Forecasting Skills

WHAT TYPES OF FORECASTING do you do? Have you tried to predict the outcome of a sporting event or your final grade in a course even before you enrolled? Do you trust the weather app on your phone? Have you tracked how accurate your phone "predicts" the weather? Good forecasters use many types of thinking skills to create a forecast: estimation, foresight, and acuity. In addition, they are open to multiple points of view. Which forecasting skills do you want to develop? This lesson introduces the basics of financial forecasting and how it is used in business.

Objective:

Summarize financial forecasting skills and strategies.

Key Terms:

budget
cash flow
causal model forecasting
financial forecasting
forecast
forecast analyst
indicator
qualitative forecasting
time series analysis and projection forecasting
trend
variance

Understanding Forecasting Skills

A **forecast** is the use of historic data to estimate or predict a future trend. It is a way to plan business strategies that emphasize not "what" a person thinks, but "how" a person thinks. According to Philip E. Tetlock and Dan Gardner, the authors of *Superforecasting: The Art and Science of Prediction*, good forecasting skills require a person to be "open-minded, intellectually humble, numerate, thoughtful updaters, and hard working." A good forecaster needs to know a little bit about a lot of things. For instance, he or she needs to be current in the issues that

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directly affect the business's bottom line and to be aware of the world. The following abilities are critical to becoming a successful forecaster:

- Foresight (the anticipation of "something" coming)
- Being open to multiple points of view (considering and synthesizing alternative thoughts)
- Acuity (keen perception)
- Thinking in probabilities (yes, maybe, or no require timely and accurate feedback about decisions)

FINANCIAL FORECASTING

Financial forecasting is the process of predicting the expected monetary or economic position of a company's operations and cash flow. Generally, forecasts are limited to major revenue and expense categories. However, cash flow is the only balance sheet item typically forecasted.

FIGURE 1. A forecast is the use of historic data to estimate or predict a future trend. Forecasting is often used for stock market analysis.

Cash Flow

Cash flow is the total amount of money going into and out of a business. The forecast is updated in the short term—usually monthly or quarterly.

Decisions

Management uses forecasts to make decisions regarding employee hours, inventory stock levels, and facility production levels in the short run. Forecasting may be used by management to develop "what if" scenarios and contingency plans. When forecasting is used in this manner, management and accountants work together to develop hypothetical situations and project what the results of operations will be under those circumstances.

Budget

A **budget** is an estimate of revenues and expenses for a period of time that is evaluated periodically. Companies create budgets as goals for sales, expenses, and profits. Budgeted amounts are compared to actual amounts to determine if they are meeting goals. Some may think of budgeting and forecasting as the same thing; they differ in that a credible budget is often the result of accurate forecasting. A **variance** is the difference between actual and bud-

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geted figures. Budgets are updated annually unless significant information related to the budget causes a change.

Immediate Changes

Forecast information is used to make immediate changes to company operations, whereas a budget includes targets a company seeks to hit. Some say forecasting is an educated guess about future revenues and expenses and that budgeting is a goal that reflects future revenues and spending.

FIGURE 2. In which of these business-plan categories would a company use forecasting to inform their projects and production?

Forecast Analysis

Accountants are often part of a business's forecasting process as are forecast analysts. A **forecast analyst** is a person who uses data to predict future productivity levels, sales, expenses, etc. A forecast analyst usually has a bachelor's degree in business or economics.

Courses

Courses helpful for those seeking a role as a forecast analyst are:

- Research
- Data analysis
- Statistics
- Economics
- Finance

Business Uses

Businesses use forecasting to:

- Project sales
- Organize supply-chains of production materials
- Project return on investment (ROI) for potential company expansion projects
- Budget and plan
- Analyze stock market and other investments
- Predict probable project costs
- Develop "what if" and "worst-case" scenario planning

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FORECASTING STRATEGIES

It is imperative to utilize certain techniques to forecast.

Forecasting Tools

Forecast analysts use financial models and measurements to make financial predictions. Technology has advanced and so have the number and types of forecasting tools available to forecasters. Selection of the forecasting tool is critical to achieving the best projections for a specific company. Those developing the forecasts must be familiar with the many methods available and choose the one best suited for the company's circumstances.

Factors

Some factors that impact the choice of forecast method/tool are:

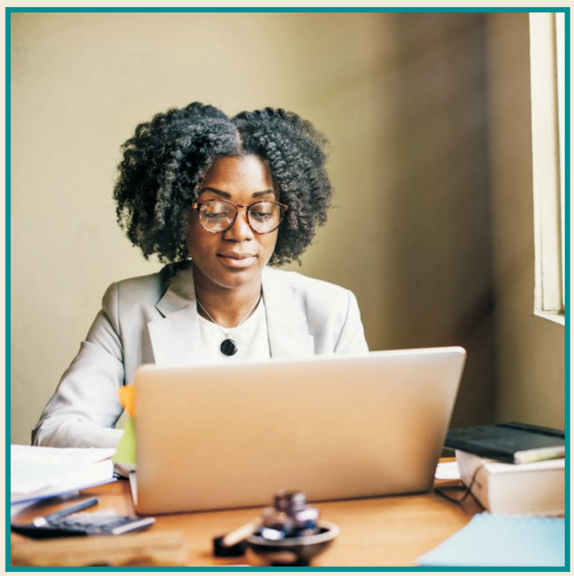
- Amount of available historical data
- Desired level of accuracy required for forecast being developed
- Time period being forecast
- Cost/benefit of the forecast
- Time horizon for decision-making
- Overall volatility of current economic conditions

FURTHER EXPLORATION...

