

CPI, for corporate performance index, is a summary score of financial excellence that rates a company against its industry peers on a percentile scale. It tends to confirm a company's TSR rank when the rank is right, challenges TSR when it is wrong, and explains the factors that are determining TSR in any case.

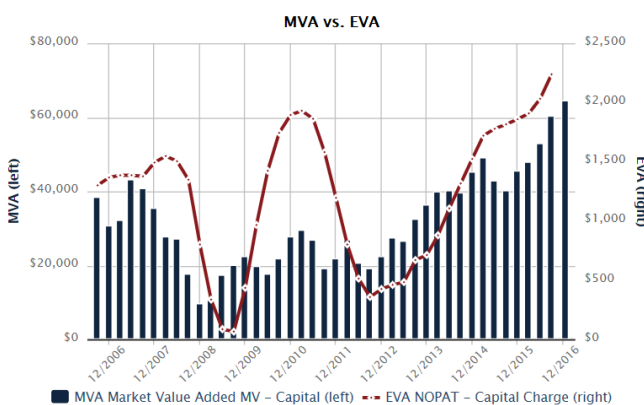
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The CEO Wealth Creators Index In its January/February 2017 issue, Chief Executive magazine published a ranking of S&P500 CEOs who have been in office for at least three years. Dubbed the Wealth Creators Index, CEOs are ranked by CPI scores furnished by EVA Dimensions. It's another validation that CPI is gaining traction as a credible measure of corporate performance and counterpoint to TSR. Chief Executive's new editor, Mike Winkleman, challenged us to explain the key EVA metrics visually, with a set of graphs, which we did using Emerson Electric as an example. It was a great idea and turned out well. We cover that and the ranking highlights in this installment of CPI Insights.

Chief Executive's top 10 Wealth Creators are featured in the table below (the full table and feature article is available at <http://chiefexecutive.net/inside-chief-executives-2016-wealth-creators-index/>; mid-market companies are ranked at <http://chiefexecutive.net/2016-mid-market-wealth-creators-index/>). Facebook's Mark Zuckerberg is the leader of the pack, boasting a perfect 100 CPI score (as of June 30th, 2016, the record date), followed closely by Regeneron, Visa, and Monster Beverage. Regeneron and Texas Instruments are notable for recording large improvements in their CPI scores to make it into the top echelon.

TOP 10 WEALTH CREATORS 2016

RANK	COMPANY	CEO	2015 SCORE	2016 SCORE	CHANGE IN SCORE
1	Facebook	Mark Zuckerberg	99.7	100.00	0.30
2	Regeneron Pharmaceuticals	Leonard S. Schleifer	74.7	99.79	25.09
3	Visa	Charles W. Scharf	100.0	99.57	-0.43
4	Monster Beverage	Rodney C. Sacks	98.9	99.36	0.46
5	Mastercard	Ajay Banga	99.5	98.94	-0.56
6	Illumina	Jay Flatley		98.72	
7	Edwards Lifesciences	Michael A. Mussallem	92.5	98.51	6.01
8	Texas Instruments	Richard K. Templeton	98.3	98.30	16.10
9	Avago Technologies	Hock E. Tan	93.8	98.09	4.29
10	Paychex	Martin Mucci	95.9	97.87	1.97



