Sensitivity analysis boils down to expressing cash flows in terms of key project variables and then calculating the consequences of misestimating the variables
A **Scenario analysis** is a look at different scenarios that might impact the project
The analysis how bad sales can get before the project begins to lose money is a **Break-even analysis**
A project that breaks even in accounting terms will surely have a negative NPV
Degree of operating leverage is measure by the percentage of change in profits for each 1% change in sales = % change in profits / % change in sales
Monte carlo simulation is a tool for considering all possible variables
Options to modify projects are known as **real options**
Decision trees are made to predict a projects profitability

Chapter 16: Payout policy

If you buy stocks on or later than the **ex-dividend** date, you are not entitled to dividend
Dividends can also be pay out as **stock dividends**, which is just extra shares
Repurchasing stock is the company rebuying its stock, which then makes the prize per stock higher
Repurchasing stock is more likely to be done with short time excessive cash, dividends tend to only be higher when there is long time excessive cash
When higher dividends are announced, stock prices rise
In principle, the payout policy does not matter
The best reason in favour of people who prefer dividends payout over reinvestments is the lack of confidence of the shareholders in the company to reinvest its earnings
Some people say: dividends are taxed more heavily than capital gains so firms should reinvest more

Chapter 17: Does debt policy matter?

A policy that maximizes the market value of the firm is also best for the firm's stockholders
The market value is independent of its capital structure
Leverage increases the expected earnings per share, but not the share price; the reason is that the change in the expected earnings is exactly offset by a change in the rate at which the earnings are discounted
Preposition 1: Financial leverage has no effect on shareholders' wealth
Preposition 2: The rate of return that shareholders can expect to receive increases as the firms debt-equity ratio increases
Return on assets = r_a = operating income / market value
= (proport. Debt x return on debt) + (proport. Equity x return on equity)
$= \left(\frac{D}{D+E} \times r_D\right) + \left(\frac{E}{D+E} \times r_E\right)$
This formula can be turned around to solve for the return on equity
Increase in expected return is exactly offset by an increase in risk and therefore in shareholders required rate of return
MM's message: when the firm changes its mix of debt and equity securities, the risk and expected returns of these securities change, but the company's overall cost of capital does not change

Chapter 18: How much should a corporation borrow?

The interest that company's pay is tax-deductible
The after-tax value of a firm goes up by PV(tax shield)
The firm's objective should be to arrange its capital structure to maximize after-tax income