

Enterprise Value and Equity Value

The Enterprise Value (EV) is the value of a firm's entire business, regardless of its capital structure. The equity value, on the other hand, describes what remains of the EV after a firm's debt has been paid off: Therefore, it reflects the shareholders' claim.

The EV, frequently referred to as firm value or asset value, is among others the outcome when valuing a business by applying the Discounted Cash Flow (DCF) approach. Thereby, future expected unlevered free cash flows are discounted by a factor representing the firm's long-term stable capital structure: The Weighted Average Cost of Capital (WACC), composed of Cost of Equity (CoE) and Cost of Debt (CoD). - Therefore, the EV is an estimate of the value of a company's core business operations regardless of its capital structure: It represents the combined value for all investors, such as a corporate's shareholders, its bondholders, creditors and others.

Hence, when approximating a firm's EV, such as on the basis of valuation multiples, parameters have to be selected and applied which are in economic ownership of all investors, or: whereby a firm's capital structure is ignored. In this context, earnings before interest and taxes (EV/EBIT), earnings before interest, taxes, depreciation and amortization (EV/EBITDA) or revenues (EV/S) can be applied. Together, these multiples are also known as EV multiples.

The equity value, on the other hand, reflects the economic ownership of shareholders only. It is also referred to as net asset value and equals the EV less net debt. Whereby latter is defined as all interest bearing short- and long-term liabilities (i.e. debt) less cash and cash equivalents. If a firm is listed, then its equity value – as viewed and judged by the market - is the firm's market capitalization or market value of equity, equaling the number of outstanding shares multiplied by its share price.

An alternative approach in approximating a firm's (fundamental) equity value, is by discounting cash flows to equity by the CoE. Whereby cash flows to equity comprise a firm's operating cash flows less capital expenditures plus (minus) net debt issued (repaid). This structure therefore represents cash

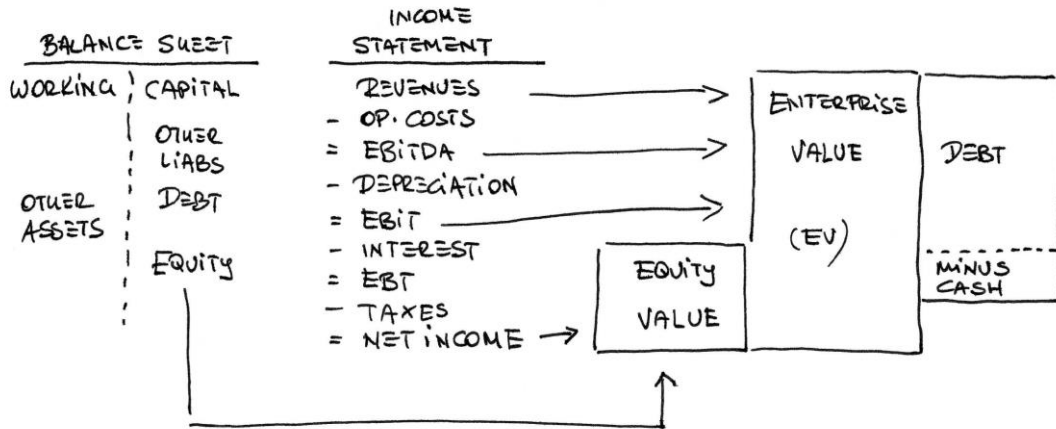
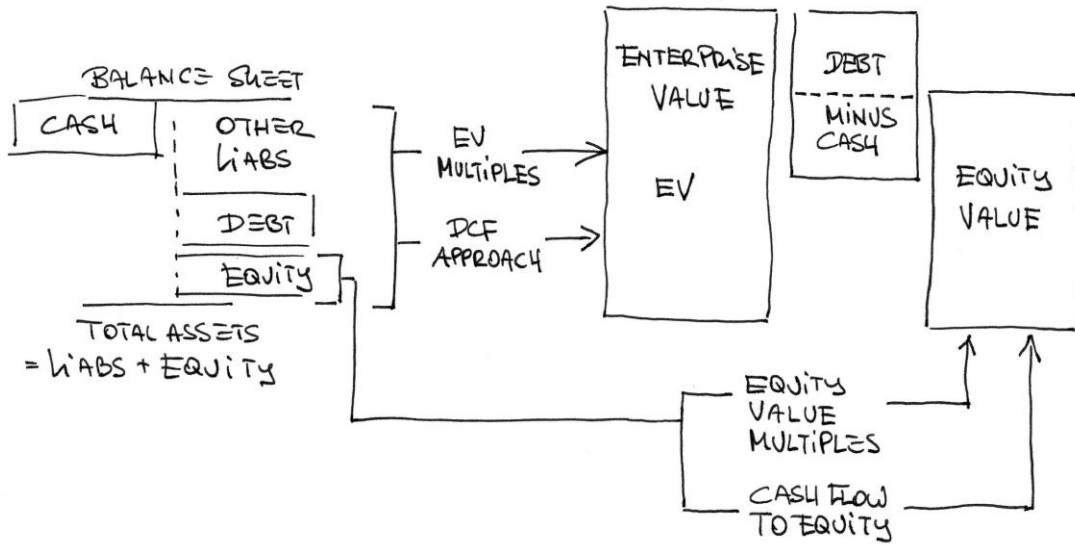
flows available to equity investors, with interest expenses already paid.

The equity value can also be directly derived by applying multiples: Most commonly used in this context are the price / earnings ratio (P/E, or market capitalization to net profit) and the price / book value ratio (P/BV, or market capitalization to book value of equity). Rarely, and then foremost in the context of mature companies (e.g. utilities), the price / cash earnings ratio can be applied (P/CE), with cash earnings defined as net income plus depreciation and amortization (i.e. a cash flow proxy to equity).

In theory, only changes to a firm's core business will affect its EV, however not changes to its capital structure (Modigliani-Miller-Theorem). And neither does issuing or redeeming equity nor amendments to its debt structure have an impact on a firm's EV. This is also why the entire set multiples used to calculate a firm's EV, rely on denominators positioned above the items of interest expense and interest income in a firm's income statement (revenues, EBITDA and EBIT). Only these lines would be affected, should a firm's capital structure change, not any items on top of them, though.

In reality, however, radical changes in a firm's capital structure may actually also impact its EV: As can be illustrated by the concept of the DCF approach, aggressive leveraging of a firm will eventually push up both, CoE (higher beta amid higher volatility) as well as CoD (higher risk of default and therefore default spread). As far as the WACC is concerned, though, the overall higher levels of CoE and CoD would be mitigated by the now relatively higher (market-related) weighting of the financial liabilities vis-à-vis equity (with CoD always lower than CoE). Despite the Modigliani-Miller-Theorem, the combined effect may still drive up the WACC and in consequence result in a lower EV. – Besides, excessive leverage will also be recognized by the capital markets, and with a stock's volatility increasing, applicable multiples are likely to decrease.

However, as the WACC component in the DCF approach indicates a long-term stable capital structure, in case of a momentarily excessive leverage, the WACC may have to be adapted periodically, eventually reflecting a capital structure having returned to normal / standard levels again.



EV MULTIPLES: REVENUES, EBITDA, EBIT
 EQUITY VALUE MULTIPLES: NET INCOME, EQUITY

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