

Core Concepts

All EVA Dimensions’ services are grounded in the belief that measures and models that focus on real economic profit and its predictable connection to shareholder wealth are apt to generate more reliable insights and produce superior corporate and investment decisions than those based on popular but flawed accounting metrics and valuation multiples.

The EVA framework that Dimensions uses is a practical application of 3 well-established, academically vetted, and empirically proven corporate finance tenets:

1. Economic Profit is better than Accounting Profit
2. Operating Decisions should be separated from Financing Decisions
3. Net Present Value is the Rule that maximizes Shareholder Wealth

Economic Profit Beats Accounting Profit Hands Down

Accounting rules dictate that corporate profits be measured in ways that defy common sense, that are readily manipulated by management, that diminish the link between profit and share price, and that mislead managers and investors into making dumb decisions.

Chief among the distortions is a failure to deduct a cost for using shareholder capital, when in fact shareholders, no less than lenders, expect and deserve a return for providing capital and bearing risk. This oversight causes poor-performing, low-returning firms to look better and more valuable than they really are, and makes it hard to discern precisely how good the good performers really are.

“...there is no profit unless you earn the cost of capital. Alfred Marshall said that in 1896, Peter Drucker said that in 1954 and in 1973, and now EVA (economic value added) has systematized this idea, thank God.”

Peter Drucker - Fortune Magazine, September 28, 1998

The alternative is to measure economic profit – or EVA, which stands for economic value added. Under EVA, profit is measured by deducting the full cost of debt and equity capital from net operating profit after taxes (NOPAT).

$$\begin{aligned} \text{EVA} &= \text{Net Operating Profit After Tax} - \text{A Capital Charge} \\ \text{EVA} &= \text{NOPAT} - \text{Cost of Capital} \times \text{Total Capital} \end{aligned}$$

A company’s cost of capital is not a cash cost. It is an opportunity cost that equals the rate of return the firm’s investors could otherwise expect to earn by investing their capital

in a stock and bond portfolio of comparable risk. For most firms, cost of capital carries a premium to compensate for risk that varies from 2% to 10% over the rate prevailing on government bonds.

After deducting the full cost of capital, the resulting economic profit figure is zero when a firm is just returning what investors could earn on their own. When EVA is positive a firm is truly excelling; if it is negative, the firm is losing money in an economic sense. No other profit measure so clearly and definitively separates the good from the bad.

Deducting the full cost of capital also means EVA is a legitimate continuous improvement metric for which more always is better than less. That cannot be said of sales, market share, margin, profit, return, even cash flow, or any other corporate performance measure. All of them can increase in ways that diminish value. But more EVA – whether that is a negative EVA becoming less negative or a positive EVA becoming more positive -- is always more valuable, for it alone ties directly to net present value and shareholder wealth, as will be explained.

EVA makes other corrective adjustments to repair additional accounting deficiencies. GAAP accounting, for instance, dictates that research and development outlays be expensed, with the consequence that reported profit shrinks when a firm steps up research spending and invests in its future, and profit expands when management cuts back R&D – possibly to achieve a short-term and unsustainable earnings goal. Those profit signals are counter to common sense and to economic reality

Under EVA accounting, R&D outlays are added to a firm's balance sheet capital, just like outlays for plant and equipment, and then charged against earnings over time. With that simple shift, EVA does not misleadingly drop when research is stepped up and nor does it automatically rise when management whacks its research budget. The result is a measure that motivates managers to increase research spending if they think the money will be well spent, that does not tempt managers to make opportunistic cutbacks that will materially damage long term prospects, and that provides investors with more reliable insights about the true state of corporate performance.

The EVA Dimensions research team has identified well over 100 accounting distortions that cover such things as inventory valuation, taxation, accrual reserves, restructuring charges and unusual items, marketing and brand spending, acquisition premiums, and so forth. Our EVA benchmark data has been computed so as to purge as many distortions as possible using publicly reported data, and our performance management and valuation models have been designed to give our clients considerable control over customizing an EVA definition that will work best for their needs, their business, and their organization.

