

Elements of Forecasting

in Business, Finance, Economics and Government

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“Solutions Manual”

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Preface

This is quite a nonstandard “Solutions Manual,” but I use the term for lack of something more descriptively accurate. Many of the Problems and Complements don't ask questions, so they certainly don't have solutions; instead, they simply introduce concepts and ideas that, for one reason or another, didn't make it into the main text. Moreover, even for those Problems and Complements that *do* ask questions, the vast majority don't have explicit or unique solutions. Hence the “solutions manual” offers remarks, suggestions, hints, and occasionally, solutions. Most of the Problems and Complements are followed by brief remarks marked with asterisks, and in the (relatively rare) cases where there was nothing to say, I said nothing.

F.X.D.

Solutions

Chapter 1 Problems and Complements

1. (Forecasting in daily life: we are all forecasting, all the time)
 - a. Sketch in detail three forecasts that you make routinely, and probably informally, in your daily life. What makes you believe that the forecast object is predictable? What factors might introduce error into your forecasts?
 - b. What decisions are aided by your three forecasts? How might the degree of predictability of the forecast object affect your decisions?
 - c. How might you measure the "goodness" of your three forecasts?
 - d. For each of your forecasts, what is the value to you of a "good" as opposed to a "bad" forecast?

* Remarks, suggestions, hints, solutions: The idea behind all of these questions is to help the students realize that forecasts are of value only in so far as they help with decisions, so that forecasts and decisions are inextricably linked.

2. (Forecasting in business, finance, economics, and government) What sorts of forecasts would be useful in the following decision-making situations? Why? What sorts of data might you need to produce such forecasts?

- a. Shop-All-The-Time Network (SATTN) needs to schedule operators to receive incoming calls. The volume of calls varies depending on the time of day, the quality of the TV advertisement, and the price of the good being sold. SATTN must schedule staff to minimize the loss of sales (too few operators leads to long hold times, and people hang up if put on hold) while also considering the loss

associated with hiring excess employees.

- b. You're a U.S. investor holding a portfolio of Japanese, British, French and German stocks and government bonds. You're considering broadening your portfolio to include corporate stocks of Tambia, a developing economy with a risky emerging stock market. You're only willing to do so if the Tambian stocks produce higher portfolio returns sufficient to compensate you for the higher risk. There are rumors of an impending military coup, in which case your Tambian stocks would likely become worthless. There is also a chance of a major Tambian currency depreciation, in which case the dollar value of your Tambian stock returns would be greatly reduced.
- c. You are an executive with Grainworld, a huge corporate farming conglomerate with grain sales both domestically and abroad. You have no control over the price of your grain, which is determined in the competitive market, but you must decide what to plant and how much, over the next two years. You are paid in foreign currency for all grain sold abroad, which you subsequently convert to dollars. Until now the government has bought all unsold grain to keep the price you receive stable, but the agricultural lobby is weakening, and you are concerned that the government subsidy may be reduced or eliminated in the next decade. Meanwhile, the price of fertilizer has risen because the government has restricted production of ammonium nitrate, a key ingredient in both fertilizer and terrorist bombs.
- d. You run BUCO, a British utility supplying electricity to the London metropolitan area.