JOURNAL OF SMALL BUSINESS STRATEGY

ECONOMIC VALUE ADDED AND SMALL BUSINESSES

Charles P. Baril
S. Brooks Marshall
James Madison University

Robert F. Sartelle
Virginia Corporation Commission

ABSTRACT

Economic Value Added (EVA), a tool for creating wealth, is a leading idea in corporate finance today. Highly regarded companies like Coca-Cola and CSX have seen their market value soar since adopting EVA. The concept is straightforward; value is created when earnings exceed the cost of invested capital. Thus, EVA is rapidly gaining acceptance among large, publicly-traded corporations. However, EVA can be applied effectively to create value in small, privately-held firms, too. This article illustrates EVA's application in small, privately-held firms, examines EVA's strengths and weaknesses, discusses ways to overcome those weaknesses, and describes specific operating, investing and financing actions small business managers can take to create wealth.

INTRODUCTION

Today, small businesses operate in an increasingly competitive environment. The combination of rising global competition, saturated traditional metropolitan markets, and advances in computer technology has prompted many large corporations to seek growth through expansion into smaller, less developed communities. Walmart's incredible success story is a case in point. Over the past thirty years, in one small town after another, the opening of a Walmart store has signaled the death knell for dozens of locally-run businesses.

The secret to Walmart's success has been its unrelenting drive to create value, for its customers and itself, in the form of a state-of-the-art purchasing, distribution, and merchandising system which allows it to provide swift, convenient service and low prices. For small companies facing the challenge of powerful, new competitors entering their markets, the normal "business as usual" response will not suffice. Rather, to survive these companies must operate more effectively and efficiently. In short, they must act to create value.

To create value, a firm, division, or project must earn more than its capital charge. This fundamental financial concept is the cornerstone of free enterprise. Yet, managers often violate this premise, taking actions that destroy rather than create wealth. A primary reason for management's value-destroying behavior is that the traditional earnings-based measure of

performance does not include the cost of equity capital. Consequently, managers who focus on accounting earnings frequently understate or ignore the cost of equity capital in their decisions.

Since the early 1980's, this key to creating wealth, earning more than capital costs, has resurfaced as a driver of management decisions, particularly among large, publicly-traded companies. While a number of business consulting firms have developed their own systems incorporating this value-creating principle, Stern, Stewart & Co. popularized the concept calling it Economic Value Added (EVA). Focused on enhancing the value of a firm, EVA-based systems are useful for setting goals, making operating, capital investing and financing decisions, assessing firm and sub-unit performance, designing incentive compensation plans, and communicating with business investors and creditors. Although the best known adopters are large, publicly-traded companies including Coca-Cola, AT&T, CSX, Tenneco, and Briggs-Stratton, the EVA concept is equally applicable to small, closely-held businesses.

This article illustrates EVA's fundamental components and its application for small, privately-held companies. We describe specific operating, investing and financing actions promoted by EVA's discipline which create firm wealth. In addition, we discuss the potential limitations of adopting EVA and suggest ways to overcome these weaknesses.

THE COMPONENTS OF ECONOMIC VALUE ADDED

Economic Value Added (EVA) measures a company's, division's, or project's incremental change in value of its base investment over time. Specifically, EVA is the unit's after-tax operating profit minus its capital charges (the cost of its debt and equity capital.) The EVA formula for a single period is presented below.

EVA = NOPAT - (Cost of Capital x Total Capital)
where NOPAT = net operating profit after taxes,
Cost of Capital = weighted average cost of debt and equity financing, and
Total Capital = total cash investment in the firm, division, or project.

To illustrate, assume that Value Add, Inc. (Value Add hereafter) has total capital invested of $1 million, composed of $400,000 debt outstanding and $600,000 invested by owners. Also assume that the weighted-average cost of this invested capital is 12.2%, and Value Add's net operating profit after taxes, NOPAT, is $122,000. Value Add's EVA calculation is shown below:

EVA = NOPAT - (Cost of Capital x Total Capital)
= $122,000 - (12.2% x $1,000,000)
= $122,000 - $122,000
= $0.

