**EVA – Economic Value Added**

**Returns generated above investors' required rate**

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**What is Economic Value Added (EVA)?**

Economic Value Added (EVA) is a measure based on the residual Income technique, which measures the return generated over and above investors’ required rate of return ([hurdle rate](https://corporatefinanceinstitute.com/resources/knowledge/finance/hurdle-rate-definition/)).  The metric serves as an indicator of the [profitability](https://corporatefinanceinstitute.com/resources/knowledge/finance/profitability-ratios/) of projects undertaken and its underlying premise consists of the ideas that (1) real profitability occurs when additional wealth is created for the [shareholders](https://en.wikipedia.org/wiki/Shareholder), and (2) that projects create value when they generate returns above their [cost of capital](https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-wacc-formula/).

**EVA Formula**

EVA adopts almost the same form as residual income and can be expressed as follows:

**EVA = NOPAT – (WACC \* capital invested)**

Where:

* **NOPAT** = Net operating profits after tax
* **WACC** = [Weighted Average Cost of Capital](https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-wacc-formula/)
* Capital invested = Equity + long-term debt at the beginning of the period
* **(WACC\* capital invested)** is also known as a **finance charge**

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**Calculating Net Operating Profits After Tax (NOPAT)**

One key consideration for this item is the adjustment of the cost of interest. The cost of interest is included in the finance charge (WACC\*capital) that is deducted from [NOPAT](https://corporatefinanceinstitute.com/resources/knowledge/valuation/what-is-nopat/) in the EVA calculation and can be approached in two ways:

* Starting with operating profit, then deducting the adjusted tax charge (because tax charge includes the tax benefit of interest). Therefore, we should multiply the interest by the tax rate and add this to the tax charge; or
* Start with profit after tax and adding back the net cost of [interest](https://corporatefinanceinstitute.com/resources/knowledge/accounting/interest-expense/). Therefore, we should multiply the interest charge by (1-tax rate).

**Adjusting for Calculations in EVA**

Three main accounting adjustments should be made; amongst the most common and important, are:

* Expenditures on R&D, promotion, and employee training should be capitalized.
* [Depreciation charge](https://corporatefinanceinstitute.com/resources/knowledge/accounting/depreciation-expense/) is added back to profit and, instead, a charge for economic depreciation is made. This reflects the true change in the value of assets during the period, unlike accounting depreciation.
* Accounts such as provisions, allowances for doubtful debts, deferred tax provisions, and allowances for inventory should be added back to capital implied.
* Non-cash expenses should be added back to profits and to capital employed.
* Operating leases should be capitalized and added back to capital employed.
* Tax charges will be based on cash taxes, rather than the accruals-based methods used in financial reporting and will be calculated as follows:

**Tax charge per income statement – Increase (or + if reduction) in deferred tax provision + Tax benefit of interest = Cash taxes**

**Calculating Finance Charge**

**Capital invested \* WACC**

and**WACC = Ke\*E/ (E+D) + Kd (1-**t)\*D/ **(E+D),**

where**Ke = required return on equity and Kd (1-t) = After-tax return on debt**

Thus, given the adjusted taxes, we can write the EVA formula as follows:

***EVA = NOPLAT – (WACC \* capital invested)***

The properties of using EVA can be compared with other approaches in the following table:

| **Valuation Model** | **Measure** | **Discount Factor** | **Comments** |
| --- | --- | --- | --- |
| Enterprise discounted cash flow | Free cash flow | WACC | Works best for projects, business units, and companies that manage their capital structure to a target level. |
| Discounted economic profit | EVA | WACC | Explicitly highlights when a company creates value. |
| Adjusted present value | Free cash flow | Unlevered cost of equity | Highlights changing capital structure more easily than WACC-based models. |

**Example – Calculating EVA for XX Company**

|  | **2014** | **2015** | **2016** |
| --- | --- | --- | --- |
| Capital invested (beginning of year) | $54,236.00 | $50,323.00 | $55,979.00 |
| x WACC | 8.22% | 8.28% | 8.37% |
| Finance Charge | $4,459.56 | $4,168.90 | $4,682.80 |
| NOPLAT | $7,265.00 | $5,356.00 | $4,336.00 |
| – Finance Charge | $4,459.56 | $4,168.90 | $4,682.80 |
| Economic Value Added | $2,805.44 | $1,187.10 | -$346.80 |

In conclusion, this measure highlights when the company creates value and is helpful to understand the company’s performance in a given year and to determine when economic value is created.