ECONOMIC VALUE ADDED

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ABSTRACT

The quest of becoming a world-class company and becoming competitive in a global market has sharply altered the way in which many businesses are currently managed. There is a growing demand from the investment community that forces businesses to utilize new performance measurement tools that more accurately reflect the growth of the business. The Economic Value Added (EVA) concept has provided one foundation for this evolution. Most companies adopting EVA have seen a superior stock price performance that correlated with the improved financial performance.

INTRODUCTION

Quality leadership is the key to business success. It has become a fundamental strategy for worldwide competitiveness. It results from strong customer-driver work and teamwork processes throughout all areas of an organization. These are processes which people understand, believe in, become a part of and systematically develop in terms of the best quality practices available in the world. The principle presented here is that quality is a fundamental way of managing an organization. It improves the basic business, management, and technical activities in a way that simultaneously achieves customer satisfaction, human resource effectiveness, lower costs, and increased shareholder value.

Quality improvements are not limited to the assembly line of a manufacturing plant or the inspection station at a quality control center. It is a management approach that allows participation by all levels within an organization. As Dr. W. Edwards Deming strongly lectures, "I want to reemphasize that improved quality of work is critical to every one of our jobs" (Deming, 141). The moral of the story here is that as consumers demand higher quality products, investors demand the same from the agents they have hired to run their businesses. Let's not forget that building shareholder value must be the primary fiduciary responsibility of a business manager. Until recently this is a phenomenon that seemingly had been forgotten, or a least pushed to the back burner.

As global competition becomes a way of life corporate management has been forced to produce better results. Companies not only compete globally for products and services, but also for investors. To be a world-class competitor for new investors companies must create shareholder wealth and produce satisfactory returns. Companies receive money from investors
who expect both. One way of measuring both is a new concept developed by Stern Stewart & Co. and it is called Economic Value Added (EVA). It is today's hottest financial idea and getting hotter. Simply stated, EVA is a non-conventional measure of a company's after-tax profits, minus a total annual cost of capital. Traditional financial measures such as Net Operating Income (NOI) and Earnings Per Share (EPS) do not capture all aspects of a company's economic profits, the largest of which can be the cost of capital. In layman's terms, cost of capital represents the minimum rate of return that an investor expects to receive on their investment.

**ANALYSIS OF THE EVA FRAMEWORK**

EVA is a tool used to manage financial performance. Simply stated, it is the true economic profit after all costs are recaptured, including interest, taxes, and a charge for employed capital (all three of which are not necessarily used in more conventional financial measurement tools). EVA measures both the profitability and the growth of a business. Conceptually and technically, EVA is simple; however, it does require the basic knowledge of traditional financial formulas and terminology.

Capital is the net operating assets (adjusted for certain accounting distortions) and can be defined as the sum of debt, equity, and equity equivalents. A capital charge remains after applying the after-tax cost of debt and equity to the total capital employed. Net Operating Profit After Taxes (NOPAT) represents the total profits from operations before goodwill amortization and other non-economic charges, less cash taxes. EVA equals NOPAT less a capital charge. Stated another way, EVA equals return on capital (ROC) minus cost of capital (c%) times total employed capital (C).

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EVA = (r\% - c\%) \times C
\]

or

\[
EVA = NOPAT - \text{Capital Charge}
\]

or

\[
EVA = NOPAT - c\% \times C
\]

Figure 1 is a simplified example of how EVA is calculated.

*Figure 1 - EVA EXAMPLE*
Operating Income 300
Employed Capital 1,200
Return on Capital 15%
Cost of Capital 10%
Tax Rate 40%

EVA = (15% - 10%) * 1,200 = 60
EVA = (300 * (1-.4) - (10% * 1,200) = 60

The concept is simple, yet important. As stated by John Rutledge in Forbes, "The value of economic profit is to remind managers that they have not really made a profit until they have earned an economic return on the equity capital they use.... the good news is you don't need an expensive consultant to measure your economic profits. Just ask your controller to add another line to your P&L" (Rutledge,148). The simplicity is further emphasized by Daniel J. McConville in Industry Week when he says the following: "Anyone with fourth-grade arithmetic skills can do it; no calculator is needed, let alone a computer" (McConville,55).