Because Value Add's earnings equal its capital charges, an EVA of $0 results. With a return on investment just covering its cost of capital, Value Add's managers created no change in value or wealth for the period.

NOPAT, EVA's measure of earnings, differs from traditional accounting measures due to EVA's focus on value creation. To calculate NOPAT, two fundamental adjustments are made to net income. First, all expenditures generating benefits for more than one period are capitalized and amortized as expenses over the multiple periods benefited. Second, interest costs are removed from the income statement and reclassified as a part of the capital charge.

Figure 1
Value Add, Inc.

Income Statement			**EVA**	
Sales	$1,200,000		Sales	$1,200,000
Costs and Expenses:			Costs and Expenses:	
Cost of goods sold	700,000		Cost of goods sold	700,000
Selling & Administration	360,000	EVA considers R & D an investment rather than an expense of the period.	Selling & Administration	360,000
R & D	50,000→		→**R & D**	0
Interest expense	40,000→	EVA considers interest expense (net of taxes) a capital charge rather than a component of operating performance.	Taxes	18,000
	1,150,000			1,078,000
Income before taxes	50,000		**NOPAT**	122,000
Taxes on Income (20%)	10,000		**Capital Charges:**	
Net Income	$ 40,000		→**Interest expense** (net of $8,000 tax savings)	32,000
			Equity charge	90,000
				122,000
			EVA	$ 00

Figure 1 presents Value Add's NOPAT and EVA measures compared to its income statement. As discussed, two adjustments are made to Value Add's net income to determine NOPAT, EVA's measure of operating performance. First, consistent with management's intent research and development (R&D) expenditures are considered an investment benefiting future

periods. Thus, in the period of the R&D cash outlay, Value Add's NOPAT is unaffected by the $50,000 expenditure. Instead, for NOPAT measurement purposes, Value Add will amortize R&D expenditures over the periods benefited, rather than expensing them in the current period as required under generally accepted accounting principles. Similarly, Value Add would capitalize and amortize marketing, employee hiring and employee training expenditures that have a recognizable future benefit over the periods benefited for NOPAT measurement purposes.

Value Add's second adjustment to traditional net income reclassifies interest expense, net of $8,000 in tax savings. EVA excludes all financing charges from its measure of operating performance, NOPAT. Instead, the cost of both debt and owners' equity are captured in EVA's capital charges component. By separating operating results from financing costs, Value Add's managers can better identify and remedy problems in new capital projects and on-going operations. In summary, to measure NOPAT and provide an improved operating performance measure, Value Add treats the period's R&D expenditures as an investment and classifies interest expense as a capital charge.

While NOPAT reflects the results of operations, capital charges reflect the cost of financing those operations. The capital charges component of EVA explicitly incorporates the cost of all capital employed, both debt and equity. Value Add's capital charges for the period total $122,000, with borrowed capital costing $32,000 and equity capital costing $90,000. With a $1,000,000 total capital investment, $400,000 in outstanding debt and $600,000 in equity, Value Add's cost of capital averages 12.2% ($122,000/$1,000,000).

Value Add's cost of debt financing is its interest expense adjusted to reflect its tax deductibility. The income statement for Value Add shows $40,000 in interest expense, indicating an average before-tax cost of 10% based on $400,000 in borrowed capital. Value Add's 20% marginal tax rate creates a tax savings of $8,000, and results in an after-tax cost of borrowing of $32,000.

Value Add's equity charge is the return its owners could be getting if they put their money in an alternative investment of similar risk. Over the lifetime of the company, Value Add's owners have invested cash totaling $600,000. Value Add's owners demand a 15% return on their invested capital. Therefore, Value Add's capital charge for equity totals $90,000 (15% x $600,000).

Frequently, the rate of return required by owners is computed by adding a risk premium to the cost of debt. Because equity capital carries greater risk than does debt, the owners' required return is somewhat higher than the return lenders demand. Value Add's 15% equity cost represents a 5% risk premium added to its 10% cost of borrowing.

Much of the capital invested by owners is captured in conventional accounting's valuation of net assets, including the cost of land, plant and equipment, and working capital. However, Value Add's R&D expenditure points to another distinguishing feature of EVA. Consistent with management intentions, R&D is treated as a capital investment benefiting future periods. However, by classifying R&D cash outlays as an equity capital investment,

Value Add recognizes an additional equity charge, the cost of the $50,000 incremental cash investment by owners.

