PICKING STOCKS THE BUFFETT WAY: UNDERSTANDING RETURN ON EQUITY

By Timothy Vick

"The primary test of managerial economic performance is the achievement of a high earnings rate on equity capital employed (without undue leverage, accounting gimmickry, etc.) and not the achievement of consistent gains in earnings per share."
[From the 1979 Berkshire Hathaway annual report.]

Warren Buffett joined the world's club of billionaires in a unique fashion—as an investor, exploiting the world's financial inefficiencies. However, his approach is anything but opaque. Instead, he follows a clear and consistent set of investment rules and methods. In his new book, "How to Pick Stocks Like Warren Buffett," Timothy Vick delves into Buffett's reasoning and stock-picking criteria. This article, excerpted from the book, focuses on a key component of Buffett's analysis: return on equity.

The 1990s truly were an extraordinary period, for investors and corporate America alike. Not only were stock investors amply rewarded with gains averaging nearly 20% a year, but corporations displayed their best internal performance of the century. The two results, of course, went hand-in-hand. Had corporations not been so profitable and efficient, investors would not have been so willing to pay high premiums for their earnings. It's also doubtful that the stock market would have rallied by even a fraction of the amount it did.

Indeed, some of the weakest market periods during the twentieth century coincided with slowdowns in corporate earnings growth and dwindling returns on equity. Low returns on equity have tended to produce low stock valuations, and vice versa. As the decade closed, it was apparent that U.S. corporations deserved valuations above historical norms simply because they generated returns on investor's capital far in excess of levels seen throughout the twentieth century.

The high returns on shareholder's equity (ROE) posted by the nation's largest companies in the 1990s were a major factor in the strong showing by the stock market. Those gains were made possible by some spectacular achievements: continued improved earnings, better internal productivity, a reduction of overhead costs, and strong top-line sales gains, to name just a few. The tools companies used to produce these results—restructurings, layoffs, share buybacks, and management's success in utilizing assets—fueled one of the most impressive improvements in ROE history.

Returns on equity for the S&P 500 companies averaged between 10% and 15% for most of the twentieth century but rose sharply in the 1990s. By the end of the decade, corporate returns on equity jumped above 20%, That's a phenomenal rate considering that the 20% level was an *average* of 500 companies. Many technology companies consistently posted returns on equity in excess of 30% in the 1990s, as did many consumer products companies such as Coca-Cola and Philip Morris and pharmaceutical companies such as Warner-Lambert, Abbott Laboratories, and Merck. Because companies produced such elevated returns on their shareholder's equity (or book value), investors were willing to bid their stocks to huge premiums to book value. Whereas stocks tended to trade for between one and two times shareholder's equity throughout most of the century, they traded, on average, for more than

Timothy Vick is a senior analyst with Arbor Capital Management, Chicago, Illinois, and the founder and former editor of the investment newsletter, Today's Value Investor.

This article is excerpted from Mr. Vick's new book "How to Pick Stocks Like Warren Buffett," published by McGraw-Hill (800/262-4729; www.books.mcgraw-hill.com).

six times shareholder's equity by late 1999.

But even before 1999, Warren Buffet began questioning whether corporations could continue to generate returns on equity in excess of 20%. If they couldn't, he said, stocks could not be worth as much as six times equity.

History favored Buffett's assessment. American companies turned less charitable in the 1990s toward issuing dividends and retained an increasing share of their yearly earnings. In addition, the U.S. economy seemed capable of sustaining growth rates of just 3% to 4% each year. Under those conditions, it would be nearly impossible for corporations to continue generating 20% ROEs indefinitely. It would take yearly earnings growth in excess of 20% a year to produce 20% ROEs—an impossibility unless the economy were growing at rates far in excess of 10% a year.

Returns on equity play an important role in analyzing companies and putting stock prices and valuation levels in proper context. Most investors tend to concentrate on a company's past and projected earnings growth. Even top analysts tend to fixate on bottom-line growth as a yardstick for success.

