

ECONOMIC VALUE ADDED?

EPPs May Be
No Better at
Improving
Operating
Performance than
Traditional Plans

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Most executive compensation plans include features to induce managers to make efficient investment decisions. These include earnings-based bonuses and stock ownership (including employee stock ownership plans, restricted stock, phantom stock, and stock options). What differentiates an economic profit plan (EPP) from its competitors is that it rewards managers for generating economic profits in excess of a charge for the amount of invested capital.

What are economic profits? Let's consider an example. Suppose you invest \$1,000,000 in a new machine with a required capital cost of 10 percent. If this project realizes only a

10 percent return on invested capital, it earns back its cost of capital each period but fails to create value for shareholders. The internal rate of return equals its cost of capital, implying the project has a zero net present value. A manager should be indifferent about whether to take the project since it does not increase shareholder wealth.

Suppose however the machine generates a return on invested capital of 15 percent. "Economic" profits are computed by deducting "economic" depreciation from operating cash flows. It does not matter what accountants report as depreciation for reporting purposes;

we require an estimate of the "true" economic cost of operating the machine. The calculation is made by subtracting the opportunity cost of using the machine in its current capacity rather than elsewhere.

Since the opportunity cost is \$100,000 ($\$1,000,000 \times 10$ percent), economic profits are \$50,000. The project clearly earns more than its cost of capital implying it has a positive net present value. It can be shown that the project's net present value equals the discounted value of all future economic profits. Hence, there is a direct link between economic profits and net present value.

Benefits of EPPs

Plans compensating managers on the basis of economic profits are increasingly popular and are used by such blue-chip companies as Boise Cascade Corp., the Coca-Cola

Company, Eli Lilly & Co., and Monsanto. The management-consulting firm of Stern Stewart and Co. is the leading advocate of the economic profit approach, which it markets under the name of Economic Value Added (EVA™). Other firms such as the Boston Consulting Group and KPMG offer similar plans.

EPPs attempt to compensate for deficiencies in other incentive plans. Stock ownership plans motivate managers to improve share prices, but stock price changes reflect changing market conditions and only partially the efforts of managers. Earnings-based compensation schemes are based directly on accounting numbers, which can be evaluated at the divisional level. The disadvantage is that earnings plans tend to induce a short-term orientation and are based on accounting numbers subject to manipulation and fail to adjust for operating risk. Proponents of EPPs argue their plans control for many of these deficiencies because they focus on cash flows rather than accounting earnings, yet appropriately adjust for capital costs.

If EPPs provide managers with incentives to make better investment decisions, firms adopting such plans should experience improved operating performance. Stern Stewart and Co. claims that “more than 300 client companies worldwide now use EVA, and evidence shows most of them significantly outperform other companies in their industries.” The firm argues there are three ways for EPP firms to increase value:

“Increase the returns from assets already in the business by running the income statement more efficiently without investing new capital; invest additional capital and aggressively build the business so long as expected returns on new investments exceed the cost of capital; and release capital from existing operations, both by selling assets that are worth more to others and by increasing the efficiency of capital by such things as turning working capital faster and speeding up cycle times.”¹

In essence, an appropriately designed EPP should provide incentives for improving investment performance by linking executive compensation to value creation (economic profits).

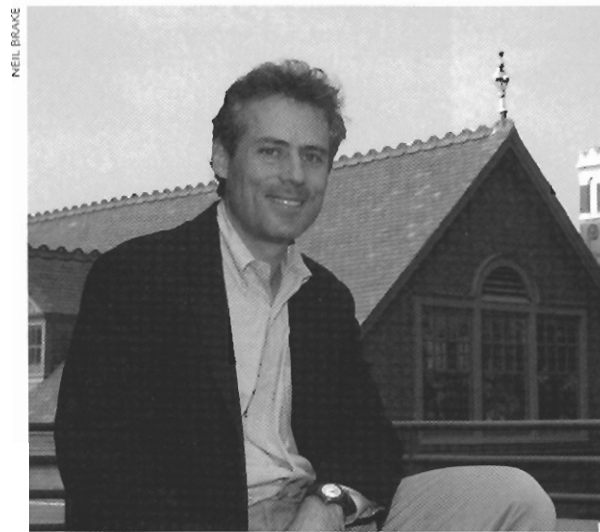
Motivation for the study

The question Chris Hogan (former Owen assistant professor, now at Southern Methodist University) and I wanted to address is whether these plans provide better incentives than those in traditional plans. My interest in this topic was sparked by a Financial Markets Research Center conference held at Owen in honor of Professor Marty Weingartner. The conference featured a lively panel discussion on the efficacy of EPP plans. On one side, representatives of Stern and Stewart presented the pros of compensation plans based on EVA™. The other side was represented by a group of academics who had published articles critical of EVA™ as a performance metric.