Thus, to determine the equity capital tied up in Value Add's operations, start with the cost of its land, plant and equipment, and working capital reported on its balance sheet. Then, add the $50,000 cash invested in the R&D project. Value Add's total capital investment of $1,000,000 results. Of this amount, $400,000 is provided by lenders, leaving $600,000 provided by owners.

The components of EVA have the advantage of resembling the conventional earnings measure. However, EVA and other value creation tools modify these conventional measures to better capture the economic substance of the firm's operations. In addition, EVA separates a company into three functional categories: operating, investing, and financing activities. This categorization allows the drivers of value creation to be more easily identified. In the next section we describe specific wealth-creating strategies promoted by EVA's discipline.

CREATING VALUE WITH EVA

According to EVA, there are but four ways to create economic value. The first is to improve the company's operating performance. The second is to reduce the cost of capital. The third is to eliminate investments in projects earning less than their capital charges. The last is to invest in future projects that are projected to earn more than their capital charges. EVA's primary virtue is that it clearly shows and measures how each strategy creates value. While the small business owner may find these suggested actions consistent with what he or she is already doing, some may provide insights into value-creating opportunities.

Increasing Operating Profits (NOPAT)

The first way to create value is the most obvious. Companies can create value simply by increasing operating profits, while adding no new capital. For example, a manufacturing firm may find a way to operate an existing machine more efficiently by performing routine maintenance less frequently or during idle time. Or, a service firm may find that lower-cost employees provided with additional training can perform certain tasks assigned previously to more senior, higher-cost employees.

Increasing operating efficiencies is a strategy familiar to most small businesses. Traditional financial systems support this type of value-creating activity. However, traditional systems that focus on enhancing periodic earnings can destroy a firm's long-term value. Examples include slashing advertising or R&D expenditures to meet quarterly profit goals. EVA offers the advantage of focusing management attention on long-term value creation through an improved measure of operating performance that is more closely aligned with the economic substance of a firm's operating decisions.

Reducing The Cost Of Capital

Value is created when a firm's capital charges decrease. The most effective means of cutting capital charges is to reduce the cost of capital. The cost of capital is composed of two parts, the after-tax cost of debt and the rate of return owners require on their investment. Management approaches to reducing a firm's cost of capital can include shifting from equity to debt financing, shrinking the cost of debt financing or slashing the cost of equity financing.

Most small businesses are financed initially with equity capital which is cash invested by owners. Frequently, lenders are reluctant to extend credit to small, start-up companies because they are viewed as poor credit risks. However, an extended period of successful operations can "open doors" for a small business, providing access to debt financing.

Once debt financing becomes available, managers should consider using it in lieu of equity capital. Value can be created through the use of additional debt because equity is a more costly form of capital. From an investor's standpoint equity capital is a scarcer resource and it lacks a regular repayment feature. From the firm's perspective equity charges, unlike interest payments, are not deductible for tax purposes.

A second means of reducing capital charges is to retire higher-cost debt and re-issue new debt at a lower cost. For example, a small business manager may be able to negotiate lower interest rates with existing lenders by demonstrating a reduction in risk Once again financial statements documenting successful performance over an extended period can facilitate the bargaining effort.

In negotiating reduced interest rates, small businesses need to show lenders how expenditures for R&D or employee training can be viewed as investments benefiting future periods. While conventional earnings measures expense these items as incurred, many financiers now think such discretionary expenditures enhance rather than diminish the firm's future operations and its potential for servicing its loans. Keith Wells, Vice President of First Union Mortgage in Richmond, Virginia, states that "In evaluating loan proposals, we ask if some of the items expensed actually provide future, long-term benefits. If so, we capitalize those expenditures." EVA performance measures aid a lender's efforts to capture the economic substance of a firm's operations by isolating expenditures that benefit future operations. EVA's popularity can help the manager market this view of operating performance.

