2,922	$1,686
Other expense	**(40)**	(37)	(4)
Financing charges[b]	**370**	305	274
2004 charge for change in estimate of unasserted asbestos and environmental liabilities	—	—	465
Taxes[c]	**(1,438)**	(1,196)	(917)
After-tax income excluding financing charges and 2004 charge	**$2,409**	$1,994	$1,504
Return on invested capital[d]	**11.4%**	10.1%	7.9%

[a]Average capitalization is calculated as the average of the sum of stockholders' equity, net debt (long-term debt and commercial paper plus long-term debt due within one year less cash and cash equivalents), the net present value of future long-term operating lease commitments, and the receivables sold under the accounts receivable sales program for the most recent preceding 13-month ends.

[b]Financing charges represent the estimated interest expense included in operating lease payments and A/R sales fees.

[c]Taxes are calculated as the sum of monthly operating income, other expense and financing charges, multiplied by an effective tax rate respective to each month.

[d]Return on invested capital is calculated as the total after-tax income excluding financing charges and 2004 charge divided by average capitalization.

Source: Burlington Northern, Inc., 2006 10K.

PepsiAmericas adds interest expense to net income when measuring ROIC because it uses operating profits in its computation. Adding back interest expense, a legitimate ongoing cost without which the entity would not have been able to raise the funds to purchase the related assets, represents an unbalanced approach—that of including the capital but not its cost. If the company were able to change its capital structure so that it had greater equity and lower interest payments, its return on capital undoubtedly would shift, as would its cost of capital.

We are, after all, seeking to determine how effective management has been at using the entity's capital base, not the financing base. If, however, the business under scrutiny has a substantial financing unit that is integral to the business or is a financing company—as opposed to an industrial concern—one should not deduct net interest income from free cash flow.

EXAMPLE:

PepsiAmericas defines ROIC as follows:

- Numerator (rolling 12 periods):
  - + Net income
  - + Amortization expense
  - + Interest expense (net of tax)
  - + Special charges (net of tax)
  - − Other income (expense)
  - − Loss from discontinued operations
  - = *Adjusted net operating profit after taxes*
- Denominator (average 4 quarters):
  - + Total assets
  - + Accumulated amortization
  - − Cash
  - − Current liabilities, excluding short-term debt
  - − Other liabilities, excluding long-term debt
  - = *Adjusted average invested capital*

Source: PepsiAmericas 2004 Annual Report.

EXAMPLE:

Lockheed Martin calculated its return on invested capital for the fiscal years 2004–2008 as shown in Table 5-2.

TABLE 5-2

Lockheed Martin: Return on Invested Capital

	Year Ended January 31 (In Millions)				
	2008	**2007**	**2006**	**2005**	**2004**
Net earnings	**$3,217**	$3,033	$2,529	$1,825	$1,266
Interest expense (multiplied by 65%)[1]	**222**	229	235	241	276
Return	**$3,439**	$3,262	$2,764	$2,066	$1,542
Average debt[2,5]	**$4,346**	$4,416	$4,727	$5,077	$5,932
Average equity[3,5]	**8,236**	7,661	7,686	7,590	7,015
Average benefit plan adjustments[4,5]	**3,256**	3,171	2,006	1,545	1,296
Average invested capital	**$15,838**	$15,248	$14,419	$14,212	$14,243
Return on invested capital	**21.7%**	21.4%	19.2%	14.5%	10.8%

[1]Represents after-tax interest expense using the federal statutory rate of 35%.

[2]Debt consists of long-term debt, including current maturities of long-term debt, and short-term borrowings (if any).

[3]Equity includes noncash adjustments, primarily related to average benefit plan adjustments discussed in note 4 below.

[4]Average benefit plan adjustments reflect the cumulative value of entries identified in our Statement of Stockholders' Equity under the captions "Postretirement benefit plans," "Adjustment for adoption of SFAS 158" and "Minimum pension liability." The total of annual benefit plan adjustments to equity were: 2008 = $(7,253) million; 2007 = $1,706 million; 2006 = $(1,883) million; 2005 = $(105) million; and 2004 = $(285) million. As these entries are recorded in the fourth quarter, the value added back to our average equity in a given year is the cumulative impact of all prior year entries plus 20 percent of the current year entry value. The cumulative impact of benefit plan adjustments through December 31, 2003 was $(1,239) million.

[5]Yearly averages are calculated using balances at the start of the year and at the end of each quarter.

By using the average of debt and equity held throughout the year, the company could be overstating its prospective ROIC if total debt significantly increased toward the back half of the year. As the table shows, Lockheed Martin showed a significant rise in its ROIC metric owing to vastly improved net income in relation to its capital base, which it adjusts for the pension liability included in other comprehensive income/loss. Since the company's pension obligation exceeded its plans assets, the difference was shown as a liability. Prior to SFAS 158, the company's unrecognized net losses and unrecognized prior service costs enabled it to report a pension asset. Lockheed Martin is, correctly adding back the charge to net comprehensive income. Under SFAS 158, actuarial gains and losses that arise during a period, as well as amortization of such gains and losses, are recognized as components of other comprehensive income. In my ROIC computation, I am striving to measure the ability of the enterprise to provide a cash return on the invested capital, which may differ from the balance-sheet equity owing to the charge in the other comprehensive income component.

Lockheed Martin produced $4.4 billion in cash flow from operations during 2008, with a boost coming from the noncash stock-based compensation, deferred income taxes, and balance-sheet items. With $926 million in capital spending and $42 million in corporate fat, its free cash flow, using the procedure outlined in Chapter 4, amounted to about $ 3.5 billion, slightly higher than the return derived by the company.