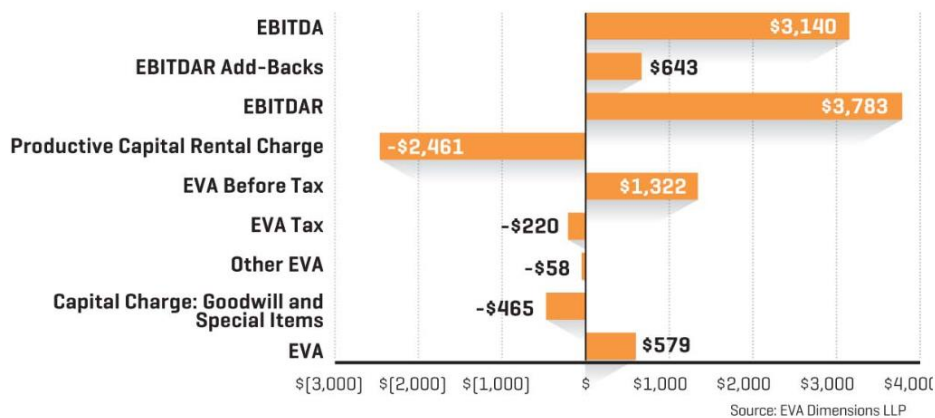
Texas instrument's ascendancy is reflected in its EVA/MVA chart at left. Over the past three-to-five years, the chip maker increased its EVA profits from about \$500 million to well north of \$2 billion, which helped lift its MVA wealth premium from \$20 to \$60 billion, the result of an astute focus on where money could be made. Motley Fool's Dan Caplinger nailed it as far back as December, 2014: "In an industry in which many major players have fought hard against each other to provide the highest-end products possible to their customers, Texas Instruments has stuck with a couple of key areas in the chip world, focusing on analog applications, such as power

management and embedded processing and connectivity [which will benefit from the Internet of Things]. Strategy is choice, and under CEO Richard Templeton, Texas Instruments apparently made the right calls.

As was mentioned, Chief Executive included a series of graphs to explain the metrics behind the CPI score, using Emerson Electric as an example. The series kicks off with the EVA waterfall chart appearing below. The starting point to get to EVA is EBITDA, the popular yet deceptive measure of cash operating profit. It's deceptive because it measures profit without setting aside an allowance to replenish the wasting assets that are needed to run the business, or to pay taxes, or to provide investors with a fair return on their capital. It is not sustainable. It's not cash you can take to the bank. It is truly earnings before many things that count. Its sole virtue is its familiarity, which is good enough to make it the launching pad to compute EVA. For Emerson, it was \$3.1 billion for the 4 quarters ending mid-year 2016.

Emerson Electric Company

While Emerson's EBITDA is over \$3 billion, its EVA, after deducting the cost of capital, tax and capital charge on goodwill and special items, falls all the way to \$579 million.



The first adjustment we make is to improve EBITDA. We add back the company's rent expense and its R&D and advertising spending. We consider those to be capital costs, not operating costs. We also add back the reported pension cost and deduct the pension service cost in its place (which approximates the incremental cost of services performed in the period). The result is called EBITDAR. It is a better, purer, more comparable measure of true cash operating profit.

Unlike EBITDA, it is unaffected by the mix of leasing or owning assets or the spending on innovation and brands. It is also not pushed around by arbitrary and malleable pension funding assumptions, or by amortizing funding gaps or gains that have accumulated over history. The net of those adjustments increased Emerson's EBITDA by \$643 million, or almost 20%, to arrive at EBITDAR of \$3.8 billion. That's its true, gross, cash operating profit.

It's time to pay the piper and cover the full cost of the capital tied up in earning assets. The charge consists of the cost of capital on the firm's working capital, plus the depreciation and cost of capital on its net plant assets (and the same applied to the present value of its rented assets), plus the amortization and cost of capital on book intangibles (excluding goodwill, which is covered later). It also includes the cost of amortizing R&D over 5 years and advertising over 3 years, plus the cost of capital on the unamortized balances. R&D and ad spending are thus treated like plant and equipment expenditures. They are treated as capital assets. The outlays are added to capital and written off over time, subject to a capital charge on the net capital balance. Managers are given the time they need to make the investments pay off. But they also must deliver results and cover the charges over time or else EVA will suffer.

The cost of capital used in these calculations is pre-tax, that is, it is the familiar post-tax weighted average cost of capital grossed up for taxes. A 6% cost of capital, post tax, turns into a 10% cost of capital pre-tax, at a 40% corporate tax rate, for example. The capital charges are thus measured pre-tax, which makes them perfectly comparable to any other operating cost, like cost-of-goods sold, or to EBITDAR for that matter, which is a pre-tax figure.