However, a company's ability to produce high returns on owner's capital is equally as crucial to long-term growth. In some respects, return on equity may be a more important gauge of performance because companies can resort to any number of mechanisms to distort their accounting earnings.

Warren Buffett expressed this sentiment more than 20 years ago:

"The primary test of managerial economic performance is the achievement of a high earnings rate on equity capital employed (without undue leverage, accounting gimmickry, etc.) and not the achievement of consistent gains in earnings per share. In our view, many businesses would be better understood by their shareholder owners, as well as the general public, if management and financial analysts modified the primary emphasis they place upon earnings per share, and upon yearly changes in that figure." [From the 1979 Berkshire Hathaway annual report.]

TABLE 1. MICROSOFT PROJECTIONS: MAINTAINING 30% ROE

	Begninning Equity ($, mil)	Net Income ($, mil)	Ending Equity ($, mil)	ROE (%)	Annual Earnings Growth (%)
2000	$8,000	$2,825	$10,825	30.0	na
2001	$10,825	$3,825	$14,650	30.0	35.4
2002	$14,650	$5,179	$19,829	30.0	35.4
2003	$19,829	$7,012	$26,841	30.0	35.4
2004	$26,841	$9,491	$36,332	30.0	35.4
2005	$36,332	$12,847	$49,179	30.0	35.4
2006	$49,179	$17,390	$66,569	30.0	35.4
2007	$66,569	$23,540	$90,109	30.0	35.4
2008	$90,109	$31,865	$121,974	30.0	35.4
2009	$121,974	$43,130	$165,104	30.0	35.4
2010	$165,104	$58,380	$223,484	30.0	35.4

CALCULATING ROE

Return on equity is the ratio of yearly profits to the average equity needed to produce these profits:

$$\text{ROE} = \frac{\text{net income}}{(\text{end equity + begin equity})/2}$$

If a company earned $10 million, started the year with $20 million in shareholder's equity, and finished with $30 million, its ROE would be roughly 40%:

$$\text{ROE} = \frac{\$10 \text{ million}}{(\$30 \text{ million} + \$20 \text{ million})/2}$$

$$= 0.40 \text{ or } 40\%$$

In this case, management obtained a 40% return on the resources shareholders provided them to generate profits. Shareholder's equity—assets minus liabilities—represents the investors' stake in the net assets of the company. It is the total of the capital contributed to the company and the company's earnings to date on that capital, minus a few extraordinary items. When a company posts a high ROE, it is efficiently using the assets shareholders have provided. It follows that the company is increasing its shareholder's equity at rapid rates, which should lead to equally rapid increases in stock price.

Buffett believes that companies that can generate and *sustain* high ROEs should be coveted because they are relatively rare. They should be purchased when their stocks trade at attractive levels relative to their earnings growth and ROEs because it is extremely difficult for companies to maintain high ROEs as they increase in size. In fact, many of the largest, most prosperous U.S. companies—General Electric, Microsoft, Wal-Mart, and Cisco Systems, among them—have displayed steadily decreasing ROEs over the years by virtue of their size. These companies found it easy to earn enough profits to record a 30% ROE when shareholder's equity was only $1 billion. Today, it's excruciatingly difficult for them to maintain 30% ROEs when equity is, say, $10 billion or $20 billion.

In general, for a company to maintain a constant ROE, it needs to exhibit earnings growth in excess of ROE. That is, it takes more than 25% earnings growth to maintain a 25% ROE. This applies for companies that don't pay dividends (dividends reduce shareholder's equity and make it easier to post high ROEs). If management wishes to maintain a company's ROE at 25%, it must find ways to create more than $1 in shareholder's equity for every $1 of net income produced. Table 1 shows that Microsoft would have to post average yearly earnings growth of 35.4% to maintain a 30% yearly ROE (Microsoft's average ROE during the 1990s). Beginning with $8 billion in shareholder's equity, Microsoft would have to increase equity to $223 billion by 2010 to attain those growth rates.