In addition, if lenders perceive the company as being less risky, so too should owners. As a result, owners can lower their required rate of return, thereby trimming equity charges. A short-hand method used by many small firms to determine their cost of equity is to add approximately 5% to their cost of debt (Brigham, 1995). With this method, reductions in the cost of debt lead to similar reductions in the measured cost of equity capital.

Reducing Investments In Projects Earning Less Than Their Capital Charges

Firms with substantial equity financing seldom give adequate attention to minimizing uneconomic working capital and capital assets (Birchard, 1994). By focusing management's attention on the value produced by individual capital projects, product lines or business segments, an EVA system highlights the value-creating possibilities of eliminating unproductive capital investments.

CSX, the large railroad company, provides a well-known example of creating value through a strategy of eliminating investments with negative EVA's. With the discipline provided by an EVA system, CSX managers determined that three locomotives could do the job where it once used four on certain routes (Tully, 1993). While slower, they still arrived in time for unloading. As a result CSX was able to reduce its locomotive fleet by one-third, eliminating $70 million in under-productive invested capital. In addition, the decrease in locomotives generated a 25% savings in fuel costs. Thus, CSX decreased capital charges by reducing total capital and enhanced the company's cash operating earnings.

Another class of assets that tends to absorb the invested capital of small businesses is working capital. Managers who can sustain their firm's operating performance while decreasing cash, short-term receivables, or inventory will create value for their company by eliminating unnecessary debt and equity financing and their capital charges.

For instance, the establishment of an EVA system enabled management at Quaker Oats to recognize the substantial capital costs associated with carrying sizable inventories (Tully, 1993). By eliminating quarter-end sales promotions, they smoothed sales and reduced their need for huge stocks of inventory. Further, by reducing inventories, the company could close five of 15 warehouses, saving both capital costs and salaries.

Traditional performance measures frequently fail to show the impact of holding unproductive assets. Based on conventional earnings measures, a business segment with operating profits in excess of its interest costs is viewed as "profitable." However, if the business segment's equity charges are not also covered by its operating profits, the EVA system will identify the business segment as a value destroyer. EVA-focused companies will sell or liquidate this unprofitable unit, and either re-deploy the cash proceeds in more profitable ventures or return the capital to the firm's owners through higher dividends or stock buybacks. Likewise, small business owners can examine carefully the contribution of each asset group or segment of their businesses to determine whether the capital invested is being used effectively.

Increasing Capital Investment In Projects Earning More Than Their Capital Charges

An EVA system encourages managers to invest in all value-creating projects, those for which operating profits are projected to exceed capital charges. In contrast to the strategies previously discussed, the capital investment strategy focuses on the effective management of growth rather than of existing operations. Not only does it provide a structure for evaluating

the ongoing effectiveness of capital investments, an EVA system measures effectiveness in a manner consistent with the analysis used for accepting or rejecting proposed projects.

For most firms capital investments at the proposal stage are subjected to structured, discounted cash flow analyses. However, once accepted, a project is typically monitored, if monitored at all, using traditional earnings-based measures such as return-on-investment. EVA attempts to correct this inconsistency between the evaluation criterion and the monitoring measure in two ways. First, EVA considers all expenditures intended to benefit future periods as investments. Second, EVA performance measures remind small business managers that the investments of owners in any project require a return.

John Sherwood, Partner at Warren, Whitney and Sherwood, a contract management firm in Richmond, Virginia, agrees that small businesses need to incorporate a return on the owners' investments into their investment and divestment decisions. "Small businesses are not contractually obligated to compensate owners for the use of their money. As a result, equity costs are often ignored in business decisions. Any system which considers such costs is a step forward."

Mechanisms To Promote Value Creation

These four strategies for creating value provide a framework for thinking about the whole firm's performance and identifying areas for improvement. However, as most small business owners will attest, conceptualizing value creation is only part of a manager's task. Motivating its implementation is the other. One mechanism available to companies adopting EVA systems is a restructuring of their management compensation packages to reflect the importance of creating value. For small firm owners seeking to transfer managerial responsibilities to non-owners, value-based compensation arrangements can be an integral part of the solution.