For more information on accounting pitfalls and EVA remedies, please consult *How to Fix Accounting – Measure Economic Profit* by Bennett Stewart.

Thou Shalt Separate Operating and Financing Decisions

Accounting measures like EPS (earnings-per-share) and ROE (return on equity) violate another sacrosanct tenet of corporate finance, which is that operating decisions should be separated from the impact of specific financing decisions.

Consider that a debt financed investment project or acquisition needs only to earn more than that after-tax cost of borrowing the funds – a hurdle rate of but 4% to 5% these days – in order to add to bottom line profit and boost EPS and ROE. The problem is that adding debt adds financial risk because bottom-line shareholder profit is more volatile when additional fixed interest charges are deducted from fluctuating operating profits. Investors accordingly discount more highly leveraged earnings at a higher rate. Or, what amounts to precisely the same thing, they pay a lower multiple for riskier earnings, so that a firm's stock price may go down even as EPS goes up.

For nearly a half-century now, academic scholars have urged corporate managers to navigate around the contending currents of earnings expansion and multiple contraction when an investment is debt financed (and to see through the opposite effects when equity is used) by judging all projects against the same standard. Namely, managers should assume that all projects are financed by a target blend of debt and equity, and they should ignore the impact of the actual debt or equity used to finance a particular investment.

EVA achieves that by deducting a capital charge from NOPAT that is based on a firm's weighted average cost of capital, where the weights reflect the target debt/equity blend that management is expected to use on average and over time. Consequently, unlike EPS or ROE, EVA will never tempt managers to accept poor projects that happen to be debt financed, and nor will it discourage them from embarking on fundamentally sound projects that are financed with equity. EPS and ROE provide no such guarantee; they penalize or subsidize individual projects according to how they are individually financed, and that is a sure fire formula for misjudging value and muffing decisions.

EVA also removes other financing distortions, such as arise when firms like Microsoft build up a hoard of excess cash that masks underlying business performance, or when firms turn to off-balance-sheet lease financing or securitization, or when pension accounting obscures the true risk and condition of a defined benefit pension plan. Separating operating and financing decisions in all its manifestations is incredibly important to do, but reported accounting measures do even begin to address the problem.

Net Present Value Rules

The third strut supporting the EVA platform is the rule that managers should adopt strategies and make decisions that will maximize net present value – the present value of expected cash inflows, net of newly invested capital.

Net present value, or NPV as it is commonly known, asks and answers the eminently sensible question: Are investors likely to get more or less value out of a project than the

cash they put into it. Of course, investors want more, and so since at least the 1930s, when the method was first developed by oil companies considering large scale drilling projects, managers have been instructed to accept the projects, adopt the strategies, and make the decisions that they believe will maximize the expected net present value of future cash flows.

Unfortunately, most companies encounter tremendous difficulty putting the NPV rule into practice. A chief reason is that NPV forecasts are reviewed only when a new project is first proposed. After that, the related capital investment is buried on the balance sheet and attention shifts to the additional earnings and EBITDA the project produces. Bonus plans based on simply beating profit budgets reinforce the lack of accountability between proposing positive NPV projects and then making them actually perform as promised.

The way to restore NPV to its rightful place as the centerpiece of value-based corporate management is to recognize that the present value of projected EVA, discounted at the weighted average cost of capital, is by definition equal to the net present value of discounted cash flows. The reason EVA ties directly to NPV is that EVA deducts the full cost of capital; it sets aside each period the profit amount that must be earned to recover the value of invested capital. As a result, if EVA for a new project is projected to be zero, so that investors would earn just the return they seek on the invested capital, then the value of the project will just match the capital invested in it, and its net present value will be zero. Only if EVA is positive and investors earn a premium return will NPV be positive, and vice versa. And the larger, the surer, and the more immediate the EVA, the larger the NPV will be.