The key to understanding ROEs, Buffet notes, is to make sure that management maximizes use of the extra resources given it. Any company can continue to produce ever-larger earnings every year simply by depositing its income in the bank and letting it draw interest. If Microsoft shut down operations and reinvested yearly net income at 5% rates, earnings would continue growing, but ROE would plummet, as shown in Table 2.

By doing nothing, Microsoft's management could deliver 5% earnings growth for investors and brag of "record earnings" each year, but management would fail in its obligation to use corporate assets wisely. By 2010, Microsoft's ROE would fall to 10%. ROE would continue to fall for another 70 years until it reached 5% and parity with earnings growth. Indeed, when net income does not grow as fast as equity, management has not maximized use of the extra resources given it.

"Most companies define 'record earnings' as a new high in earnings per share. Since businesses customarily add from year to year to their equity share, we find nothing particularly noteworthy in a management performance combining, say, a 10% increase in equity capital and a 5% increase in earnings per share. After all, even a totally dormant savings account will produce steadily rising interest each year because of compounding." [From the 1979 Berkshire Hathaway annual report.]

Focusing on companies producing high ROEs, Buffett says, is a formula for success, because, as shown above, high ROEs must necessarily lead to strong earnings growth, a steady increase in shareholder's equity, a steady increase in the company's intrinsic value, and a steady increase in stock price. If Microsoft maintained a 30% ROE and the company never paid a dividend, its net income and shareholder's equity would rise at 35.4% annual rates. We also could expect the stock to rise at 35.4% annual rates over long periods. If the stock rose at the same rate that shareholder's equity increased, the stock would persistently trade at the same *price-to-book-value ratio*.

When evaluating two nearly identical companies, the one producing higher ROEs will almost always provide better returns for you over time.

Five other points are worth considering when evaluating ROEs:

- *High returns on equity attained with little or no debt are better than similar returns attained with high debt.* The more debt added to the balance sheet, the lower the company's shareholder's equity when holding other factors constant because debt is subtracted from assets to calculate equity. Companies employing debt wisely can greatly improve ROE figures because net income is compared against a relatively small equity base. But high debt is rarely desirable, particularly for a company with very cyclical earnings.
- *High ROEs differ across industries.* Drug and consumer-products companies tend to posses higher than average debt levels and will tend to record higher ROEs. They can bear higher levels of debt because their sales are much more consistent and predictable than those of a cyclical manufacturer. Thus, they can safely use debt to expand rather than worry about having to meet interest payments during an economic slowdown. We can attribute the high ROEs of companies such as Philip Morris, PepsiCo, or Coca-Cola to the fact that debt typically equals 50% or more of equity.
- *Stock buybacks can result in high ROEs.* Companies can significantly manipulate ROEs through share buybacks and the granting of stock options to employees. In the 1990s, dozens of top-notch

TABLE 2. DECREASING ROE PROJECTIONS FOR MICROSOFT: 5% EARNINGS GROWTH

	Begninning Equity ($, mil)	Net Income ($, mil)	Ending Equity ($, mil)	ROE (%)	Annual Earnings Growth (%)
2000	$8,000	$2,825	$10,825	30.0	—
2001	$10,825	$2,966	$13,791	24.1	5.0
2002	$13,791	$3,115	$16,906	20.3	5.0
2003	$16,906	$3,270	$20,176	17.6	5.0
2004	$20,176	$3,434	$23,610	15.7	5.0
2005	$23,610	$3,605	$27,215	14.2	5.0
2006	$27,215	$3,786	$31,001	13.0	5.0
2007	$31,001	$3,975	$34,976	12.0	5.0
2008	$34,976	$4,174	$39,150	11.3	5.0
2009	$39,150	$4,383	$43,533	10.6	5.0
2010	$43,533	$4,602	$48,134	10.0	5.0