Lockheed Martin uses a 35 percent statutory tax rate in its calculation of ROIC. However, since actual cash taxes that year were $1.234 billion, not the $1.485 expense listed on the income statement, the interest expense, based on the 35 percent tax shield added back to calculate ROIC, was overstated. This is another reason why I prefer a free-cash-flow-based definition; there is no need to estimate the tax rate because free cash flow uses the actual tax payment. The company's effective tax rate was 31.6 percent.

EXAMPLE:

Nordstrom, the large clothing retailer, reports the computation shown in Table 5-3 in its 2009 10K for its return on invested capital:

TABLE 5-3

Nordstrom: Return on Invested Capital

	Twelve Fiscal Months Ended	
	January 31, 2009	**February 2, 2008**
Net earnings	**$401**	$715
Add: Income tax expense	**247**	458
Add: Interest expense, net	**131**	74
Earnings before interest and income taxes	**779**	1,247
Add: Rent expense	**37**	48
Less: Estimated depreciation on capitalized operating leases	**(19)**	(26)
Net operating profit	**797**	1,269
Estimated income tax expense	**(303)**	(497)
Net operating profit after taxes	**$494**	$772
Average total assets	**$5,768**	$5,455
Less: Average non-interest-bearing current liabilities	**(1,447)**	(1,506)
Less: Average deferred property incentives	**(400)**	(359)
Add: Average estimated asset base of capitalized operating leases	**322**	395
Average invested capital	**$4,243**	$3,985
Return on assets	**7.0%**	13.%
ROIC	**11.6%**	19.4%

Nordstrom begins by adding the entire interest expense ($131 million) listed on the income statement, as opposed to the after-tax cost, which would be more appropriate. Since interest costs are a real cost of doing business and are part of any capital expenditure analysis, I disagree with this practice. The actual interest expense, as seen under supplementary information in its footnotes, was $145 million.

Nordstrom also adds back $247 million in income taxes from the income statement and subtracts an estimated payment of $303 million that is derived from applying a projected 38 percent tax rate multiplied by the $779 million in operating profits seen in the table.

Taxes are a real cost of doing business and, like interest, are part of capital spending decision making. The actual tax expense, as gleaned from its supplementary cash flow information, for 2009 was $340 million, or $37 million greater than the amount Nordstrom used to calculate ROIC.

While Nordstrom uses $797 million in its calculation of operating profit, it showed little free cash flow for 2009, as seen in its statement of cash flows. The company generated $848 million in operating cash flows and had $563 million in capital spending, in addition to an additional $232 million increase in accounts receivable from VISA, shown as a financing activity. When including overspending on discretionary items, as we see from Table 5-4, a large part of the capex spent is picked up, as well as some overspending in cost of goods sold (COGS). Prior to 2009, Nordstrom points out in its 10K, it treated accounts receivable from third parties as an operating activity.

Using the free-cash-flow-based definition, I arrive at the following:

$$\begin{aligned}\text{ROIC} &= \text{free cash flow} - \text{interest income}\\ &= \$509 \text{ million} - \$3 \text{ million}\\ &= \$506 \text{ million}\\ &= \text{shareholder's equity} + \text{short term debt} + \text{long term debt} + \text{operating leases}\\ &= \$1{,}210 \text{ million} + \$24 \text{ million} + \$2{,}214 \text{ million} + \$696 \text{ million}\\ &= \$4{,}144 \text{ million}\end{aligned}$$

Return on invested capital (ROIC) is calculated as follows:

$$\begin{aligned}\text{ROIC} &= \frac{\$506 \text{ million}}{\$4{,}144 \text{ million}}\\ &= 12.2\%\end{aligned}$$

While the difference between the company-defined ROIC of 11.6 percent and the free-cash-flow-based ROIC of 12.2 percent may not appear significant, from a valuation viewpoint, it can be. For example, given Nordstrom's four-year average free cash flow of $408 million and a current 19 × free-cash-flow multiple, a 1 percent increase in its ROIC from its $4,144 of invested capital would translate into a $790 million in market value, or about a 10 percent increase in its stock price. Put another way, a 1 percent increase in Nordstrom's ROIC should translate into a 10 percent rise in its stock price.

The primary reason for the difference in the company's ROIC and my cash-flow-based definition is the invested capital, as depicted in its financial filing versus my calculation, as shown below. The prior year, 2007, there was a substantial difference between Nordstrom's operating profit and free cash flow, even after adding back corporate fat. Nordstrom reported it's ROIC of 19.4 percent while using a free-cash-flow-based definition; the ROIC was negative. It is not surprising, therefore, that the stock price for Nordstrom declined by over 25 percent during 2007 because investors followed the free-cash-flow-based ROIC metric, not the company's. The following year and into 2009, when Nordstrom's free-cash-flow-based ROIC rose, so too did its stock price, even though the company's "tailor made" metric fell by 40 percent.

NORDSTROM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS (In Millions)

	2008	**2007**	**2006**
Operating activities:			
Net earnings	**$401**	$715	$678
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization of buildings and equipment	**302**	269	285
Gain on sale of Façonnable	**—**	(34)	—

