Forecasting

Since time immemorial, people have sought to predict the future. Until the emergence of the relatively modern concept of 'risk' and the development of probability theory in the 17th century, predictions about the future had traditionally been the preserve of soothsayers such as Nostradamus. However, with probability theory, mathematicians demonstrated that one could use past indicators to make educated guesses as to the expected outcome of a particular set of events, e.g., the roll of a die. All these years later, and despite our progress, we still lack the ability to predict the future. Nevertheless, by considering various risks and probabilities, we can aim to understand some likely future (sales) scenarios to a greater degree.

Naturally, if you run an existing business, you will have a trading history and will be able to use this data to make more informed decisions with regards to future possible outcomes. If you generate strong cash flows and have a stable cost base, you can assess available investment options with more confidence. On the other hand, if you are just about to start up, you obviously lack 'history', and while you can make some assessment of the initial monthly outgoings (particularly fixed costs), the real challenge is to accurately predict the likely sales revenues. Breaking revenue down into its constituents (the product price times the quantity sold) gives entrepreneurs the two key figures they need to consider to begin forecasting. Price can be determined by the entrepreneur, while quantity is the variable that is most difficult to predict (notwithstanding the correlation between price and demand).

Why is forecasting important?

Firstly, cash is the lifeblood of any business and is needed to fund working capital to enable a business to run effectively. A large number of business expenses and investments in assets need to be paid for up front, and these obviously have to be paid for out of capital. These outgoings occur against a backdrop of uncertain sales levels and often a delay in receiving cash on those sales (exacerbated if your sales are predominantly on credit). Consequently, companies need to prepare cash flow forecasts to assess what the level of the cash shortfall will be, so they can obtain financial assistance in advance, such as bank overdrafts or loans. Companies can be profitable on paper yet run the risk of falling insolvent if they do not meet their obligations as they fall due. Hence, it is necessary to understand the nuances of cash flow for your particular business from Day 1, as good cash flow management plays a large role in ensuring continued solvency.

Of additional importance, investments in businesses are based on the ability of the firm to generate free cash flows, so as to reward the investor for taking a risk. The amount of cash generated and its timing is of particular interest to investors, who face an array of investment options with various risk / return tradeoffs. Typically, investors will look to review a business plan before they invest and they will pay particular attention to the predicted sales levels and cash generation capability of the company (as detailed in the cash flow forecast). Hence, these two factors underline why accurate forecasting is of vital importance to those setting up in business.

What forces affect demand?

At the start-up stage it is difficult to assess with certainty what you believe the revenue will be for Month 1. Once you have one month of trading, then of course you can use that month's figures to forecast likely sales levels in subsequent months. As a result, when you draw up your business plan initially, you need to assess the landscape and try to estimate a range for the predicted sales levels.

The following represents a list of some questions about the key external and internal determinants of demand. Answers to these questions will support the entrepreneur in coming up with plausible figures for Month 1/ Year 1.

The Proposition

Pricing
Does the product or service fulfill an existing need? Has it been produced such that each key feature and resultant benefit is attractive to a commercially viable market segment?

What is the competitive landscape like, i.e., are there barriers to entry/ attractive alternatives? What is the turnover of a close competitor and how profitable are they?

Macro Environmental Trends

Competition

How is the product correlated to the external environment? Does demand drop significantly when the economy is struggling? Does the product attract extraordinary taxes or tariffs, e.g., alcohol and tobacco? Will a growing environmental consciousness affect demand levels?

Is the product priced at a level that will attract a sufficient number of customers? Standard demand and supply rules would dictate that the lower the price, the higher the demand for a product. What price level maximizes profitability?

Seasonal Characteristics
Substitutes

Is there any seasonality or cyclicality element to the product or service?

Are there many attractive substitutes? What are the main bases for differentiation in the market, i.e., price, features, service, etc.?

The Market

Marketing

What is the market demand for the product category (i.e., the size of the prize you are chasing)? Is it growing or is it stagnant?

Is there a marketing plan in place? What are the key marketing activities? Is there sufficient budget to effectively target various segments?

Route to Market

Has the company secured a "route to market"? How will customers access the product?

Having assessed the various determinants of demand, it is now a little easier to hone in on a plausible range of sales forecasts for the months and years ahead.

How do you make a sales forecast?
Once you have considered the context, you are now in a more informed position to consider potential revenue figures.

