Financial Modelling

Forms and uses of common financial models

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Three Statement Model

- Cash flow statement, income statement and balance sheet integrated into one dynamically connected model
- Serves as the foundation of more complex models such as LBO model, DCF model and M&A model
- Enables financial managers to predict the business's financial performances under a diverse range of scenarios e.g. recessions
- Therefore, financial managers are able to make decisions regarding financing business activities and investing which are quantitatively backed as well as gauge an enhanced understanding of how such activities would impact the business's bottom line

https://corporatefinanceinstitute.com/resources/knowledge/modeling/3-statement-model/
https://www.wallstreetprep.com/knowledge/build-integrated-3-statement-financial-model/

Discounted Cash Flow(DCF) Model

- Essentially a valuation method estimating the value of an investment based on its expected future cash flows
- Attempts to identify present value of investment based on expected level of cash flow in the future
- DCF is calculated through a discount rate
- Should DCF be above current cost of the investment, opportunity can result in positive returns
- Weighted average cost of capital typically used when calculating discount rate since it accounts for expected rate of return for shareholders

https://www.investopedia.com/terms/d/dcf.asp

Merger(M&A) Model

- Financial statements of buyer and seller combined to identify any effects of the acquisition process
- The key aspects of this model include making acquisition assumptions, projections, valuing each business involved, combining their financials, conducting pro forma adjustments as well as conducting deal accretion
- Thus, key outcomes of M&A model encompass any new debt due, new shares issued as well as any fluctuations in the earnings per share of the new entity

https://corporatefinanceinstitute.com/resources/knowledge/modeling/build-merger-model/

Initial Public Offering(IPO) Model

- Process of transforming a private enterprise into a publicly listed company through its shares being traded in an exchange market
- Essentially a valuation process in which a business's value is determined by demand for its shares, industry comparables, growth prospects and the company's narrative
- A critical aspect of launching an IPO is for the business to release the aforementioned three statements- balance sheet, income statement and cash flow statement

https://www.investopedia.com/articles/financial-theory/11/how-an-ipo-is-valued.asp#:~:text=An%20initial%20public%20offering%20(IPO)%20is%20the%20process%20by%20which,traded%20on%20a%20stock%20exchange.

Leveraged Buyout(LBO) Model

- Financial transaction involving an acquisition of a business by a financial sponsor, financed using substantial debt
- Leverage used to increase the returns to equity holders and is repaid from the company's operational cash flows
- Underlying aim is to evaluate investment and attain the highest feasible risk-adjusted internal rate of return
- Usually, private equity funds target exiting the investment within a five year period to monetise their returns

https://www.fe.training/free-resources/financial-modeling/lbo-model/#:~:text=What%20is%20an%20%E2%80%9CLBO%20Model,hence%20the%20term%20'leveraged'.

Sum of the Parts Model

- Valuation method comprising of determining each aggregate division's worth if they were spun off or acquired by another company
- Also referred to as the break up value as it assesses individual segments' worth should the company be broken up
- Enables a company to establish a useful measure of its value which can be highly relevant in the case of a hostile takeover or a restructuring
- Often put to use when a company is a conglomerate and has business units in different industries
- This is so since the nature and quantity of revenue differs among a variety of different industries

https://www.investopedia.com/terms/s/sumofpartsvaluation.asp#:~:text=The%20sum%2Dof%2Dthe%2Dparts%20valuation%20(SOTP),or%20acquired%20by%20another%20company.

Consolidated Model

- Constructed by combining the financial results of multiple business units into one single model
- Usually includes elimination as a means of avoiding double-counting of credentials such as revenue
- Structural options centre around being aggregated or consolidated in nature
- Aggregation encompasses consolidation of financial data by categories, totals or through reclassification
- Consolidation encompasses consolidation of financial data by the means of historical or all time financial performance

https://www.modano.com/resources/learning/consolidations/consolidation_model/introduction/consolidation_modeling

Budget Model

- One of the most common financial models in financial planning and analysis
- Literally entails the generation of budgets for upcoming financial years
- Based on a set of assumptions and historical financial data with a strong focus on the income statement
- Output of this model is a set of target revenue and expenses for a given time period
- Through the comparison of budget model's predictions with actual financial performance, management can identify the key drivers of the business as well as budget more accurately in the future

https://insightsoftware.com/blog/building-financial-models-to-help-your-corporate-budgeting/#:~:text=6.-,Budget%20model,focus%20on%20the%20income%20statement.

Forecasting Model

- Process of projecting a business’s financial performance during a future reporting period
- Enables the development of a predictive model that aids the company in making sound business decisions, especially from a financial perspective
- An integral process present in key events such as budgeting, investment research, project financing and raising capital
- This model is key in allowing the executive management to know the direction of the business based on its financial performance

https://www.investopedia.com/ask/answers/difference-between-financial-forecasting-and-financial-modeling/

Option Pricing Model

- Estimation of an option contract's value by assigning a price known as a premium, based on the calculated probability that the contract would finish with intrinsic value at the expiration
- A key property of this model is that it accounts for all important variables such as interest rates, current market price, strike price, volatility, and time to expiration to theoretically value an option
- Increasing an option's maturity or implied volatility will increase the price of the option, holding all else constant
- Common option pricing methods include the Black Scholes model, the binomial tree and the Monte-Carlo simulation method

https://www.investopedia.com/terms/o/optionpricingtheory.asp#:~:text=Essentially%2C%20option%20pricing%20theory%20provides,to%20theoretically%20value%20an%20option.