The EVA system includes an executive compensation plan that rewards managers for EVA wealth creation, thereby simulating the risks and rewards of ownership (Stewart, 1991: p.249). Incentive plans promoting the creation of value make the ultimate payout contingent on continued, long-term success. These plans place golden handcuffs on the best performers by smoothing the annual payout for cyclical ups-and-downs. And, they provide for the potential of both unlimited bonuses and unlimited losses.

Stern, Stewart & Co. suggest another mechanism for promoting entrepreneurial, value-creating, behavior among managers, increased debt levels. Sometimes sustained prosperity, a temporary lull in competition, or stable markets can produce a sense of complacency, resulting in unfocused management and "flabby" business operations. When economic conditions worsen, these unprepared firms lose market share, are bought out, or even fail. To avoid this fate, Stern, Stewart & Co. recommend a regular cycle of higher debt levels to put companies through the equivalent of boot camp. The discipline of servicing debt forces management to continually squeeze operating efficiencies out of the business and shed unproductive assets, focusing its attention on the remaining core businesses.

Thus far we have presented the components of EVA and four strategies for creating value encouraged by an EVA-based system. Because EVA was not widely publicized until 1991, much of what we know has been provided by the consultants selling the system (Peterson & Peterson, 1996). More valuable insights can be gained from the experiences of firms adopting EVA systems in the early 1990's. Next. we discuss some of the limitations experienced by firms implementing EVA systems, consider how these limitations apply to small businesses, and suggest some remedies small business managers may find effective.

EVA LIMITATIONS AND REMEDIES

EVA's popularity is based in large part on its alleged (Boston Consulting Group, Inc., 1996) relationship with market valuation. "Investors who know about EVA, and know which companies are employing it, have grown rich" (Tully, 1993). However, while "the theory is compelling, the evidence is abysmal" (Lowenstein, 1997). Yet, market value relationships should not drive the adoption decisions of closely-held, small businesses. Small businesses should emphasize value creation, not valuation by an external constituency.

In deciding whether to adopt an EVA system, small business owners should examine the experiences of publicly-traded companies and consider the applicability of these experiences to their own firms. Further, these owners should reflect on additional limitations which may be encountered by small-firm adopters and possible remedies. Then, using their common sense small business owners must weigh the potential benefits and costs. Finally, if convinced that adopting an EVA system will increase the value of their companies, they must carefully develop plans for its implementation.

For the implementation of an EVA system to be successful, experience has shown that management must embrace the concept. As with any new performance measurement system, managers are likely to meet the adoption of an EVA-based system with apprehension. Despite all of the arguments in favor of performance metrics that reward capital productivity, many managers will continue to prefer retaining traditional, earnings-based measures. An EVA system's implementation is seriously handicapped if management is not deeply committed to enhancing value and if the existing corporate culture is too rigid to accept a program that aims to affect how people behave (Stern, 1994).

To get managers to buy into an EVA system, they must understand the system and its performance measures. Ochsner (1995) advises adopting companies to implement an extensive education program for managers. Of course, management education programs are costly. But, Stewart (1995) warns that scrimping on training is one of the main ways business people err in applying EVA.

One avenue for controlling training costs and facilitating understanding is to simplify the system, reducing complexity. Facing substantial write-offs, Valmont Industries, Inc., a small, mid-western manufacturer of metal structures, needed to get a firm grip on managing existing capital. In response, Valmont's management adopted a bare-bones version of EVA. They chose a simple performance measure, net operating profit minus a ten percent charge for invested capital. Valmont found that the nature of its financial position and operations made

adjustments for intangible assets, off-balance sheet financing and inflation unnecessary. The impact of these adjustments on Valmont's performance measure was minimal (Birchard, 1996).

Many small businesses can alleviate the dual problems of management apprehension and added cost by adopting such a simplified system of measurement which retains EVA's value-creating strengths. By employing a measure of operating performance available from its conventional income statement, Valmont minimized training costs and spared itself the cost of creating two sets of books. However, before adopting a similarly simple system it is imperative that small businesses ensure that the simplifications do not sacrifice important information. Ultimately, the system adopted must promote managerial attention to creating value.