	2008	2007	2006
Amortization of deferred property incentives and other, net	**(21)**	(36)	(36)
Stock-based compensation expense	**28**	26	37
Deferred income taxes, net	**(36)**	(42)	(58)
Tax benefit from stock-based payments	**3**	28	44
Excess tax benefit from stock-based payments	**(4)**	(26)	(38)
Provision for bad debt expense	**173**	107	17
Change in operating assets and liabilities:			
Accounts receivable	**(93)**	(1,083)	(61)
Investment in asset-backed securities	**—**	420	128
Merchandise inventories	**53**	—	(39)
Prepaid expenses	**9**	(9)	(5)
Other assets	**29**	(27)	(8)
Accounts payable	**16**	(19)	84
Accrued salaries, wages, and related benefits	**(54)**	(64)	49
Other current liabilities	**28**	36	23
Income taxes	**(76)**	(6)	(6)
Deferred property incentives	**119**	58	31
Other liabilities	**(29)**	(1)	17
Net cash provided by operating activities	**848**	312	1,142
Investing activities:			
Capital expenditures	**(563)**	(501)	(264)
Change in accounts receivable originated at third parties	**(232)**	(151)	—
Proceeds from sale of Façonnable	**—**	216	—
Proceeds from sale of assets	**2**	12	—
Purchases of short-term investments	**—**	—	(110)
Sales of short-term investments	**—**	—	164
Other, net	**1**	3	(8)
Net cash used in investing activities	**(792)**	(421)	(218)
Financing activities:			
Proceeds from commercial paper	**275**	—	—
Proceeds from long-term borrowings, net	**150**	2,510	—
Principal payments on long-term borrowings	**(410)**	(680)	(307)
Increase (decrease) in cash book overdrafts	**20**	5	(51)
Proceeds from exercise of stock options	**13**	34	51
Proceeds from employee stock purchase plan	**17**	17	16
Excess tax benefit from stock-based payments	**4**	26	38
Cash dividends paid	**(138)**	(134)	(110)
Repurchase of common stock	**(264)**	(1,702)	(621)
Other, net	**(9)**	(12)	—
Net cash (used in) provided by financing activities	**(342)**	64	(984)
Net decrease in cash and cash equivalents	**(286)**	(45)	(60)
Cash and cash equivalents at beginning of year	**358**	403	463
Cash and cash equivalents at end of year	**$72**	$358	$4

TABLE 5-4

Free Cash Flow: Nordstrom

Part I - Cash Flow Items:

Year	Jan-05	Jan-06	Jan-07	Jan-08	Jan-09	Most Recent Quarter Jul-09	Previous Quarter Jul-08	Last 12 Months Jul-09	Last 12 Months Jul-08
Net Operating Cash Flow	606.3	776.2	1142.4	161.0	848.0	492.0	218.0	1174.0	884.9
Capital Expenditures	246.9	271.7	264.4	501.0	563.0	94.0	153.0	464.0	574.0
Sale of PPE	NA	NA	NA	NA	NA	0.0	0.0	NA	NA
Free Cash Flow – Including Discretionary Items	359.5	504.6	877.9	(340.0)	285.0	398.0	65.0	710.0	310.9
Free Cash Flow – Excluding Discretionary Items	359.5	504.6	877.9	(259.5)	509.1	—	—		
Discretionary Capital Expenditures	0.0	0.0	0.0	80.5	163.9	—	—		
Discretionary R&D	0.0	0.0	0.0	0.0	0.0	—	—		
Discretionary Cost of Goods Sold	0.0	0.0	0.0	0.0	27.2	—	—		
Discretionary SG&A	0.0	27.2	0.0	0.0	0.0	—	—		
Discretionary Advertising	0.0	0.0	0.0	0.0	0.0	—	—		
Large Buildup (Reduction) in Accounts Receivable	0.0	143.5	153.4	(92.7)	528.1	634.4	683.9		
Large Buildup (Reduction) in Inventory	726.2	(201.7)	(214.5)	(220.9)	(233.4)	(130.6)	(82.8)		
Large Buildup (Reduction) in Accounts Payable	(133.5)	24.6	21.9	(5.5)	(95.2)	(29.7)	162.0		

EXAMPLE:

Flextronics, Inc., calculates ROIC both including and excluding goodwill, referring to the latter as return on invested tangible capital. In its definition of return on capital, the company excludes certain charges, such as bad debts, that can upwardly bias the calculation. It is up to the analyst to determine whether these exclusions are unusual, although it would appear, in the case of Flextronics, that bad debt and other charges for which a cash return was expected should be included. Bad debts unfortunately have been an ongoing cost of the firm's doing business. Using the free-cash-flow-based measure, non-cash write-offs such as goodwill are relevant to the extent that they required a cash outlay for capital.

EXAMPLE:

Because MBIA is a financial company, its preferred measure is return on equity, not return on capital.

> **Operating Return on Equity (ROE):** The Company believes operating return on equity is a useful measurement of performance because it measures return on equity based upon income from operations and shareholders' equity, unaffected by investment portfolio realized gains and losses, gains and losses on financial instruments at fair value and foreign exchange, unrealized gains and losses, and non-recurring items. Operating return on equity is also provided to assist research analysts and investors who use this information in their analysis of the company.

Source: MBIA 2007 Third Quarter Report to Shareholders.

By overlooking its investment portfolio, management is ignoring very large, real effects amounting to almost $6 billion compared with $2.5 billion in shareholders' equity. These investments are necessary if called on to pay claims. As early as 2007, some credit analysts estimated that MBIA, owing to its large position in structured investments in mortgages, was facing loses exceeding its stated equity. Indeed, its stock price and shareholders' equity collapsed when the default rate on those investments rose, and they were being ignored under MBIA's preferred measure of return on equity. Thus, to ignore its investment portfolio would be to disregard the part of its business that brought the company to near bankruptcy.

DIVISIONAL RETURN ON CAPITAL

When evaluating the financial results of a division, a tax rate must be assigned, even though income taxes typically are paid at the parent-company level through a consolidated tax return. We saw how many firms use the statutory rate in many calculations. Table 5-5 shows an analysis by LaFarge Corp., a French-based cement manufacturer, in which they utilize a 26 percent tax rate, the parent's rate, to compute divisional ROIC. Under the analysis, LaFarge calculates each division's return on capital, with little supporting data available to the analyst. As is seen, despite the cement division's appetite for capital, this division, during 2005, had an after tax-return on capital of 9.7 percent. The roofing division had a poor ROIC, probably not covering its ROIC.

