APV vs. Comp.
has a beautiful theory ("true NPV") behind it. It identifies for you exactly what matters (the expected future cash flows) and how differently timed cash flows matter in different ways (through the discount rate). The theory even gives you the exact relationship between various estimated inputs and your final measures (the present value formula). To the extent that you can reach the ideals of the theory—finding good expected cash flow and discount rate estimates—you know that your valuation is accurate!
Disadvantage: First, your input estimates—especially your expected cash flow estimates—can be far off from the truth. Second, there is no objective standard for your estimates, and a third party cannot verify them.
Comp. Its main disadvantage is that it is much more ad hoc: You have to make two important judgment calls. First, what is a good comparable firm? Second, what should you use as the appropriate valuation attribute? Yet one advantage of comparable is that the inputs can be more objective and more verifiable than those for NPV. analysts rarely agree on what firms are appropriate comparable and what attribute fits best. Such disagreement can create different subjective estimates, too, and thereby void the objectivity advantage.
D/TA is not a good measure of leverage. TA includes D and NFL, numerator should include it as well.
Biggest determinant of market-based leverage ratio change: The debt part seldom change year to year compared to equity. It only changed drastically when issuing or retiring a debt. Thus, the biggest determinant of market-based leverage ratio changes is equity.
Negative book value of equity: Theoretically, negative shareholder equity means the stockholders owe money. But realistically, common stockholders are protected from such a liability by the corporate structure of publicly traded companies. When shareholder equity is negative, it's often due to the accounting methods used to deal with accumulated losses in previous years.
Convertible debt like debt when OTM, equity ITM.
When target is undervalued, combined firm add value.
Instead of using average P/E, 1, Ignore non positive E. , Use median. 3, Average E/P. 4, P/E = (sum P)/(sum)
To take care of long-term accruals in the conversion from net income into cash flows, undo the smoothing—add back the depreciation and subtract out the capital expense. Do not use depreciation or amortization figures from the income statement to undo the accounting adjustments for capital expenses. These figures are incomplete. You must use the depreciation figures from the cash-flow statement. Reading both net income and depreciation off the income statement is not only wrong, but also a common mistake. To take care of short-term accruals in the conversion from net income into cash flows, undo the smoothing—subtract changes in net working capital. (Equivalently, you can add decreases in net working capital.)
Project cash flows (CF) are due to financial creditors and shareholders together and are computed as Project Cash Flow = Cash Flow from Operating Activity+Cash Flow from Investing Activity+(Net) Interest Expense
Equity cash flows (CF) are available only to levered equity (i.e., the company's shareholders): Equity Cash Flow = Project Cash Flow
+ Net Issuance of Debt – Interest Expense
Balance sheet stock numbers are often inaccurate as measures of true values. This applies especially to the book value of equity. In turn, it applies, to a lesser extent, to the book value of assets. The most reliable figures on the balance sheet are often cash and short-term instrument assets and financial-debt liability figures.
It is the law of one price that ultimately gives you a value estimate. In theory, companies with the same correct attributes should have the same value. In practice, companies with similar relevant attributes should have similar values.
All else equal, the price-earnings ratio is higher for firms with more future enings more future earnings growth
Unlike market betas and costs of capital, price-earnings ratios cannot be value-weighted and averaged. Mergers can change P/E ratios even if they do not create value.
Ratios intrinsically never make sense when denominators can take on negative values.
The basis of optimal capital structure theory is the insight that entrepreneurs want to maximize the value of the firm in an upfront sale today, and not necessarily the value of equity today or in the future.
The Modigliani-Miller propositions state that in a perfect world, the value of a firm is independent of how it is financed. Instead, it is the underlying projects that determine the value of the firm.

$$w_{Equity} \cdot E(r_{Equity}) + w_{Debt} \cdot E(r_{Debt}) \cdot (1-\tau)$$

The adjusted present value (APV) formula computes an "as-if-all-equity-financed" PV (i.e., after corporate income tax) and then adds back the tax subsidy:

$$\text{APV} = \begin{array}{c}\text{Value as if Firm is 100\%}\\ \text{Equity-Financed and Fully}\\ \text{Taxed}\end{array} + \begin{array}{c}\text{Tax Subsidies}\\ \text{from Interest}\\ \text{Payments}\end{array}$$

If the project lasts for only one period (and omitting tedious and obvious time subscripts), this translates into

$$\text{APV Today} = \frac{E(\text{FutureC})}{1+E(r_{Firm})} + \frac{E(\tau \cdot \overbrace{r_{Debt} \cdot \text{Debt}}^{\text{Interest Payment}})}{1+E(r_{Debt})} \overbrace{}^{\text{Tax Shield}} \quad (18.1)$$