The academics' argument is that if EVA™ is a better way to measure

value creation, stock returns should be more highly correlated with EVA™ than other measures of profitability. Since academic evidence runs counter to this, they conclude that EVA™ is not all it is cracked up to be.

We felt such a conclusion is not warranted because the real test of an EPP is how well firms perform after adoption. Following the conference, we decided to explore the issue of long run performance.



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What did we find?

As expected, the operating performance of companies adopting EPPs, as measured by numerous accounting measures, significantly improves in the year of and in the four-year period following plan adoption. The median return on assets (ROA) increases from 3.5 percent in the fiscal year prior to adoption to 4.7 percent four years later. Median operating income-to-total assets rise from 15.8 percent to 16.7 percent in four years. The value of growth opportunities also improves. As a whole, firms adopting EPPs realize dramatic long-run

improvements in operating performance.

Before Joel Stern can declare victory, however, it is important to ask whether the results are specific to adopting firms or whether it reflects general conditions in the industry. After all, most EPP adoptions occurred during a remarkably strong economy. Therefore, improved operating performance may have more to do with general economic conditions than a plan adoption.

Calibrating the horse race. In finance, an academic addresses this type of concern by setting up a “horse race” and selecting a set of “horses” that even the odds as much as possible. For example, if you have a “slow” horse, it is only fair to compare its performance relative to other “slow” horses. After all, a plow horse may indeed learn to run faster, but it will never catch a thoroughbred.

This is analogous to what we did in our research. We identified comparable firms by restricting eligibility to those in the same industry, of similar size, and experiencing similar operating performance prior to the adoption. Surprisingly, we found that after careful attempts to calibrate our analysis, operating performance of our comparable firms is statistically indistinguishable from adopting firms.

Explaining our results

There are two possible explanations for the similarities in operating performance improvements between adopters and nonadopters. First, improvements may reflect a return to

historical performance levels and have nothing to do with managers’ actions. Managers may opportunistically adopt EPPs to coincide with predictable changes in operating performance. If a poorly performing firm is likely to revert to the industry mean, managers may adopt an EPP to cash in on anticipated increases in economic profits. Similarly, EPP adoption may be motivated by predictable increases in economic profits caused by industry wide innovation.

A second explanation may be that performance improvements are the result of improved incentive alignment. The evidence, however, suggests instead that an EPP represents one method to realign incentives, but traditional approaches combining earnings-based bonuses and equity participation may be equally effective.

The “A Dollar Is A Dollar” Theory. We attempted to distinguish between these alternative explanations by examining the associations between operating performance changes and changes in the compensation, ownership, and governance structures of adopting and control firms. While we find numerous changes in the year of adoption, the changes are similar across all firms.

For example, bonus payments increase 39.1 percent in the adoption year for EPP firms, but also increase 37.4 percent for control firms. Thus, firms respond to poor recent performance by strengthening the link between bonus payments and performance, but the basis for

calculating bonus payments, whether by economic profits or earnings, has little impact on the actual increase in shareholder value relative to nonadopting firms.

These results are not consistent with the opportunistic adoption hypothesis. If opportunism were the motivation for EPP adoption, we conclude it would be easier to modify bonus payments under the current plan rather than make a highly visible change like adopting an EPP.

The Bottom Line

Given the similarities in firm compensation, ownership, and governance structures, the improvements in operating performance suggest EPPs are no worse than but certainly no better than alternative incentive-based compensation plans. We conclude the recent popularity of products like Stern Stewart’s EVA™ simply reflects impressive marketing, rather than a new and different way to motivate managers.

New trends should be viewed skeptically. If a radical change is necessary to kick managers into action, it could well be that an EPP is the necessary catalyst. However, our results indicate change can be accommodated just as effectively within the structure of existing compensation structures.

¹ Information obtained from the Stern Stewart website on September 24, 1999. See www.sternstewart.com.