Net Present Value Calculation Overview

Conceptually, a net present value (NPV) calculation is the estimated current (or present) value of a future payment, or stream of payments, discounted at an appropriate compound interest rate (or "discount rate")

Mechanically, the NPV calculation estimates the value of a series of cashflows by dividing each future cash inflow/outflow by the discount rate while taking the time period in which the cashflow takes place into account as follows;

Rt/(1+i)t

Where;

Rt-the net cash flow at time t

t -time of the cash flow

i -discount rate

NPV is the preferred valuation methodology for a variety of assets and liabilities primarily for the following reasons:

• Proxy for fair value: NPV calculations are often used as a proxy for the fair value of an asset or liability in the absence of a readily available market price

• Reflects economic reality: a dollar today is worth more than a dollar tomorrow since a dollar received today can be invested and earn a return

• Avoids overstating assets and liabilities: Stakeholders rely on information in a company's financial statements (e.g., investors, creditors, regulatory and rating agencies, etc.); thus using NPV reduces the likelihood of overstating the value of assets and liabilities. The calculation is widely used to account for investments, long-term projects, mergers & acquisitions and select obligations, among other uses

• Consistent with U.S. Generally Accepted Accounting Practices (GAAP) which is the standard for reporting financial statements for a wide variety of entities, including public/private companies, non-profit organizations, and governments. GAAP that use an NPV based metric to valuing future costs allocations include Statements of Financial Accounting Standards (SFAS), published by the Financial Accounting Standards Board (FASB) including SFAS 143 & 157.

SFAS No. 143, Accounting for Asset Retirement Obligations

- Effective 1/1/03. Applies to legal obligations associated with the retirement of tangible, long-lived assets. Requires that the fair value (FV) of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of FV can be made.

SFAS No. 157

- Effective 1/1/08. Applies to accounting standards that require (or permit) FV (i.e. SFAS 143). Clarifies how FV is determined. In the absence of quoted market prices in an active market, the most appropriate technique for determining the fair value (FV) of asset retirement obligations is using an expected present value.