There are two main elements to forecasting – the use of facts and the use of subjective assessment / judgment. Given the uncertainty, you can aim to identify a range for the sales predictions depending on your assessment of the potential impact on sales of specific conditions, be they environmental or company-specific (or a combination of both). There are numerous determinants of demand, ranging from the performance of the overall economy to whether there is any appetite (demand) for your particular product or service. You need to consider which of these is likely to have the biggest impact on your offering. Ideally, you should be able to obtain a Profit and Loss / Income Statement (facts) for a competitor and you could use that as a reference point to assess likely demand levels for your company (judgment).

Looking for comparable indicators for a service
Not every new company has a directly comparable competitor whose accounts can be scrutinized for sales data. However, no matter how unique your concept is, if you define your market widely enough, it is likely that you can use figures from alternative offerings (facts) to help you assess likely demand levels (judgment). For example, when the Millennium Dome was being launched in London in 2000, they initially targeted 12 million visitors in Year 1. While the actual visitor figures reached an impressive 6.5 million, the

huge shortfall in numbers meant that it was not even close to breaking even / financial viability and it ultimately failed as a venture. Had senior management looked closely at visitor figures for the UK's other top paying attractions, they would have found that Alton Towers was top at 2.65 million visitors closely followed by Madam Tussaud's and the Tower of London. These proxies would have given them a clearer sense of the range in numbers and a more conservative target within this range would have resulted in a very different proposition / investment structure from Day 1.

There are a number of different methods to try to assess sales levels for a new product. Firstly, by assessing the key benefits of the product, it is possible to understand the core need being fulfilled. This will then help inform you of a category of complements or substitute products it belongs to. More scientific approaches include George Day's top down and bottom up approaches which seek to assess demand from different sides. The top down approach seeks to drill down from the total population to a final market segment, whereas the bottom up approach looks to generalize from the consumption of individual customers.

How do you make a more accurate sales forecast?
Having assessed the wider environmental conditions and considered the internal decisions regarding the proposition, it is possible to make more accurate predictions for Month 1. After that, it is a case of extrapolating into the future using a growth factor and flexing for seasonality or cyclical trends. Notwithstanding the difficulties in forecasting for a start-up, the real benefits accrue after a year of successful trading. Once there is an historical record for a year of trading, it is then possible to plan with more certainty through the use of more scientific methods, such as trend analysis and comparison with variables. For example, an ice cream vendor could compare sales of ice cream with an obvious variable – weather temperature – in order to assess the correlation between the two variables. Once a sales forecast has been made, it can then be used for budgeting, allocating resources, managing cash flow, and as a basis to secure investment.

Sales Forecasting

Introduction

Sales forecasting is a difficult area of management. Most managers believe they are good at forecasting. However, forecasts made usually turn out to be wrong! Marketers argue about whether sales forecasting is a science or an art. The short answer is that it is a bit of both.

Reasons for undertaking sales forecasts

Businesses are forced to look well ahead in order to plan their investments, launch new products, decide when to close or withdraw products and so on. The sales forecasting process is a critical one for most businesses. Key decisions that are derived from a sales forecast include:

- Employment levels required
- Promotional mix
- Investment in production capacity

Types of forecasting

There are two major types of forecasting, which can be broadly described as **macro** and **micro**:

Macro forecasting is concerned with forecasting markets in total. This is about determining the existing level of Market Demand and considering what will happen to market demand in the future.

Micro forecasting is concerned with detailed unit sales forecasts. This is about determining a product's market share in a particular industry and considering what will happen to that market share in the future.

The selection of which type of forecasting to use depends on several factors:

(1) **The degree of accuracy required** – if the decisions that are to be made on the basis of the sales forecast have high risks attached to them, then it stands to reason that the forecast should be prepared as accurately as possible. However, this involves more cost

(2) **The availability of data and information** - in some markets there is a wealth of available sales information (e.g. clothing retail, food retailing, holidays); in others it is hard to find reliable, up-to-date information

(3) **The time horizon that the sales forecast is intended to cover**. For example, are we forecasting next weeks' sales, or are we trying to forecast what will happen to the overall size of the market in the next five years?

(4) **The position of the products in its life cycle.** For example, for products at the "introductory" stage of the product life cycle, less sales data and information may be available than for products at the "maturity" stage when time series can be a useful forecasting method.

Creating the Sales Forecast for a Product

The first stage in creating the sales forecast is to estimate **Market Demand.**
Definition:

Market Demand for a product is the total volume that would be bought by a defined customer group, in a defined geographical area, in a defined time period, in a given marketing environment. This is sometimes referred to as the Market Demand Curve.

For example, consider the INDIAN Overseas Mass Market Package Holiday Industry. What is Market Demand?