Summary of EVA, NPV, and MVA

Net Present Value = project value – capital invested in the project
 NPV = present value of “free cash flow” (operating cash flow after investment)
 NPV = present value of the project’s projected EVA

Market Value Added = total market value – total capital employed
 MVA = cumulative shareholder wealth, since inception
 MVA = the sum of the NPVs of all existing and projected capital projects
 MVA = present value of a firm’s aggregate EVA

At the corporate level, the NPV sum of all existing and planned capital projects is reflected in a sister measure to EVA called MVA, or market value added, which is the firm’s total market value less its total capital employed, a spread that indicates how much wealth a company has created for its shareholders – since the start of the company. It compares the cash that investors have put or left in the business –its capital – with the present value of the cash that they can expect to take out of the business – by selling their shares and bonds right away or by collecting dividends and debt repayments over time. And just as the present value of the EVA of a project is equal to the project’s NPV, the

present value of the EVA a company will generate in the future is equal to its intrinsic MVA. This is the reason EVA earned the epithet from *Fortune* magazine – “the Real Key to Creating Wealth.”

Core Concept Implications

With these core concepts in mind, excellence in value-based corporate management can be defined by the following practices which are directly supported by the EVA Dimensions’ *Financial Radar Screen* solution:

1. The first fact any top team should establish is: are we expanding or contracting our shareholders’ wealth in the context of what’s achievable in today’s market place. To address that, public company directors and top managers should regularly monitor their firm’s MVA and discern whether the firm’s wealth spread is widening or narrowing versus peers and broad market aggregates like the S&P500.
2. Measuring the MVA of private companies is more problematical but no less important; their MVA can and should be periodically measured via an appraised value that recognizes a significant, consistent discount from public market value due to illiquidity and concentration of risk.
3. The MVA of individual business units should also be assessed through periodic valuations to bring an outside in-shareholder value perspective to the managers of internal units, and to give top management a sense of where wealth is being created and destroyed as a key input to their strategic resource allocation decisions.
4. Forward plans, capital projects, acquisition valuations and indeed all key decisions should be reviewed according to their NPV potential – by projecting, analyzing and discounting EVA rather than cash flow. Though it is just a change in format, switching to EVA actually produces a wealth of practical benefits: (a) it permits management to establish a clear link between how decisions are made and how performance will be reviewed after the fact – a key to accountability and clarity; (b) the progression of EVA is a far better indicator than cash flow of the overall reasonableness of forecast assumptions; (c) EVA is capable of being analytically linked with all key value drivers, including income statement efficiency, balance sheet investment and asset management, growth and risk in a way that no other single measure permits.
5. The first question for internal performance reviews should be the strategic one – are we generating genuine improvements in real economic profit? Making that question paramount directly ties the forward looking, EVA-based NPV decisions that have been made to after-the-fact performance measurement, and it focuses attention on the overall score first – are we making progress in increasing the economic profit derived from all sources – before getting mired in the explanatory details. Specifically, monthly, quarterly, and annual performance reviews of individual business units and aggregate corporate results should focus first on assessing the level and change in EVA – versus plan, prior year, and peers.

6. As a supplement, and as a start on understanding value drivers and diagnosing performance in greater detail, EVA should be examined from a variety of perspectives – such as EVA per sales (EVA margin analysis), EVA per capital (EVA return spread analysis), EVA per employee, and EVA per company-specific indexes (such as EVA per passenger revenue mile, EVA per retail square foot, EVA per daily rig count, etc.).

Although the foregoing applications collectively represent a solid platform to support value-based performance management, companies wholeheartedly committed to EVA generally take additional steps such as the following, which are also expedited by the **Radar Screen** software solution:

