Case study metabical

Education

Examine methods for forecasting demand of a new product and estimating profitability. R/ The different forecasting methods can be divided in two categories.

Qualitative methods: these types of methods are usually based on the opinion of people, some of these methods are:

- Executive committee consensus: develop medium-long forecast by asking a group of knowledgeable executives their opinions with regard to future values of the items being forecasted. Dolphin method: involves a group of experts who eventually develop a consensus; they usually make long range forecasts for future technologies or future sales of a new product.
- Sales force composite: sales people are a good source of information with regard to customers' future intentions to buy the new product.
- Customer surveys: by using a customer survey, a company can base its demand forecast on the customers' purchasing plans.

Quantitative methods: These methods forecast demand levels based on analysis of historical time series. Quantitative methods are used to estimate future demands as a function of past data; appropriate when past data are available. The method is usually applied to short-intermediate range decisions.

- Forecasts based on historical data: these methods are probably the simplest ones to deploy and can be accurate over the short term.
- Naive methods: these are the most cost-effective and efficient objective forecasting model. For stable time series data, this approach

says that the forecast for any period equals the previous period's actual value. Moving average: An indicator frequently used in technical analysis showing the average value of a security's price over a set period. Moving averages are generally used to measure momentum and define areas of possible support and resistance.

- Exponential smoothing: is a technique that can be applied to time series data, either to produce smoothed data for presentation, or to make forecasts. The time series data themselves are a sequence of observations. The observed phenomenon may be an essentially random process, or it may be an orderly, but noisy, process.

Whereas in the simple moving average the past observations are weighted equally, exponential smoothing assigns exponentially decreasing weights over time.

- Trend analysis method: These methods involve determining the trend of consumption based on past consumption and project future consumption by extrapolating this trend.
- Decomposition of time series: is a statistical method that deconstructs a time series into notional components.
- Associative (causal) forecasts:
- Regression analysis: includes a large group of methods that can be used to predict future values of variable using information about other variables.

These methods include both parametric (linear or non-linear) and non-parametric techniques.

- Econometric modeling: An economic indicator indicates change in the magnitude of an economic variable. It gives the signal about the direction of change in an economic variable. Some methods for estimating profits are: Absolute Return: The Absolute Return method calculates the cost of the shares or units in a firm, by determining the total cost associated with the open position, divided by the number of shares or units owned.

The total cost is based on the total expenditure associated with buying shares and options (including broker fees and stamp duty), less any income received from dividends or gains or losses associated with selling shares and options. The Absolute return is a very effective way of determining your overall return on a position if you are actively trading an investment as it provides a rolling view of your return. Pooling Method: This method uses pooling to calculate the cost and related return. When shares or units are acquired, the number of shares or units in the pool increases and the amount paid for them is added to the cost of the pool.