Using the definition above, market demand can be defined as:

Defined Customer Group: Customers Who Buy an Air-Inclusive Package Holiday
Defined Geographical Area: Customers in India
Defined Time Period: A calendar year
Defined Marketing Environment: Strong consumer spending for overseas holidays affected by concerns over international terrorism
Stage two in the forecast is to estimate **Company Demand**
Company demand is the company's share of market demand.
This can be expressed as a formula:
Company Demand = Market Demand v Company's Market Share
For example, taking our package holiday market example; the company demand for First Choice Holidays in this market can be calculated as follows:
First Choice Holidays Demand = Rs7.9 billion x 15% Market Share = Rs1.2 billion
A company's share of market demand depends on how its products, services, prices, brands and so on are perceived relative to the competitors. All other things being equal, the company's market share will depend on the size and effectiveness of its marketing spending relative to competitors.
Step Three is then to develop the **Sales Forecast**
The Sales Forecast is the expected level of company sales based on a chosen marketing plan and an assumed marketing environment.
Note that the Sales Forecast is not necessarily the same as a "sales target" or a "sales budget".
A sales target (or goal) is set for the sales force as a way of defining and encouraging sales effort. Sales targets are often set some way higher than estimated sales to "stretch" the efforts of the sales force.
A sales budget is a more conservative estimate of the expected volume of sales. It is primarily used for making current purchasing, production and cash-flow decisions. Sales budgets need to take into account the risks involved in sales forecasting. They are, therefore, generally set lower than the sales forecast.
Obtaining information on existing market demand
As a starting point for estimating market demand, a company needs to know the actual industry sales taking place in the market. This involves identifying its competitors and estimating their sales.
An industry trade association will often collect and publish (sometime only to members) total industry sales, although rarely listing individual company sales separately. By using this information, each company can evaluate its performance against the whole market.
This is an important piece of analysis. Say, for example, that Company A has sales that are rising at 10% per year. However, it finds out that overall industry sales are rising by 15% per year. This must mean that Company A is losing market share – its relative standing in the industry.
Another way to estimate sales is to buy reports from a marketing research firm such as AC Neilsen, Mintel etc. These are usually good sources of information for consumer markets – where retail sales can be tracked in great detail at the point of sale. Such sources are less useful in industrial markets which usually rely on distributors.

Estimating Future Demand

So far we have identified how a company can determine the current position:

Current Company Demand = Current Market Demand x Current Market Share

How can future market demand and company demand be forecast?

Very few products or services lend themselves to easy forecasting . These tend to involve a product whose absolute level or trend of sales is fairly constant and where competition is either non-existent (e.g. monopolies such as public utilities) or stable (pure oligopolies). In most markets, total demand and company demand are not stable – which makes good sales forecasting a critical success factor.

A common method of preparing a sales forecast has three stages:

(1) Prepare a macroeconomic forecast – what will happen to overall economic activity in the relevant economies in which a product is to be sold.

(2) Prepare an industry sales forecast – what will happen to overall sales in an industry based on the issues that influence the macroeconomic forecast;

(3) Prepare a company sales forecast – based on what management expect to happen to the company's market share

Sales forecasts can be based on three types of information:

(1) What customers say about their intentions to continue buying products in the industry

(2) What customers are actually doing in the market

(3) What customers have done in the past in the market

There are many market research businesses that undertake surveys of customer intentions – and sell this information to businesses that need the data for sales forecasting purposes. The value of a customer intention survey increases when there are a relatively small number of customers, the cost of reaching them is small, and they have clear intentions. An alternative way of measuring customer intentions is to sample the opinions of the sales force or to consult industry experts

Time Series Analysis

Many businesses prepare their sales forecast on the basis of past sales.

Time series analysis involves breaking past sales down into four components:

(1) The trend: are sales growing, "flat-lining" or in decline?

(2) Seasonal or cyclical factors. Sales are affected by swings in general economic activity (e.g. increases in the disposable income of consumers may lead to increase in sales for products in a particular industry). Seasonal and cyclical factors occur in a regular pattern;

(3) Erratic events; these include strikes, fashion fads, war scares and other disturbances to the market which need to be isolated from past sales data in order to be able to identify the more normal pattern of sales

(4) Responses: the results of particular measures that have been taken to increase sales (e.g. a major new advertising campaign)

Using time series analysis to prepare an effective sales forecast requires management to:

- Smooth out the erratic factors (e.g. by using a moving average)
- Adjust for seasonal variation

- Identify and estimate the effect of specific marketing responses