TABLE 5-5

LaFarge Corp.: Divisional Return on Capital

2005	Current Operating Income (a)	Current Operating Income after Tax (b) = (a) × (1 – 28.6%)	Income from Associates (c)	Current Operating Income after Tax with Income from Associates (d) = (b) + (c)	Capital Employed on December 31, 2005 (e)	Capital Employed on December 31, 2004 (f)	Average Capital Employed (g) = [(e) + (f)]/2	Return on Capital Employed after Tax (h) = (d)/(g)
Cement	1,770	1,264	8	1,272	13,982	12,167	13,075	9.7
Aggregates and concrete	398	284	8	292	3,932	3,337	3,634	8.1
Roofing	98	70	7	77	2,181	2,118	2,149	3.6
Gypsum	151	108	15	123	1,267	1,147	1,207	10.2
Other	(60)	(43)	—	(43)	290	139	215	n/a
TOTAL	2,357	1,683	38	1,721	21,652	18,908	20,280	8.5

Source: LaFarge Corp. 2005 20F.

EXAMPLE:

Corn Products, Inc., uses ROIC, having devised a scoring system to calculate divisional bonuses. The size of the bonus rests on the spread between the ROIC and the division's cost of capital. Corn Products estimates a tax rate for the division based on the individual unit's operating results.

> *Return on Invested Capital for each of the company's business segments relative to their weighted-average cost of capital.* The score starts at 1.0 for achieving Return on Invested Capital equal to Weighted Average Cost of Capital and moves up on a sliding scale of 0.5 for every additional 1 percent in Return on Invested Capital, with no maximum. If Weighted Average Cost of Capital is not achieved then the score is zero. In 2008 this measure accounted for 57 percent of the Corporate performance measure.

CORN PRODUCTS, INC.
RETURN ON INVESTED CAPITAL (In Millions)

	2008	2007
Total stockholders' equity	$1,605	$1,330
Add:		
Cumulative translation adjustment	132	214
Minority interest in subsidiaries	21	19
Redeemable common stock	19	44
Share-based payments subject to redemption	9	4
Total debt	649	554

	2008	2007
Less:		
Cash and cash equivalents	(175)	(131)
Capital employed (a)	$2,260	$2,034
Operating income	$434	$347
Adjusted for:		
Income taxes (at effective tax rates of 32.0% in 2008 and 33.5% in 2007)	(139)	(116)
Adjusted operating income, net of tax (b)	$295	$231
Return on capital employed [(b) ÷ (a)]	13.1%	11.4%

RECOVERY RATE

A forerunner of ROIC and a measure in some use today is the *recovery rate.* The recovery rate measures the relationship between funds provided by operations and fund invested in the business (as total assets). The recovery rate can be considered an index of management's ability to deploy effectively (and earn an acceptable return on) corporate assets. Some companies use the recovery rate as a determining factor of a business acquisition. Acceptable recovery rates will differ from entity to entity depending on their cost of funds, investment alternatives, and ROIC.

This measure may be used, in conjunction with the cost of capital, at the individual unit level by the parent or divisional head when determining how corporate cash should best be deployed. This decision will be a function of the units' prospects for growth in free cash flow, amount of cash needed, the effect on the consolidated balance sheet, and time for the operating cash flows to pay down the external capital put into the division and balance. By *balance*, it is meant the remaining divisions' capital requirements and not wanting to "starve" a division that is fitting into the consolidated entity's long-range plan.

The companies in Table 5-6 have recovery rates ranging from negative to strong and are drawn from the beginning list of Standard and Poor's (S&P) 500 companies. The median S&P 500 company had a recovery rate of 9.34 years, meaning that it hypothetically would take that period of time to recover the cash spent for those assets, and is seen in the table as the reciprocal of the data in column 2.

Companies having large amounts of cash can, under an income-statement-based definition of ROIC, increase their metric by reducing (shrinking) shareholders' equity, with perhaps a stock buyback or a cash dividend. ROIC also could increase, all things equal, from the write-down of assets and recognition of a newly introduced accounting regulation. As we saw, Lockheed Martin's

TABLE 5-6

S&P 500 Recovery Rate Companies

Company Name	OCF/ASSETS LFY	OCF/ASSETS LTM	FCF/MK VAL	OCF/TTL DEBT	Market Value	Price Close % Change-3 Yr
3M CO	0.177	0.171	0.061	0.669	53,606.187	(0.833)
ABERCROMBIE & FITCH -CL A	0.172	0.177	0.076	4.908	3,289.517	(52.677)
ADOBE SYSTEMS INC	0.220	0.202	0.063	3.659	18,724.420	(11.799)
ADVANCED MICRO DEVICES	(0.090)	(0.115)	(0.167)	(0.136)	4,132.549	(77.223)
AES CORP	0.062	0.060	0.010	0.119	9,985.095	(27.317)
AETNA INC	0.062	0.056	0.179	0.573	11,226.780	(29.633)
AFFILIATED COMPUTER SERVICES	0.127	0.127	0.118	0.375	4,796.198	4.454
AFLAC INC	0.063	0.071	0.238	2.885	21,314.465	(6.600)
AGILENT TECHNOLOGIES INC	0.102	0.069	0.066	0.356	9,531.994	(14.867)
AIR PRODUCTS & CHEMICALS INC	0.134	0.115	0.034	0.423	17,636.383	16.890
AIRGAS INC	0.132	0.140	0.062	0.331	4,132.980	33.730
ALCOA INC	0.033	0.022	(0.108)	0.117	13,992.054	(53.210)
ALLERGAN INC	0.100	0.128	0.032	0.416	17,900.012	0.808
ALTERA CORP	0.239	0.142	0.066	0.890	6,372.047	11.589
AMAZON.COM INC	0.204	0.245	0.034	2.556	41,457.792	190.660
AMERICAN TOWER CORP	0.094	0.097	0.038	0.178	15,801.106	(0.274)
AMERIPRISE FINANCIAL INC	0.021	0.002	0.226	0.988	9,502.604	(22.537)
AMERISOURCEBERGEN CORP	0.060	0.074	0.102	0.620	6,940.951	(0.973)
AMGEN INC	0.164	0.137	0.089	0.588	62,786.944	(15.798)
AMPHENOL CORP	0.161	0.187	0.054	0.612	7,029.893	21.686
ANADARKO PETROLEUM CORP	0.132	0.116	0.060	0.522	32,296.230	43.121