The sum of all the charges Emerson incurred to cover the cost of replenishing the expiring asset base and providing a fair return to the providers of capital was \$2.5 billion, leaving pre-tax EVA of \$1.3 billion. Pre-tax EVA combines operating efficiency and asset management into a reliable net profit score. It is the best profit metric to judge operating managers and divisional teams. CEOs and top managers, though, should be judged by bottom line EVA.

Bottom EVA is measured net of taxes – not using the actual tax provision, or cash taxes, but taxes computed assuming a smooth “standard tax rate” applies to pre-tax EVA profits. Tax gyrations from one-time settlements, from transitory net operating losses, or changes in valuation reserves, or variations in tax credits do not distort the underlying firm’s operating performance. Pre-tax operating performance shines through post tax.

The EVA tax, however, is reduced by the cost of capital saved by deferring taxes. Deferred taxes are an interest-free source of funds that reduce the amount of capital that otherwise would have to come from lenders or shareholders. The cost of capital saved by deferring taxes is thus a real value, and it appears as a reduction in the firm’s tax bill¹. EVA therefore increases when managers find legitimate ways to postpone tax payments. EVA also correctly reflects the tax benefit that capital intense firms enjoy by applying accelerated tax depreciation schedules for their assets— an advantage that is totally ignored by conventional profit statistics.

The tax measured this way for Emerson was \$220 million, or about 17% of pre-tax EVA, a low rate chiefly due to significant tax deferrals, including the deferrals from reinvesting overseas profits.

Bottom line EVA also includes a grab bag of miscellaneous income and charges². On net, this amounted to a post-tax charge of \$58 million, which reduced Emerson’s EVA.

The last charge on the schedule is the cost of capital charge on goodwill and on accumulated one-time charges (net of gains). When a company buys another and pays a premium price, it records the premium as goodwill. It is additional capital put into the business, and from the shareholders’ point of view, a return is expected on that capital like any other. It is thus subject to a capital charge, like any other. A company must offset the charge over time through cost savings and growth. The capital charge is thus a constant reminder of the obligation management has incurred to deliver the benefits it advertised when the deal was struck.

Under EVA, impairment charges, restructuring charges, and other one-time charges are added back to earnings, as if they never happened, and in exchange, the charges are added back to capital where they are subject to a capital charge. An impairment is thus a non-event. What the accountants write off is simply written back into capital. EVA is not affected by a mere bookkeeping entry. A restructuring, however, may involve actual cash expenditures – for severance costs, asset relocation, contract renegotiations, and so forth. EVA thus improves when a restructuring delivers on-going benefits that exceed the additional capital costs incurred. EVA also can benefit when management sells an asset or business to another company or owner where it is worth more, even if a bookkeeping loss is recorded. EVA ignores the loss and measures the economic gain, if there is one.

Emerson’s capital charges for goodwill and one-time items were large, a total of \$465 million (goodwill and restructuring activity were both significant). This is not to say that Emerson overpaid for its acquisitions and was unwise to restructure. This simply puts a dollar cost on the benefits that Emerson must realize above the line, chiefly in expanding its pre-tax EVA, in order to generate a net value add for its shareowners.

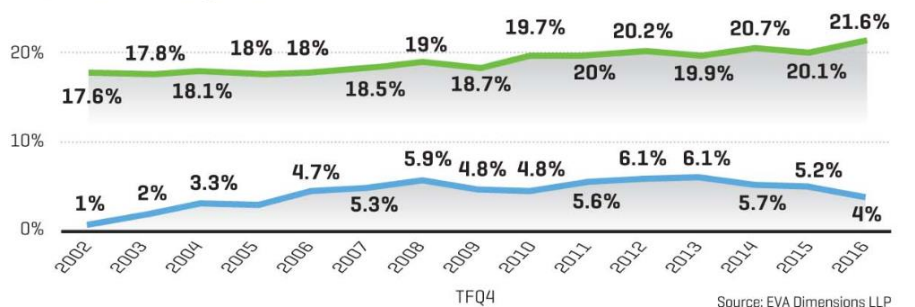
¹ Deferred taxes are conventionally measured without recognizing a deferred tax obligation on profits assumed to be indefinitely reinvested overseas. In EVA, overseas profits are assumed to be taxed at the standard tax rate, which leads to the creation of a large deferred tax balance that is also subject to the cost of capital credit.

