

## THE 8 PRINCIPLES OF FINANCE

Source: <http://campus.murraystate.edu/academic/faculty/larry.guin/Principles/IndexPrin.htm>

1. **Risk-Return Tradeoff** — The higher the risk of an investment, the higher the expected return must be.
2. **Leverage** — A magnification of earnings that results from having **fixed costs** in the company.
  - (a) **Operating leverage** — A magnification of earnings (EBIT) which results from having **fixed operating costs** in the company. *Examples of fixed operating expenses are salaries, utilities, depreciation, and property taxes.*
  - (b) **Financial leverage** — A magnification of earnings (E.A.T.) which results from having **fixed financial costs** in the company. *(The only type of fixed financial cost considered is interest expense.)*
  - (c) **Total or combined leverage** — A magnification of earnings which results from having **fixed costs of any type** in the company.

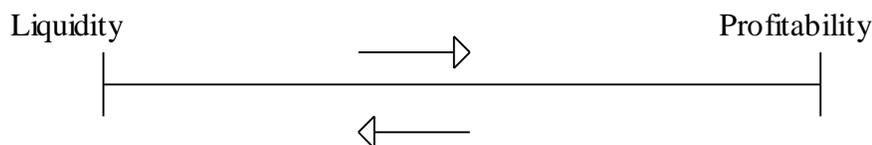
Technically, operating leverage is concerned with how rapidly E.B.I.T. (operating income) changes for a given change in sales. Financial leverage is concerned with the relationship between operating income (EBIT) and net income.

$$\begin{array}{rcl}
 \text{Operating Leverage} & \left\{ \begin{array}{l} \text{Sales} \\ - \text{Operating Expenses} \\ \hline \text{E.B.I.T. ( or Operating Income)} \end{array} \right. & \\
 \text{Financial Leverage} & \left\{ \begin{array}{l} - \text{Financial Expenses (i.e. Interest and Taxes)} \\ \hline \text{Earnings After Taxes (Net Income)} \end{array} \right. & \left. \right\} \text{ Combined Leverage}
 \end{array}$$

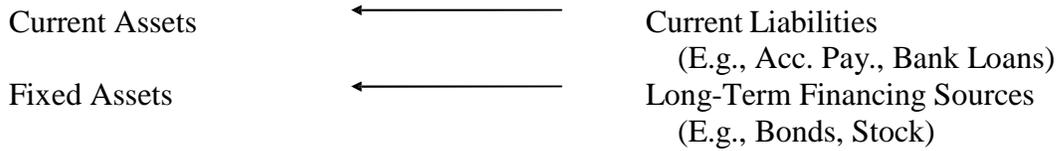
3. **Time Value of Money** — A rational person is not indifferent between having a dollar today or a dollar in the future. Regardless of inflation, a dollar today can be invested and will earn a return over a period of time.
4. **Valuation** — The value of an asset is equal to the present value of its expected returns. The rate used for the present value calculations (the capitalization rate) should be the minimum accepted return, given the risk of the investment.

$$\begin{aligned}
 \text{Value} &= \text{Present Value of Cash Flows or} \\
 \text{Value} &= \text{Cash Flows} \times \text{P.V. Factor}
 \end{aligned}$$

5. **Bond Price vs. Interest Rates** — There is an inverse relationship between market interest rates and the price of existing fixed income securities. *E.g., as interest rates rise, prices of existing bonds will fall.*
6. **Liquidity vs. Profitability** — There is a trade-off between liquidity and profitability; gaining more of one ordinarily means giving up some of the other.



7. **Matching Principle** (or the **Principle of Suitability**)— The maturity of a firm’s assets should match the maturity of the firm’s liabilities, i.e. short-term assets should be financed with short term liabilities; long-term assets should be financed with long-term sources of financing.



If you violate the matching principle, you create a problem either of too little liquidity or low profitability.

8. **Portfolio Effect (or Diversification)** — As assets are added to a group (portfolio), the risk of the total portfolio decreases. This will be true as long as the correlation of the asset being added and the portfolio is less than +1.0.

The first graph below shows the sales of a firm that only has one product (in fact, one with a seasonal fluctuation).

The second graph (entitled Correlation = +1.0) shows the effect of adding a second product to the product line, assuming the second product has a +1.0 correlation with the first product.

The third graph (entitled Correlation = -1.0) shows the effect of adding a third product, only this one has a perfect negative correlation with the first product.

Finally, the last graph (entitled Correlation = 0.0) shows the effect of adding a product whose sales have no relationship to the first product.

