Discounted Cash Flow Methodology – Adjusted Present Value

The Adjusted Present Value (APV) approach is an alternative to the Discounted Cash Flow (DCF) approach, whereby the value generated by a corporate´s capital structure is assessed separately from its business operations.

The rationale behind this approach is the fact that adding debt to fund an asset or a firm can generate value. This is due to the Cost of Debt (CoD) being lower than the Cost of Equity (CoE) and, in addition, that interest paid for debt can be deducted for tax purposes. In consequence, this lowers a company´s tax base and – hence- taxes to be paid (i.e. tax shield).

Now, whilst the standard DCF valuation approach assumes a long-term stable capital structure composed of equity and debt which drives the composition of the discount factor (WACC), the APV approach dissects the value of adding leverage (i.e. debt) to the proposed investment.

In principle, the cash flow basis is the same in both, the DCF and the APV approach: Future expected Unlevered Free Cash Flows (UFCFs) are discounted.

Subsequently, however, the APV takes separate, though complementary views on the target: One of them concerns the firm´s stand-alone unlevered state. The second one sheds a light on the upside incurred by the firm´s leveraged capital structure.

Therefore, in a first step UFCFs will be discounted by the CoE only (as if the firm had no debt on its balance sheet). Before doing this, though, the equity beta factor of the firm´s CoE will have to be de-levered, as the target – hic! – is assumed to be debt-free.

In a subsequent step, the value added by the target´s balance sheet structure (actually being levered) is accounted for: Whereby, the additional value is not only contributed by the fact that the CoD is lower than the CoE. Instead, it actually has its origin in the value of the leverage-incurred tax shield. In forecasting this, in a first step each of the firm´s anticipated annual interest expenses is multiplied with the applicable marginal tax rate. Then, in a second step, these (annual) tax shields are discounted by the (pre-tax) CoD. The result of this exercise is the accrued value of the tax shield (i.e. tax savings), or by adding leverage to the firm´s balance sheet. - Therefore, the APV is especially effective in such cases, where leverage and its tax-related implications significantly affect a firm´s value, such as in Leveraged Buyouts (LBOs).

As mentioned, to achieve correct results, the beta factor of the CoE would have to be unlevered and the marginal (not the firm´s average, though) tax rate be used. – Further, as the APV is foremost used in assessing the value creation of LBO-related transactions, the initial (possibly – excessively - high) leverage structure of a target´s balance sheet will over time (have to) get in line with common, average industry standards again. As the APV approach is based on cash flow streams over long, extensive time horizons, one may therefore adjust for a de-levering of the capital structure, perhaps over the planning horizon. After this period of de-levering, a long-term stable capital structure can be applied again for valuation purposes.

Therefore, one advantage of the APV approach is the enhanced transparency to track the origins of value creation. However, as latter is exclusively in regards to leverage and tax, the APV approach is foremost used in LBO constellations.

	STANDARD DCF	APV
APPROACH	$\dfrac{UFCF}{WACC}$	$\dfrac{UFCF}{COE} + \dfrac{TAX\ SHIELD}{COD}$
		$\uparrow$ $\uparrow$
		USE UNLEVERED BETA / USE MARGINAL TAX RATE
ASSUMPTION	STABLE CAPITAL STRUCTURE	CHANGING CAPITAL STRUCTURE

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