1. For each of the EVA perspectives noted above (EVA relative to sales, relative to capital, etc), EVA is broken down into component financial drivers which in turn are linked to the outcomes for a set of prominent operational and strategic metrics -- things like customer satisfaction, productivity, supply chain effectiveness, quality, innovation, employee satisfaction and capability building, and the like. The resulting “EVA Drivers Scorecards” becomes a principal means for keeping score, communicating strategy, educating managers about EVA, and diagnosing and fixing performance deficiencies and spotting new opportunities to create wealth.
2. Bonuses are decoupled from budgetary targets and instead structured as EVA profit sharing plans (technically, the bonuses are a target bonus to meet market pay, plus a set percent of the change in EVA). For more information, refer to *How to Structure Incentive Plans that Work* by Bennett Stewart
3. Everyone -- from board member to daily worker -- is schooled in the EVA measures and methods in order to establish a common language and mission, and to enhance top management’s ability to decentralize decision authority closer to the firing line.
4. Investor communications are supplemented with EVA/MVA analysis, and a bridge should be built to connect reported earnings per share and EVA per share, with notable differences highlighted (see attached summary of the **Radar Screen**’s EPS to EVA report for an example)

For more information on the link between EVA and MVA, and an overview of the EVA framework for value-based management and incentive compensation, please refer to *Focus Finance* by Bennett Stewart.

Financial Radar Screen>EVA Analysis> EPS to EVA Sample Report

EPS to EVA Reconciliation	
Reported net income follows rules promulgated by accounting authorities subject to competing interests, political pressure, and t EVA follows common sense and economic logic with the goal of measuring shareholder wealth, motivating the right decisions, a The marked differences between reported accounting appearance and quality economic earnings fall into 12 corrective categories	
Net Income Available to Common	
Per Share	used to compute Basic EPS
% of Sales	
Income and Capital Charge Adjustments	
Per Share	used to compute Basic EPS
% of Sales	
1	Deduct the Full Cost of Capital
Add back interest and preferred dividends to earnings, and deduct instead the full cost of debt and equity capital	
Per Share	used to compute Basic EPS
% of Sales	
2	Capitalize Rents
Add back the imputed interest contained in rent expense to earnings, and in exchange deduct the full cost of capital times the es	
Per Share	used to compute Basic EPS
% of Sales	
3	Eliminate Surplus Cash
Deduct investment income earned on surplus cash, and add back the cost of capital on the surplus cash assets	
Per Share	used to compute Basic EPS
% of Sales	
4	Eliminate Other Non-Operating Items
Exclude other non-operating income after tax from earnings, and add back the cost of capital on assets deemed non-operation	
Per Share	used to compute Basic EPS
% of Sales	
5	Convert Accruals to Cash
Add the change in bookkeeping reserves to earnings to recognize recurring cash flows as profit, and deduct the cost of capital ti	
Per Share	used to compute Basic EPS
% of Sales	
6	Convert to Sinking Fund Depreciation
Add book depreciation back to earnings and deduct sinking fund depreciation instead; also deduct a capital charges on any add	
Per Share	used to compute Basic EPS
% of Sales	
7	Capitalize and Amortize Intangibles
Add R&D and Ad&Promotion expenses back to earnings and to balance sheet capital, subject to amortization over time and a	
Per Share	used to compute Basic EPS
% of Sales	
8	Re-Capitalize Goodwill
Add post FAS 142 goodwill impairment charges and pre FAS 142 goodwill amortization back to earnings and to capital, cumulati	
Per Share	used to compute Basic EPS
% of Sales	
9	Capitalize Special Items
Add unusual, non-recurring special items charges and losses, less gains, after taxes, to earnings and to capital, cumulatively, su	
Per Share	used to compute Basic EPS
% of Sales	
10	Eliminate Retirement Cost Distortions
Substitute service cost for the reported pension cost; add back the cost of capital on recognized retirement assets; deduct the	
Per Share	used to compute Basic EPS
% of Sales	
11	Deduct Pre-FAS 123(r) Option Expense AT
Deduct the pre-FAS 123(r), footnoted option expense from earnings	
Per Share	used to compute Basic EPS
% of Sales	
12	Smooth Taxes
Add back tax provision and deduct a normalized tax instead; credit EVA with the cost of capital saved by using interest-free defe	
Per Share	used to compute Basic EPS
% of Sales	
EVA	
Per Share	used to compute Basic EPS
% of Sales	