shareholders' equity dropped from $9.8 billion to $2.9 billion despite strong operating profits as it recognized the impact of SFAS 158. With its shrunken capital base, ROIC, under many definitions, including that used by Corn Products, Inc., would not accurately reflect Lockheed Martin's ability to return cash on its invested capital. A write-down of assets would positively affect Nordstrom, improving its ROIC (if profits were unaffected).

When borrowings are used to fund a capital expenditure program, the increase in long-term debt would need to be met with an increase in free cash flow if the ROIC is to rise. If the borrowings stay in cash, there is no immediate effect on ROIC because cash merely offsets the borrowing in the denominator. For analysts who prefer to look at book value, buying back stock below book will enhance

remaining book, a tactic used by some managements to increase that metric. By the same reasoning, selling shares above book will boost book value.

Evaluating companies on the basis of book value is a tricky proposition because it rests on the quality and ease with which that book value can generate free cash flow and, in the case of financial entities, the ease with which that book can be readily converted into cash and its adequacy in supporting the entity's credit rating. While valuation on book value has merit when it can affect cash flows (such as banks), asset impairments will undermine its relation to market value. Such was seen prior to the 2007 mortgage meltdown as security analysts for the largest brokerage firms valued the financial industry based on book value. Almost every "buy side" security analyst had "buy" ratings on financial industry companies when those stocks initially fell to below book, pointing out in their research reports the companies had almost always rebounded from that level. This logic made sense when the companies were generating positive cash flows; however, as the financial firms wrote down their investment accounts, book value fell to a fraction of where it stood prior to the crisis. Meanwhile, the industry, which had collectively repurchased tens of billions of dollars of its own stock near book value, thinking it was getting a bargain because many were rated investment grade, it soon wished it had that capital back. For the financial entities themselves, their ability to grow their business is very much a function of their capital positioning.

It should be noted, however, that many companies earn superior returns on capital in a given year or during a particular phase of the economic cycle only to see quite low or negative returns on capital employed during other phases of the cycle. These entities must be fiscally prudent during periods of strength or be subject to a larger than necessary rise in the cost of equity capital when business turns down. Cyclicality in businesses need not translate into high added cost of capital if managed prudently.

EVALUATION OF ROIC WHEN INVESTED CAPITAL IS LOW

As industrial efficiencies evolve, improvements in technology take place, and management consultants develop techniques to enhance supply and production methods, productivity improves, and the growth rate of productive capital falls. This need for less capital intensity positively affects ROIC, cash required, and financial ratios. McKinsey & Co. found that the median level of invested capital for U.S. industrial entities dropped from around 50 percent of revenues in the early 1970s to just above 30 percent in 2004.[4]

[4]McKinsey & Co. study based on an analysis of more than 600 companies with sales of more than $100 million. "Comparing Performance when Invested Capital is Low," *McKinsey Quarterly*, 2005.

What McKinsey found in 2005 has only picked up momentum since. Worldwide competition for sales and market share, especially as economic growth has slowed, has led to additional expense skimming and creative means to reduce or minimize the capital base given a projected revenue stream.

For certain industries, which have a naturally low capital base, such as service-oriented entities, ROIC will be naturally high. And for manufacturing entities that use outsourcing effectively or other entities' capital for a substantial part of assembly or service, they, too, would have an unnaturally low capital base resulting in a high ROIC. This does not make ROIC any less important. However, I introduce another measure that is intended to evaluate the cash return on the company's deployment of resources—its *economic profit*. The economic profit then should be compared with sales. Doing so can remove many of the distortions of ROIC and improve intercompany comparability. Even when ROIC makes sense, economic profit should be employed as another measure to evaluate firms.

Economic profit also could be related to other firm factors, such as total employees or units sold. Doing so would provide the analyst with comparability measures specific to a particular industry or situation. When used in this way, economic profit can indicate management's ability to create value relative to its peer group or the direction and efficiency of its spending. For example, a pharmaceutical company analyst may wish to look at the economic profit per researcher.

Economic profit is defined as a company's free cash flow exclusive of interest income minus a capital charge, with the charge calculated as the company's weighted-average cost of capital multiplied by the operating invested capital. The traditional definition of economic profit uses after-tax operating profits in lieu of free cash flow.

EXAMPLE:

Calculate the 2008 economic profit for MMM using the following financials:

	($ Million)
2008 revenues	$25,269
Shareholders' equity	$9,879
Free cash flow (incl. interest income)	$3,290
Interest income	$105
Operating leases	$395
Cash and equivalents	$2,222
Invested capital	$14,728
Weighted-average cost of capital	6.4%

From the free cash flow, interest income is subtracted because we are computing the economic return on the invested capital, not the total free cash flows, which include the returns on the financial assets as well.

$$\begin{aligned}\text{Economic profit} &= (\$3{,}290 \text{ million} - \$105 \text{ million}) - 0.064 * (\$14{,}728 \text{ million}) \\ &= \$3{,}185 \text{ million} - \$942 \text{ million} \\ &= \$2{,}242 \text{ million}\end{aligned}$$

MMM's economic profit was $2.2 billion during 2008.