**ONLINE CONNECTION:
Business Planning, Budgeting, and Forecasting**

The Journal of Accountancy is a useful resource. While reading articles, take notes and share your findings with your classmates. The Journal of Accountancy offers a variety of articles related to budgeting and forecasting at

http://www.journalofaccountancy.com/topics/management-accounting/planning-budgeting-forecasting.html



How do you learn new information? Becoming a financial analyst and/or forecaster would require technical reading. A good place to begin this reading is on the Journal of Accountancy.

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Technology Forecasting Tools

Technology forecasting tools include spreadsheet software for modeling, financial analysis, and report generation; database software to collect data that may be used in decision-making; and industry-specific software to build models particular to certain types of business operations.

Human Forecasting Tools

Human forecasting tools include a good understanding of the company and the environment in which it operates. Quality forecasting requires:

- Experts who review numbers and statistics
- Company executives who weigh options and people who choose the key indicators for any model

Trends

Forecasting involves identifying and monitoring trends. A **trend** is the general direction in which a condition is changing or developing. Analysts map historical data to help identify trends and watch for financial indicators. An **indicator** is a statistic or a variable that signals a change or shift in a condition or a trend. Three basic types of indicators are leading, coincident, and lagging.

- Leading indicators are predictive and occur before the event or trend takes place.
- Coincident indicators happen at the same time as the general trend.
- Lagging indicators occur after the trend is established.

Forecasting Methods

Three basic types of forecasting methods are qualitative, time series analysis and projection, and causal models. Depending on the method chosen for forecasting, the techniques available will vary.

Qualitative Forecasting

Qualitative forecasting is a technique that relies on opinion and information specific to the forecast being made. Qualitative techniques include gathering opinions of experts. The qualitative technique may or may not take historical information into consideration based on the scenario. Depending upon the forecast being developed, the experts may be customers or those working in the field.

- Market research surveys may be conducted with customers.
- Questionnaires may be administered to a panel of experts or to company members with extensive experience.

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Time Series Analysis and Projection Forecasting

Time series analysis and projection forecasting is a technique that relies on historical data to identify patterns and trends, along with related changes in those patterns. Time series analysis and projection include analysis, such as:

- Moving average computations
- Mathematical models
- Trend analysis

FIGURE 3. Think of a company you would like to own. What types of data would you collect and analyze before making financial decisions about a company that you owned? Would it include the four categories pictured here? Accurate trend analysis depends on your ability to identify patterns.

Causal Model Forecasting

Causal model forecasting is a process that uses information about the relationship between items within the company's systems to develop forecasts. Causal methods include regression models and other models that involve looking at the interdependence of the business with other industry and economic factors. The analysis of economic indicators that may be incorporated in a causal model include:

- Inflation rate
- Unemployment rate
- Gross domestic product growth

Summary:

A forecast is the use of historic data to estimate or predict a future trend. It is a way to plan business strategies that emphasizes not "what" you think, but "how" you think. A good forecaster needs to know a little bit about a lot of things—to be current in the issues that directly affect their business's bottom line and to be aware of the world. Successful forecasters use many types of thinking skills to create a forecast: estimation, foresight, and acuity. In addition, they are open to multiple points of view.

Financial forecasting estimates a company's future financial outcomes based on historical data. Financial forecasting is a tool used to help businesses plan future sales revenue, spending patterns, and cash flows. Three basic types of forecasting methods are qualitative, time series analysis and projection, and causal models. Depend-

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ing on the method chosen for forecasting, the techniques available will vary. Although technology is heavily involved in financial forecasting, the human element is still required to provide leadership. A good understanding of the company and the environment in which it operates is a necessity for quality forecasting to take place.

Checking Your Knowledge:

1. What is forecasting?
2. How do budgeting and forecasting differ?
3. What are the requirements to become a forecast analyst?
4. Describe the three common forecasting methods.
5. What considerations are made when choosing a forecasting method?

Expanding Your Knowledge:

Check out career opportunities in forecasting on the Career Builder website at http://www.careerbuilder.com/jobs-forecasting.

Web Links:

How to Forecast Cash Flow

http://articles.bplans.com/how-to-forecast-cash-flow/

Making Sense of Market Forecasts

https://www.wsj.com/articles/SB10001424052748703675904576064320900295678

Causal Model Forecasting

http://www.fao.org/docrep/003/T4240E/T4240E09.htm

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