Additionally, a simple measure of operating performance like Valmont's helps focus management on the costs of using equity capital. This is paramount when working to create value. And, to measure its charges for equity capital Valmont applied a straightforward, ten percent rate. While publicly-traded firms may face difficulties in estimating their cost of capital (Peterson & Peterson, 1996), small business owners need only answer the question, " what expected return do you require on your investment?" If consensus is too hard to reach, Brigham (1995) recommends adding approximately 5% to the firm's cost of debt. Small businesses can start there and revise if deemed appropriate. The point is not to fine-tune the estimate, but to ensure that the costs associated with investments by owners are incorporated into the decisions of the business.

Beyond the hurdles of added implementation costs for new systems and gaining management acceptance, small businesses may find it unrealistic to adopt Stern and Stewart's suggestion to increase debt financing. Many small businesses have limited sources for added borrowing, making increased borrowing difficult to obtain. Compounding this problem, small businesses often lack diversity as to products and customer base. Higher debt levels magnify this operating risk. With greater variation in cash flows, some of these businesses may be subjected to unacceptable levels of risk (Brigham, 1995).

Moreover, increased debt levels can diminish a firm's financial flexibility. The ability to respond quickly to investment opportunities, a competitive advantage of many small businesses, depends on having ready access to additional funds. Rising debt levels magnify the difficulties of securing borrowed capital.

Nevertheless, small firms can overcome these constraints. Instead of employing high debt levels to align the interests of managers with owners, they can introduce effective incentive compensation arrangements. Or, consistent with the limited scope of their firms' operations, small business owners can control management behavior through effective oversight.

Finally, for the small business introducing an EVA-based system, some of the problems of conventional accounting systems remain. Economic profit is still subject to manipulation. And, periodic performance measures may encourage management to reject promising projects

due to negative, short-term impacts on EVA (Boston Consulting Group, 1996; Birchard, 1996). Once again active participation by owners can mitigate these problems for many small businesses.

CONCLUSION

Touted as today's hottest financial idea, EVA communicates in a straightforward manner the message that most firms can become more competitive and valuable by shifting management's perspective from profit enhancement to value creation. EVA systems are grounded in the fundamental principle that value is created when operating earnings exceed the cost of financing those operations. Accordingly, EVA's performance measures take into account the cost of the money owners have provided, as well as the cost of borrowed capital. With no contractually specified cash payments, many small business managers resist the idea that real costs are incurred when they employ equity capital. By restructuring management compensation plans, EVA systems encourage managers to consider the total cost of their operations' capital when making operating, investing and financing decisions. EVA systems direct managers to create value.

However, EVA is no panacea. While the fundamental concepts are broadly accepted, successful EVA system implementations have been limited generally to publicly-traded companies with substantial resources. In addition, some of the problems of conventional systems remain. Bearing in mind the competitive importance of fostering a concern for capital efficiency among managers, small businesses should examine the experiences of EVA adopters, and tailor any implementation of value-based measurement systems to their unique business settings.

REFERENCES

Birchard, B. (1994). Mastering the new metrics. *CFO: The Magazine for Senior Financial Executives, 10* (10), 30-38.

Birchard, B. (1996). How Valmont Industries implemented EVA. *CFO: The Magazine for Senior Financial Executives, 12* (3), 34-40.

Boston Consulting Group, Inc. (1996, October). *Shareholder Value Management.*

Brigham, E. (1995). *Fundamentals of Financial Management*, 7th Edition. Fort Worth, TX: Dryden Press.

Lowenstein, R. (1997, February 13). Testing the latest economic elixir. *The Wall Street Journal,* C1.

Ochsner, R. C. (1995, March/April). Welcome to the new world of economic value added. *Compensation & Benefits Review*, 30-32.

Peterson, P. P. & Peterson, D. R. (1996). *Company Performance and Measures of Value Added.* Charlottesville, VA: Research Foundation of the Institute of Chartered Financial Analysts.

Stern, J. (1994, March). No incentive for bad management. *Corporate Finance*, 43-44.

Stewart, G.B., III (1991). *The Quest for Value.* Harper Collins Publishers, Inc.

Stewart, G.B., III (1995). EVA works - But not if you make these common mistakes. *Fortune*, 117-118.

Tully, S.(1993, September 20). The real key to creating wealth. *Fortune*, 38-50.