When we compare MMM's economic profit to its 2008 revenues of $25,269 million, we arrive at 8.9 percent, which then could be compared with its historic results or with other companies in its industry. The economic profit also could be related to employee headcount or other useful factors important to the company.

EXAMPLE:

This is how Clorox computed its economic profit for fiscal years 2007–2009. As seen below, it used a partial-cash-flow format by excluding some noncash charges.

THE CLOROX COMPANY
ECONOMIC PROFIT

	(Dollars in Millions)		
	FY09	**FY08**	**FY07**
Earnings from continuing operations before income taxes	$811	$693	$743
Noncash restructuring-related and asset-impairment costs[1]	10	48	4
Interest expense[2]	161	168	113
Earnings from continuing operations before income taxes, noncash restructuring-related and asset-impairment costs, and interest expense	$982	$909	$860
Adjusted after-tax profit[3]	$650	$604	$574
Average capital employed[1,4]	3,045	2,680	2,165
Capital charge[5]	274	241	195
Economic profit (adjusted after-tax profit less capital charge)	376	363	379

[1]Noncash restructuring-related and asset-impairment costs are added back to earnings and adjusted capital employed to more closely reflect cash earnings and the total capital investment used to generate those earnings.

[2]Interest expense is added back to earnings because it is included as a component of the capital charge.

[3]Adjusted after-tax profit represents earnings from continuing operations before income taxes, noncash restructuring-related and asset-impairment costs, and interest expense after tax. The tax rate applied is the effective tax rate on continuing operations, which was 33.8, 33.6, and 33.2 percent in fiscal years 2009, 2008, and 2007, respectively.

[4]Total capital employed represents total assets less non-interest-bearing liabilities. Adjusted capital employed represents total capital employed adjusted to add back current-year noncash restructuring-related and asset-impairment costs. Average capital employed represents a two-point average of adjusted capital employed for the current year and total capital employed for the prior year based on year-end balances. See below for details of the average capital employed calculation:

	FY09	FY08	FY07	FY06
Total assets	$4,576	$4,708	$3,581	$3,521
Less:				
Accounts payable	381	418	329	329
Accrued liabilities	472	440	507	474
Income taxes payable	86	48	17	19
Other liabilities	640	600	516	547
Deferred income taxes	23	97	5	34
Non-interest-bearing liabilities	1,602	1,603	1,374	1,403
Total capital employed	2,974	3,105	2,207	$2,118
Noncash restructuring and asset-impairment costs	10	48	4	
Adjusted capital employed	$2,984	$3,153	$2,211	
Average capital employed	$3,045	$2,680	$2,165	

[5] Capital charge represents average capital employed multiplied by the weighted-average cost of capital. The weighted-average cost of capital used to calculate the capital charge was 9 percent for fiscal years 2009, 2008, and 2007.

Source: Clorox Corp 2009 10K.

Clorox could have taken its definition a step further, as we did with MMM, by substituting free cash flow for operating profit because operating profits are subject to generally accepted accounting principles (GAAP), and we are gauging cash return to compare the result with revenues or other useful measures, including invested capital. I believe that my definition of free cash flow and capital employed to be more reflective of invested capital than is Clorox's definition. Clorox uses a weighted average cost of capital (WACC) of 9 percent but doesn't reveal how that was determined. It is most likely that the company is using the capital assets pricing model (CAPM) to compute the equity cost of capital.

Table 5-7 lists companies in the advertising industry, which traditionally has required a small capital base. The companies were selected from their Standard Industrial Code (SIC)[5] for 2008. Even the size of the capital base could not save many companies from a negative economic profit during the recession, as shown in the table. In the first column we see how most investors would define return on

[5] Standard Industrial Classification (SIC) codes are four-digit numerical codes assigned by the U.S. government to business establishments to identify the primary business of the establishment. The first two digits of the code identify the major industry group, the third digit identifies the industry group, and the fourth digit identifies the industry.

investment (see table footnote), whereas we are defining economic profit using free cash flow.

The table, listing companies having a minimum $200 million market capitalization for which data were available, showed for the average firm a positive ROIC yet a vastly different (negative) economic profit as a percentage of total sales. Monster Worldwide, for example, had an acceptable 10.9 percent ROIC yet a near-zero economic profit relative to revenue, indicative of its large capital base, high cost of capital, and free cash flow during the year. Monster Worldwide is predominantly an online employment agency, yet it has the same SIC as companies in pure advertising, illustrating a weakness of comparability based solely on U.S. government classification.

TABLE 5-7

Year 2008: Return on Investment as Traditionally Defined versus Economic Profit as a Percent of Sales

Company Name	Return on Investment[6]	Economic Profit/Sales
Arbitron, Inc.	52.8%	3.2%
Clear Channel Outdoor Hldgs.	−46.9%	−36.3%
Focus Media Holding, Ltd.–ADR	−34.6%	−53.2%
Harte Hanks, Inc.	10.5%	5.6%
Interpublic Group of Cos.	6.3%	3.9%
Lamar Advertising Co.–CL A	0.3%	−19.8%
Monster Worldwide, Inc.	10.9%	0.0
National Cinemedia, Inc.	5.8%	22.2%
Omnicom Group	14.7%	5.1%
Publicis Groupe SA–ADR	12.2%	7.5%
WPP PLC–ADR	4.4%	−0.2%
Median	**6.3%**	**−3.5%**
Median (ex. focus media)	**8.4%**	**3.5%**

[6]Return on Investment is defined in the table as income before extraordinary items available for common divided by total invested capital which is the sum of the following items: Total long term debt; Preferred Stock; minority Interest; and Total Common Equity. We believe return should be measured as free cash flow, the amount of cash that could be distributed to shareholders without effecting future growth.