If EVA is such a simple and obvious "measuring stick" for financial performance, why is it not catching on? A simple answer can be found using an old cliche, "if it ain't broke, don't fix it". In other words, for years the commonly-accepted performance measures such as Earnings Per Share (EPS), Return on Equity (ROE), Return on Investment (ROI), Return on Assets, (ROA), Return on Net Assets (RONA), and Return on Invested Capital (ROIC) appeared to detail all the relevant financial information. However, it now appears that they do not necessarily tell the "whole" story. Among the various disadvantages of each individual calculation lies the fundamental problem with all of these approaches: they do not encourage growth!

Following is a brief analysis of several conventional methods of financial performance measurement and some potential problems that each employ. EPS is often distorted by generally accepted accounting principles (GAAP) that can create inventory build-ups and other intangible assets, as well as huge accrual versus cash differences on both the balance sheet and the income statement. EPS can also be distorted by issuing additional share of stock or by repurchasing shares from the market, both of which are not performance related. Return on Equity can be manipulated by a change in the capital structure or an organization, such as an equity offering.
which is not impacted whatsoever by financial performance. Return on Investment's main flaw is that it encourages the rejection of a potentially good investment that promises a positive rate of return, but lower than the required rate for the capital project that is usually dictated by the firm's existing portfolio of projects. Both RONA and ROIC discourage investments in new projects because such an investment would increase the net assets employed/invested and the capital base upon which the formulas are driven. EVA on the other hand is not influenced by various accounting disciplines or capital structures. It is based on a cash flow system that offers little or no flexibility.

PRESSURES TO BUILD VALUE

Global markets and world class competition have brought with them a "results, not excuses" environment for which businesses must now operate if they desire success. The expectations of world class performance are set by the shareholders of the companies who demand outstanding results and increased value for their investment. As Dana Mead, Tenneco Inc.'s Chairman of the Board and Chief Executive Officer, stated in his opening message at Tenneco's Annual Leadership Conference, "Companies cannot afford to be just the best in the industry, or even best in the United State. To be successful, we have to compete with the best in the world" (Tenneco). Managers who use EVA have greatly increased the value of their companies and investors who know about EVA, and which companies are employing it, have grown rich.

Value is increased simply by earning a greater return than creditors and shareholders require; then pay the cost of that capital; and shareholders pocket the difference. The fundamental problem with published financial statement information is that the "real" cost of capital is not included. Only the cost of borrowed capital finds its way to the income statement as interest expense, while, the cost of equity capital (often the most expensive of the two) is omitted. This presents the underlying inconsistency in a value-added approach. Under this scenario, a company can have rather strong earnings, but fail to increase in value. This is possible because the high cost of equity capital is not reflected in the earnings. And as Shawn Tully establishes in her article The Real Key to Creating Wealth, "Incredibly, most corporate groups, divisions, and departments have
not idea how much capital they tie up or what it costs...and until they figure all this out, they can't
know whether they're covering all their costs and adding value to a company" (Tully). This attitude
is also highlighted by James Meenan, CFO at AT&T, when he states that "Good is no longer
positive operating earnings. It's only when you beat the cost of capital" (Tully).

One of the greatest attributes of EVA is its correlation with stock prices. Companies that
adopt the concept often become super performers. Currently there are two approaches used to
determine the value of a company; one utilizes an accounting framework, the other an economic
framework. Under the accounting framework market value is established as a by-product of
earnings per share and the Price/Earnings ratio (EPS * P/E = P). The economic framework
calculates the share price by discounting the expected cash flows at a rate reflecting the company's
risk factors. A company's market value is equal to the present value of its expected EVA. This is
identical to the net present value of its projected cash flows. The stock prices track EVA much
more closely than they track other measures such as EPS or ROE.