The $1+E(r_{Debt})$ cost of capital in the second term may or may not be correct. However, because the second term is small, it rarely makes much difference whether you discount with $E(r_{Firm})$ or $E(r_{Debt})$.
Corporate and personal taxes that can be avoided provide cash that the owners can keep. Reducing the total taxes ultimately collected by Uncle Sam (now and in the future) at *either* the corporate *or* the personal level can increase the value of the firm to its owners.
Financial distress costs usually favor equity over debt as a cheaper financing vehicle.
Ex-post reluctance to take the right projects (such as making additional maintenance investments) can favor equity over debt as the cheaper financing vehicle. Ex-post reluctance to liquidate by managers not acting on behalf of the overall firm but on behalf of equity can favor equity over debt as the cheaper financing vehicle. Ex-post reluctance to liquidate by managers not acting on behalf of the overall firm but on behalf of themselves can favor debt over equity as the cheaper financing vehicle. Debt can force them to liquidate—which can be a good move ex-ante.
Competitive product-market environments could favor either equity or debt.
The need to control free cash flow and agency problems favors debt over equity as the cheaper financing vehicle.
Uncontrolled free cash flow and agency concerns can mean that firms end up having more equity than debt financing, even if this is not value-maximizing.
Bondholders and other creditors can lose value if either of the following occurs:

- The firm later undertakes riskier projects.
- The firm adds more debt of equal or higher priority.

Creditors demand higher interest rates if they fear such expropriation. Thus, it is in the interest of the owners to assure creditors that they will not do so. The prime mechanisms to allay bondholder fears are

- Loan covenants
- Reputation
- Bond convertibility

The presence of inside information concerns (investors fearing the worst) favors debt over equity as the cheaper financing vehicle.
Transaction cost considerations could favor either debt or equity. Behavioral considerations could favor either debt or equity.
Capital structure can have dramatic value influences for firms that are (a) considering drastic changes in their capital structure (e.g., as in a private buyout); (b) close to financial distress; and (c) very highly levered. (For example, many banks routinely operate with liabilities-to-assets ratios above 90%. Any mishap can be catastrophic.)
Naïve APV or WACC use can give the distorted impression that the firm's cost of capital always decreases with leverage. It is important that you adjust the cost-of-capital terms in the formula to take into account all the other capital-structure benefits and costs, too.
Interaction effects can make it difficult to adjust capital structure optimally in the future. Future adjustment costs can favor a more flexible capital structure (more equity and financial slack) today.

	EBIT	+$35	+$10
+	Depreciation	+$25	+$50
+"	(–)Capital Expenditures	+(–$75)	+(–$75)
–	(+)Corporate Income Tax	–(+$14)	–(+$2)
=	Cash Flow, Project, After Tax	–$29	–$17
	Net Income	+$21	+$3
+	Depreciation	+$25	+$50
"+"	(–)Capital Expenditures	+(–$75)	+(–$75)
+	Interest Expense	+$0	+$5
=	Cash Flow, Project, After Tax	–$29	–$17
	EBIT		+$35
+	Depreciation		+$25
"+"	(–)Capital Expenditures		+(–$75)
–	Corporate Income Tax		–$14
=	Cash Flow, Project		–$29
+	Net Debt Issue		+$50
–	Interest Expense		$0
=	Cash Flow, Levered Equity Ownership		+$21
	Net Income		+$21
+	Depreciation		+$25
"+"	(–)Capital Expenditures		+(–$75)
+	Net Debt Issue		+$50
=	Cash Flow, Levered Equity Ownership		+$21

Agency problem: This conflict arises when separate parties in a business relationship, such as a corporation's managers and shareholders, or principals and agents, have disparate interests. Agents, working as employees, are assumed and obligated to serve the principal's best interests. Problems occur when the agent begins serving different interests, such as the agent's own interests. Thus, conflict occurs between the interests of principals and agents when each party has different motivations, or incentives exist that place the two parties at odds with each other.

	Earnings after Interest before Taxes (= Net Income + Tax)
+	Interest Expense
=	EBIT
–	Corporate Income Tax
=	Net Operating Profit
+	Changes in Deferred Taxes
+	Depreciation
=	Gross Cash Flow
–	Capital Expenditures
–	Changes in Working Capital (e.g. payables)
–	Investment in Goodwill
–	Miscellanious Increases in Other Assets
=	Free Cash Flow from Operations
–	Acquisition and Divestitures
–	Short-Term Investments
–	Miscellaneous Investing
=	Project Firm Cash Flow to Debt + Equity
+	Net Issuance of Debt
–	Interest Expense
=	Project Firm Cash Flow to Equity