EXAMPLE:

TABLE 5-8

Cash Flows: Monster Worldwide

Part I - Cash Flow Items:

Year	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Most Recent Quarter Jun-09	Previous Quarter Jun-08
Net Operating Cash Flow	92.5	221.6	268.8	269.2	225.8	(13.6)	70.7
Capital Expenditures	24.3	39.8	55.6	64.1	93.6	11.5	29.7
Sale Of PPE	NA	NA	NA	0.0	0.0	0.0	0.0
Free Cash Flow – Including Discretionary Items	68.2	181.8	213.2	205.1	132.2	(25.1)	41.0
Free Cash Flow – Excluding Discretionary Items	77.9	182.5	227.6	220.6	150.5	—	—
Discretionary Capital Expenditures	0.0	0.7	14.5	15.5	18.1	—	—
Discretionary R&D	0.0	0.0	0.0	0.0	0.0	—	—
Discretionary Cost of Goods Sold	9.7	0.0	0.0	0.0	0.2	—	—
Discretionary SG&A	0.0	0.2	0.0	0.0	0.0	—	—
Discretionary Advertising	0.0	0.0	0.0	0.0	0.0	—	—
Large Buildup (Reduction) in Accounts Receivable	0.0	59.5	(48.7)	(47.9)	(109.2)	(215.1)	(94.4)
Large Buildup (Reduction) in Inventory	(193.0)	4.0	(26.6)	(24.3)	(24.3)	(16.9)	(6.2)
Large Buildup (Reduction) in Accounts Payable	(19.5)	84.5	(97.8)	(94.9)	(182.2)	(301.2)	(84.6)

Monster Worldwide generated free cash flow of $150 million during its fiscal year 2008, when adjusted for overspending in discretionary areas (Table 5-8). When we subtract its interest income and its weighted-average cost of capital of 13.2 percent multiplied by its capital base of $1.047 billion, we see that it had an economic profit of negative $5 million, surely a disappointing return given the size of its capital base. This is calculated as follows:

$$\begin{aligned}\text{Economic profit} &= (\$150 \text{ million} - \$17 \text{ million}) - (0.132 * \$1{,}047 \text{ million}) \\ &= \$133 \text{ million} - \$138 \text{ million} \\ &= -\$5 \text{ million}\end{aligned}$$

And with Monster Worldwide's 2008 revenues of $1,343 million, we get

$$\text{Economic profit as a percentage of sales} = \frac{-\$5 \text{ million}}{\$1{,}343 \text{ million}} = -0.004 = -0.04 \text{ percent}$$

Thus, when we look at Monster Worldwide's economic profit as a percentage of revenue, we see that its return was, for 2008, very unimpressive. Importantly, the difference between the traditional definition of ROIC relative to economic profit as a percentage of sales is quite dramatic, indicating that Monster's financial performance is more reflective of reality when substituting economic profits for return on investment. However, as we see from Monster's free cash flow, its four-year average was considerably higher than the 2008 recession-induced year, so if we were to normalize economic profit, the results would have been considerably stronger. Given that its most recent fiscal year showed a sharp drop in free cash flow and its most recent quarter was negative, Monster's cost of capital undoubtedly has risen, reflecting the increase in instability.

Figure 5-2 shows that companies in the capital-intensive paper products industry have a wide disparity in their ability to produce sales given their invested capital. The average for the group is 0.963, meaning that they need almost $1 dollar of capital to produce $1 dollar in revenue per year.

FIGURE 5-2

Invested Capital as a Percentage of Sales: Paper Products Industry

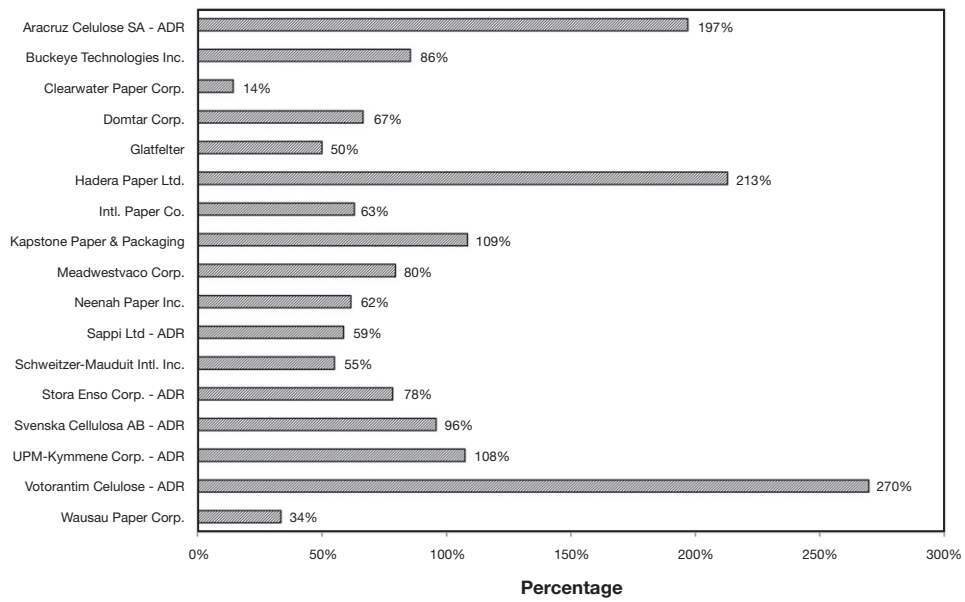
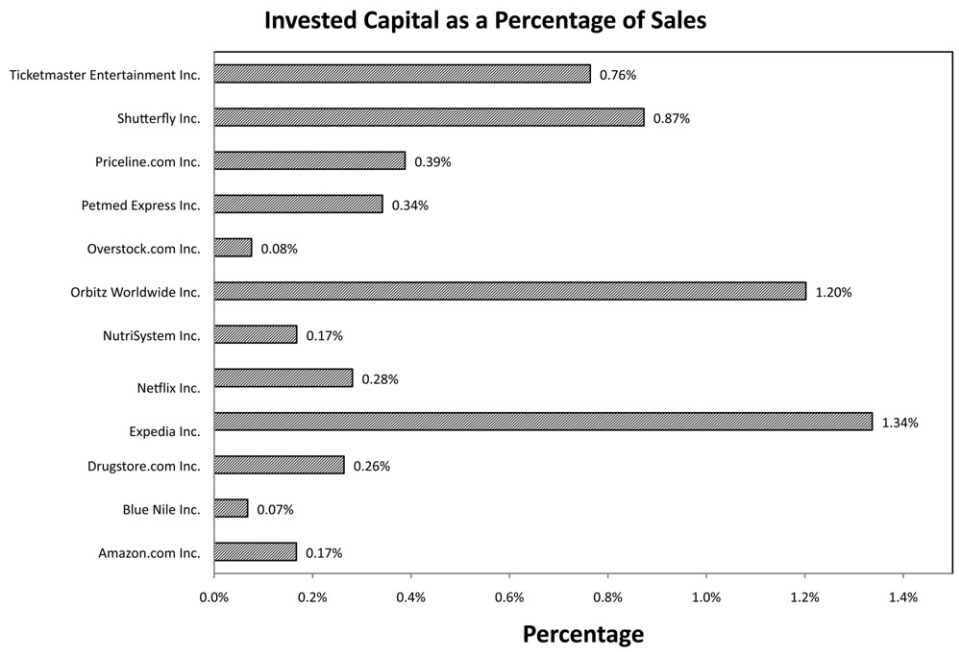