There are seven EVA companies for which data have been analyzed since they adopted the
EVA concept and it is very apparent that the EVA companies have outperformed their competitors,
as well as the S&P since their adoption. The companies are AT&T, Briggs & Stratton, Coca-Cola,
CSX, Emerson Electronic, Equifax, and Quaker Oats. See Exhibit 1 for an illustration of their
stock performance compared to the S&P for a two year period following the adoption of EVA.
According to the Stern Stewart Performance 1000, an annual ranking of prominent companies by
the market value they have added to their shareholders' investment, there is persuasive evidence
that EVA best accounts for changes in share value over time, far more so than earnings, earnings
per share, earnings growth, return on equity, dividends, and even cash flow. "EVA shows
investors what they really care about - the net cash return on their capital - rather than some other
type of performance viewed through the often distorting lens of accounting rules. For this reason,
investors understandably favor companies committed to increasing EVA." says Shawn Tully
(Tully).
PERFORMANCE OPPORTUNITIES

Another positive aspect of EVA is that it allows the senior management of a company to create their own opportunities. AT&T, for example, only collected and reported financial statement information for about a half-dozen companies before EVA, while there were approximately forty separate and distinct operating units. The entire cost of capital was consolidated at a group level which made it difficult to measure an operating units' economic profit. After undertaking the painful task of historically calculating EVA for each of the operating units, it was discovered that many of them had been operating under negative EVAs for years. Having taken advantage of EVAs' finger-pointing abilities, all AT&T business units with negative EVA have been told to improve their measurement or face the prospect of new management.

Briggs & Stratton has a similar tale. Until EVA there were no profit centers below the corporate level. Return on capital was 7.7% with a total cost of capital of 12%, and like most companies the divisional EVA was unknown. Since EVA, Briggs & Stratton has been able to identify the below-par performers and has subsequently chosen to outsource their production to other companies. This strategy enabled them to inject more capital into the business units that were performing at acceptable levels. The stock market is applauding Briggs' efforts: in 1990 the stock price was $20/share, now it nears the $80/share mark.

When CSX, a railroad giant, lost $70 million in 1988 CEO John Snow issued an ultimatum, "Get that EVA up to break-even by 1993 or be sold." (Tully). The company now operates on less capital, has 30% fewer locomotives, and the stock has risen from $28/share to $75/share. See Figure 6 for a brief analysis of what EVA has done for the stock prices of Briggs & Stratton, Coca-Cola, and CSX.

Equifax also uses EVA fundamentals to create long-term shareholder value. The first step taken by Equifax changed the way in which it financed the purchase of operating assets. Equifax's goal was to become a more leveraged company which in turn would lower its cost of capital. On December 15, 1992, Equifax repurchased 6.6 million share of its own stock. The goal represented here was to utilize a degree of financial leverage that was dependent upon the cash flows of the
company rather than a pre-determined debt-to-capital ratio. This has helped Equifax to record a 30% increase in the market price of the stock in 1992 alone. Not to mention that the stronger balance sheet will increase their ability to negotiate more favorable interest rates on future long-term borrowings.

Beating the cost of capital is also a primary concern of Quaker Oats Company's CEO William Smithburgh. Inventories have been reduced to $9 million from $15 million and 33% of their warehouses were eliminated. Until adopting a version of EVA, operating units were not responsible for the cost of their inventories. "Says Steven Brunner, a plant manager for Quaker, "I used to treat inventories like they were free," quotes Shawn Tully (Tully). Because of cyclical inventory needs, corporate headquarters encouraged plant managers to keep excessive stocks of inventory and vowed to absorb the cost. The Quaker Oats Company now operates under a management system that has created opportunities to control earnings, operating income, working capital turnover, and net cash from operations, while allowing the invested capital to decrease and average shareholder value to increase. But maybe the most important result from a shareholder perspective is that their stock is up 30%.