² This is an amalgamation of after-tax items, consisting of non-sales-related income, such as from royalties and licensing, plus the income, net of the capital charge, on investments, plus the cost of capital saved with long-term interest-free funding sources, net of the cost of capital on miscellaneous assets, net of the EVA siphoned away to non-controlling interests, and net of the capital charge on any net pension funding gap.

Putting it all together, Emerson’s EVA was \$579 million, a far cry from the \$3.1 billion EBITDA starting point. The chart below, which expresses EBITDA and EVA as percent-of-sales margins, shows that the gap has been widening,

Emerson Electric Company EVA Margin vs. EBITDA Margin

Over the past four years, Emerson’s EBITDA margin, as a percentage of sales, climbed to 21.6%, while EVA margin fell to 4%.



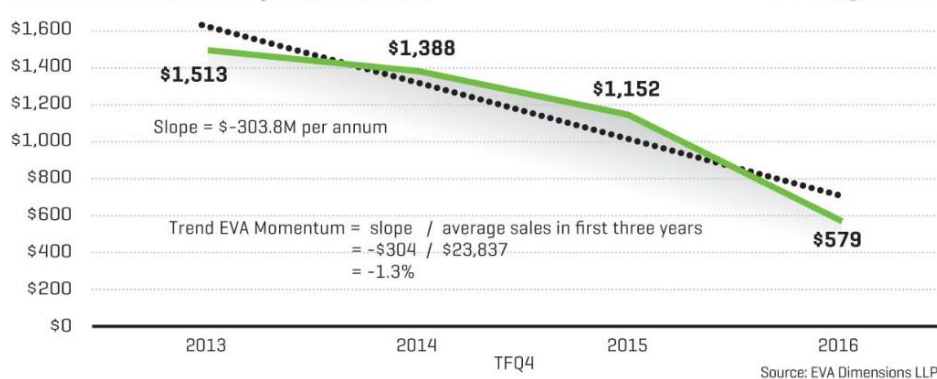
Emerson’s most recent EVA was 4% of sales compared to 21.6% for EBITDA, a gap of 17.6% between gross cash profits and true, bottom line economic profits. Three years back, in 2013, EVA was 6.1% of sales, compared to 19.9% for EBITDA, a gap of 13.8%. Emerson is looking better on EBITDA while performing considerably worse on EVA. EBITDA is becoming an increasingly distorted measure of how well Emerson is

really doing. Managers who focus on EBITDA are obviously missing a lot of factors that drive value.

The next metric, Trend EVA Momentum, quantifies the rate of growth or deterioration in EVA. It is computed by running a regression line through the past four years of EVA, and dividing the slope – in this case a trend *decline* of \$303.8 million a year – by the average of sales in the first three of the four years – which was \$23.8 billion – for a Trend Momentum statistic of -1.3%. That tells us that Emerson’s EVA declined at the average annual rate of 1.3% of trailing sales – obviously going in the wrong direction. One reason: as was noted, Emerson’s EVA margin, the ratio of EVA-to-sales, a key measure of its business model profitability, was slipping.

Emerson Electric Company EVA Momentum 3-Year Trend

This metric measures either the growth or, in Emerson’s case, the deterioration of EVA per unit of sales.