FIGURE 5-3

Invested Capital as a Percentage of Sales: Internet Retail



Shown in Fig. 5-3 is the percentage of invested capital required for each dollar of sales for Internet retailers, which, while having a definite need for infrastructure, especially for warehousing and computers, require only, on average, 49 cents in capital to produce $1 in annual revenues. And for other service industries, such as advertising, accounting services, money management, and consulting, it may be as low as 10 cents—or lower—in capital to produce a dollar in sales.

Entities requiring a small invested capital base are capable of reducing their capital infrastructure, requiring less need for financing, thus are a management goal for all companies. Improving the return on the capital base while increasing revenues often results in a boon in free cash flow for shareholders. The improvement could take the form of moving production equipment to a lower-cost (labor or tax) jurisdiction, outsourcing labor, margin improvement, revenue enhancement, improvements in the credit department, and effective balance-sheet management.

The sale of manufacturing facilities to an outside contract manufacturer and at the same time receiving a cash payment in return for the assets with

exclusive right for the contractor to manufacture the company's products also can improve ROIC.

EXAMPLE:

Xerox, Flextronics Reach $1bn Outsourcing Deal

Xerox has reached an outsourcing agreement with contract manufacturer Flextronics International of Singapore encompassing more than $1bn in annual manufacturing costs.

The deal includes the sale of some of Xerox's manufacturing assets to Flextronics for $220m, and encompasses about half of Xerox's overall manufacturing operations. The agreement includes a five-year contract for Flextronics to manufacture certain Xerox office equipment and components, at a modest premium over book value.

Source: Electronics Weekly.

Companies can be expected to continue to reduce their property, plant, and equipment (PPE) relative to revenues, especially as the trend toward low-cost manufacturing countries evolves, with a resulting increase in balance-sheet cash, short-term investments, and expansion opportunities. Certainly, Apple Computer has been a leading company in this regard and in the process has been generating very high amounts of excess cash. Investors are, in Apple's case, ignoring the very low returns on its cash in their valuation of the company, focusing instead on its high economic profit.

As we see from its June 30, 2009, balance sheet (Table 5-9), Apple, reports $24 billion in balance-sheet cash, another $6.9 billion in marketable securities, and just $26 billion in shareholders' equity. It generates about $34 billion in revenue on just $2.6 billion in PPE. Apple's cash and equivalents are so large in relation to its equity that when subtracting cash from its capital base, its invested capital is small. Of course, this also would be the case for a company with operating losses, but in Apple's case, its management has been extraordinarily effective at taking advantage of others' capital.

This trend toward using other entities' capital is not confined to the manufacturing sector because service entities are also redeploying labor outside their cost structure.

TABLE 5-9

Apple, Inc., Consolidated Financial Statements

APPLE, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)
(In Millions, Except Share Amounts)

	June 27, 2009	September 27, 2008
Assets		
Current assets:		
Cash and cash equivalents	$5,605	$11,875
Short-term marketable securities	18,617	10,236
Accounts receivable, less allowances of $58 and $47, respectively	2,686	2,422
Inventories	380	509
Deferred tax assets	1,731	1,447
Other current assets	6,151	5,822
Total current assets	35,170	32,311
Long-term marketable securities	6,899	2,379
Property, plant, and equipment, net	2,653	2,455
Goodwill	207	207
Acquired intangible assets, net	259	285
Other assets	2,952	1,935
Total assets	$48,140	$39,572
Liabilities and Shareholders' Equity:		
Current liabilities:		
Accounts payable	$4,854	$5,520
Accrued expenses	3,338	3,719
Deferred revenue	8,469	4,853
Total current liabilities	16,661	14,092
Deferred revenue—noncurrent	3,667	3,029
Other noncurrent liabilities	1,924	1,421
Total liabilities	22,252	18,542
Commitments and contingencies		
Shareholders' equity:		
Common stock, no par value, 1,800,000,000 shares authorized, 895,735,210 and 888,325,973 shares issued and outstanding, respectively	7,957	7,177
Retained earnings	17,878	13,845
Accumulated other comprehensive income	53	8
Total shareholders' equity	25,888	21,030
Total liabilities and shareholders' equity	$48,140	$39,57