**PAYBACK ANALYSIS**

Every company that employs EVA contends that the benefits outweigh the required investment of implementing the program. The payback involves not only higher returns on invested dollars, but also improved systems management and less waste of valuable company resources. There has been too little concern about managing the assets on the balance sheet. Just a shift in the focus of accountability from the income statement to the balance sheet can produce immediate results in the financial performance of a company. An old cliche comes to mind: "If you take care of the pennies and nickels, the dollars will take care of themselves."

**DECISION ALTERNATIVES**

The decision to use EVA is typically driven by market forces and poor past performance. Companies that delay implementation will be playing catch-up to those who are already using it. Although EVA is considered by many to be the single most important measure that captures market
valuation and company performance, it is neither the quick-fix, nor is it automatic. The concept provides only a framework for which corporate decisions can be made. It is designed to supplement, not replace, other performance management instruments.

Companies have found that implementing EVA has greatly improved their business operations. Through a program that increases management responsibility for the long-term growth of the corporation, both the overall operating performance and the market value of the company increase. This correlation however does not come without potential trade-offs in the business cycle and the decision-making process.

**SUMMARY AND CONCLUSION**

With the advent of the North American Free Trade Agreement (NAFTA) and other global free-trade documents, it has become essential for United States companies to prepare for worldwide competition. Improved financial performance begins with improved products and processes, but ends in the hands of shareholders who demand increased value of the company. Increased value comes in two ways: increased market value of the stock and increased dividend pay-out rates. To compete for global investors' money companies must prove that they can produce both.

The underlying problem is that conventional financial performance measuring techniques can indicate strong performance; however, in many cases this has not translated into incremental value to the company or to the shareholder. EVA takes one additional step beyond what conventional measures do in measuring financial performance. EVA requires a company to recapture not only operating expenses and the cost of borrowed debt (interest expense), but also the cost of equity. Put another way, under the EVA framework, there is no profit to report until a company earns the entire cost of capital that it has employed.

The need for a new measurement technique is emphasized by the awareness of a growing global marketplace and the need for the American business community to adapt to principles that provide opportunities to become a successful competitor on a world-wide basis. The limit of this project is that all research has been done using only secondary data.
EVA utilizes more of a "cash" approach to measuring how well a company has performed. This eliminates inaccurate operating results that can be presented under the more traditional accounting methods. EVA has proven to be a superior tool. When capital returns are unacceptable and cash flow is unsatisfactory, EVA will identify the cause.

The process should begin with educating both the senior management team and the finance staff who will then begin to re-engineer the financial management system. Usually, executive incentive plans are strengthened and based upon EVA. Finally, the concept is communicated to managers and investors to insure that everyone is involved. This is the only way that EVA can work effectively.

Companies that use EVA contend that the payback is worth the cost of switching to EVA, especially with intangible benefits such as increased shareholder value. EVA, however, is not the easy win. Its implementation requires much work and thought. It also does not come without trade-offs in other areas, but if it is used correctly it will provide opportunities to increase the financial performance of any company.

In conclusion, the concept of EVA is growing rapidly. Senior management teams who are serious about establishing a market share globally and growing their businesses are taking advantage of the EVA framework. As the market place truly shifts from a domestic domain to a worldwide concern, the importance of sustaining true economic profits will be magnified. Corporations, just like people, must learn to crawl before they learn to walk. Companies that use EVA are beginning to run.
REFERENCES


Stewart, Stern, Various documentation was used from Stern Stewart's EVA training materials.


Tenneco, Various information was used from EVA training course material. The material was collected from Stern Stewart and includes annual report information from Coca-Cola, Quaker Oats, Briggs & Stratton, CSX, Equifax, and others.