TABLE 3. ANNUAL ROEs FOR WARREN BUFFETT'S LARGEST HOLDINGS DURING THE 1990s

	ROE (%)											
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999(Est)*	Avg
Coca-Cola	34.2	35.9	36.6	48.4	47.7	48.8	55.4	56.7	56.5	42.0	39.0	45.6
American Express	20.3	15.3	14.3	8.7	13.4	21.5	19.0	22.3	20.8	22.7	21.5	18.2
Gillette	42.5	42.5	36.9	34.3	40.0	34.6	32.8	27.4	29.5	31.4	30.5	34.8
Freddie Mac	22.8	19.4	21.6	17.4	17.7	19.0	18.6	18.5	18.5	15.7	16.5	18.7
Wells Fargo	18.5	17.1	15.4	16.9	18.3	20.8	18.0	19.0	19.2	14.0	16.0	17.6
Walt Disney	23.1	23.6	16.4	17.4	17.7	20.2	20.2	9.5	10.9	9.6	7.0	16.0
Washington Post	21.0	19.3	12.8	12.9	12.9	15.1	16.1	16.5	19.8	13.9	13.5	15.8
General Dynamics	13.8	—	11.8	7.2	17.6	16.9	15.8	15.8	16.5	16.4	14.0	14.6

** Estimated at the time of this writing.*

companies bought back stock with the stated intention of improving earnings per share and ROEs. Schering-Plough, the pharmaceutical company, posted unusually high ROEs, in excess of 50%, during the late 1990s because it repurchased more than 150 million shares. Had Schering-Plough not been repurchasing stock, ROEs would have been between 20% and 30%.

- *ROEs follow the business cycle and ebb and flow with yearly increases in earnings.* If you see a cyclical company, such as J.C. Penny or Modine Manufacturing, posting high ROEs, beware. Those rates likely cannot be maintained and are probably the byproduct of a strong economy. Don't make the mistake of projecting future ROEs based on rates attained during economic peaks.
- *Beware of artificially inflated ROEs.* Companies can significantly manipulate ROEs with restructuring charges, asset sales, or one-time gains. Any event that decreases the company's assets, such as a restructuring or the sale of a division, also decreases the dollar value of shareholder's equity but gives an artificial boost to ROE. Firms that post high ROEs without relying on gimmicks are truly rewarding shareholders.

PREDICTING PERFORMANCE

There is some correlation between the trend of a company's ROE and the trend of future earnings, a point Warren Buffett has made on numerous occasions. If yearly ROEs are climbing, earnings also should be rising. If the ROE trend is steady, chances are that the earnings trend will likewise be steady and much more predictable. By focusing on ROE, an investor can more confidently make assumptions about future earnings. If you can estimate the growth of a company's future ROEs, then you can estimate the growth in shareholder's equity from one year to the next. And if you can estimate the growth in shareholder's equity, then you can reasonably forecast the level of earnings needed to produce each year's ending equity. Using the Microsoft example, we were able to project a 30% yearly ROE through 2010. That allowed us to calculate the net income needed to produce those figures. Using some simple calculations, we showed that Microsoft's earnings would grow at 35.4% annual rates.

Such assumptions rely, of course, on whether Microsoft can continue to produce 30% yearly ROEs. If the company's ROE falls short, you cannot expect 35.4% earnings growth. No company the size of Microsoft can continue to grow at 30% rates forever, a factor you must take into consideration when evaluating any stock, particularly today's less-established technology companies.

Warren Buffet's portfolio of consumer-products and consumer cyclical stocks shows his preference for high, consistent ROEs. Coca-Cola and Gillette, for example, have steadily posted yearly ROEs between 30% and 50%, an astonishing record for companies that have existed for decades. Nearly all the other public companies in which Buffett owns large stakes boast average yearly ROEs of 15% or better.

By virtue of their high internal returns and lower than average capital needs, these companies have managed to generate high returns on shareholders' money year after year and post earnings growth of between 10% and 20%.

Table 3 presents the performance of several of Buffett's largest stock holdings during the 1990s. ❖

- Look for articles in the **Stock Screens** area on searching for stocks with high ROE:
  —"Return on Equity"
  —"Finding Stocks the Warren Buffett Way"
- Buffett Valuation Spreadsheet:
  Go to the **Download Library** and look under the category Files From AAII for downloadable Excel spreadsheet for Mac or Windows.

AAII.com
American Association of Individual Investors