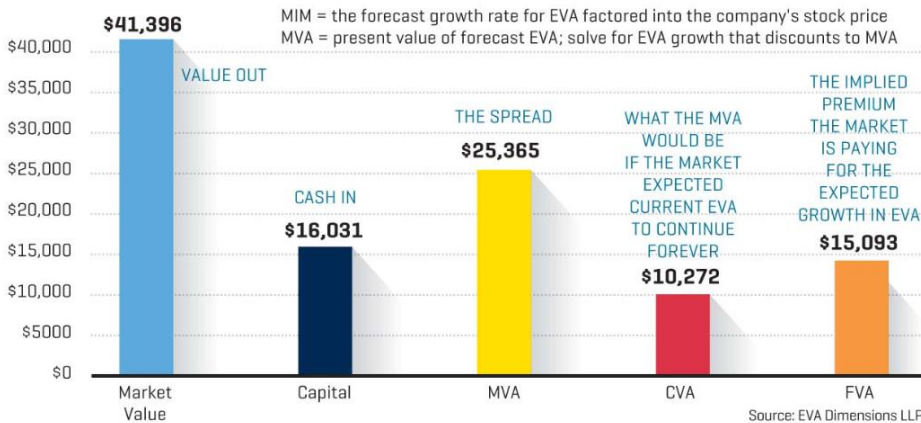
The last chart, on the next page, plots two key metrics: MVA, or Market Value Added, and MIM, or Market-Implied EVA Momentum. Recall that MVA is the spread between the firm’s overall enterprise value (which is the total market value of its debt and equity, net of excess cash) and the total capital invested in its net business assets, also measured net of excess cash. It’s the difference between the money investors have put or left in the business and the value they see coming out of the business. The difference thus measures the owners’ collective wealth and the firm’s franchise value.

For Emerson, a sum of \$16 billion in capital had been invested to fund business assets. At the same time, investors were placing a total enterprise value on the business of \$41.4 billion, leaving a spread, or MVA, of \$25.4 billion, the yellow bar.

Recall that a company’s MVA, its market-to-book premium, and aggregate NPV, is equal to the present value of all the EVA profits the market forecasts it will earn. Put another way, investors will pay a market value premium to the extent that a company can be expected to earn premium profits – profits above a commodity rate of return on capital.

Emerson Electric Company Market-Implied Momentum

Emerson's MVA—the Market Value premium to Capital—exceeds the value of its current EVA profits and implies that EVA will grow at a long-run Momentum rate of .77 % of current sales



called CVA, standing for Current Value Added. It is the market value added to the firm's capital assuming the current EVA profits run flat forever.

But That's not enough to account for all of Emerson's value. Emerson's MVA was \$23.4 billion, of which only \$10.3 billion can be attributed to maintaining the current EVA. The \$15.1 billion remainder, which is depicted by the orange bar in the chart, is called FVA, or Future Value Added. It is the value that investors are implicitly assigning to the projected growth in EVA.

With a little math, we solve for the annual EVA increment that discounts back to the company's FVA premium, and then divide that by current sales. The ratio answer is 0.77%. That is MIM, or Market-Implied Momentum. That tells us that Emerson's EVA would have to increase at the rate of 0.77% of its current sales, in each year over 10 years, *and then hold steady thereafter at the level*, to discount back to FVA and thus fully account for the company's current share price. This gives us a statistic that can be compared with peers to quantify a company's strategic position. The higher it is, the more the company is poised for significant growth above the cost of capital for a long time to come. Emerson is forecast to generate a decent amount of EVA Momentum, but it is coming off a negative three-year trend. A good portion of the projected rise is to just to recover lost ground. We need both statistics, actual and projected Momentum, to judge the totality of performance, and both are included in CPI.

To review, with the four charts just discussed, we've covered all the bases. We've seen EVA and the EVA profit margin (compared to the EBITDA margin), as well as MVA, and the derivation of Market-Implied EVA Momentum (the one ratio statistic not shown was MVA margin, but that is just MVA divided by sales). We do hope the charts help you to visualize and better understand the key metrics that go into CPI. We close by thanking Michael Winkleman, Chief Executive editor, for publishing the ranking and asking the right question – how can we make EVA simpler and more visual? Great question, and we hope you like the answers you've seen.

Want a fuller explanation of EVA and CPI? Then tune into a 30 minute video-cast conducted by our CEO, Bennett Stewart. Click here: [Using the CPI Corporate Performance Index to Fix TSR Flaws](#)

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