

Preface

An Introduction to Financial Forecasting in Investment Analysis

The objective of this proposed text is a 250 page introductory financial forecasting text that exposes the reader to applications of financial forecasting and the use of financial forecasts in making business decisions. The primary forecasts examined in this text are earnings per shares (eps). This text will make extensive use of I/B/E/S data, both historic income statement and balance sheet data and analysts' forecasts of eps. We calculate financial ratios that are useful in creating portfolios that have generated statistically significant excess returns in the world of business. The intended audience is investment students in universities and investment professionals who are not familiar with many applications of financial forecasting. This text is a data-oriented text on financial forecasting, understanding financial data, and creating efficient portfolios. Many regression and time series examples use E-Views, OxMetrics, Scientific Computing Associates (SCA), and SAS software.

The first chapter is an introduction to financial forecasting. We tell the reader why one needs to forecast. We introduce the reader to the moving average and exponential smoothing models to serve as forecasting benchmarks.

The second chapter introduces the reader to the regression analysis and forecasting. In the third chapter, we use regression analysis to examine the forecasting effectiveness of the composite index of leading economic indicators, LEI. Economists have constructed leading economic indicator series to serve as a business barometer of the changing US economy since the time of Wesley C. Mitchell (1913). The purpose of this study is to examine the time series forecasts of composite economic indexes, produced by The Conference Board (TCB) and test the hypothesis that the leading indicators are useful as an input to a time series model to forecast real output in the USA. Economic indicators are descriptive and anticipatory time-series data are used to analyze and forecast changing business conditions. Cyclical indicators are comprehensive series that are systemically related to the business cycle.

The third chapter introduces the reader to the forecasting process and illustrates exponential smoothing and (Box–Jenkins) time series model estimations and forecasts using the US Real Gross Domestic Product (GDP). The chapter is a “hands-on” exercise in model estimating and forecasting. In this chapter, we examine the forecasting effectiveness of the composite index of leading economic indicators, LEI. The leading indicators can be an input to a transfer function model of real Gross Domestic Product, GDP. The transfer function model forecasts are compared to several naïve models in terms of testing which model produces the most accurate forecast of real GDP. No-change forecasts of real GDP and random walk with drift models may be useful as a forecasting benchmark (Mincer and Zarnowitz 1969; Granger and Newbold 1977).

The fourth chapter addresses the issue of composite forecasting using equally weighted and regression-weighted models. We discuss the use of GDP forecasts. We analyze a model of United States equity returns, the USER Model, to address issues of outliers and multicollinearity. The USER Model combines Graham & Dodd variables, such as earnings, book value, cash flow, and sales with analysts’ revisions, breadth, and yields and price momentum to rank US equities and identify undervalued securities. Expected returns modeling has been analyzed with a regression model in which security returns are functions of fundamental stock data, such as earnings, book value, cash flow, and sales, relative to stock prices, and forecast earnings per share (Fama and French 1992, 1995; Bloch et al 1993; Haugen and Baker 2010; Stone and Guerard 2010).

In Chapter 5, we expand upon the time series models of Chap. 2 and introduce the reader to multiple time series model and Granger causality testing as in the Ashley, Granger, and Schmalensee (1980) and Chen and Lee (1990) tests. We illustrate causality testing with mergers, stock prices, and LEI data in the USA in the postwar period.

In Chapter 6, we examine analysts’ forecasts in portfolio construction and management. We use the Barra risk optimization analysis system, the standard portfolio risk model in industry, to create efficient portfolios. The Barra Aegis system produces statistically significant asset selection using the USER Model for the 1980–2009 period.

In Chapter 7, we show how US, Non-US, and Global portfolio returns can be enhanced by use of eps forecasts and revisions. We use the Sungard APT and Axioma systems to create efficient portfolios using principal components-based risk models. McKinley Capital Management hosted a research seminar in Anchorage in July 2011. The APT and Axioma results presented in Chapter 7 extend portfolio construction applications presented at the McKinley conference and published in the Spring 2012 *Journal of Investing* special edition on Quantitative Risk Models.

We illustrate global market timing and tactical asset management in Chapter 8. The ability to forecast market shifts allows the manager to increase his or her risk acceptance and enhance the risk-return tradeoff.

We summarize our processes, tests, and results in Chapter 9. We produce conclusions that are relevant to the individual investor and portfolio manager.

The author acknowledges the support of his wife of 30-plus years, Julie, and our three children, Richard, Katherine, and Stephanie. The author gratefully acknowledges the comments and suggestions of several gentlemen who each read several chapters of this monograph. Professors Derek Bunn, of the London Business School, Martin Gruber, of New York University, Dimitrios Thomakos, of the University of Peloponnese (Greece), and Jose Menchero of MSCI Barra. Special thanks to Anureef Saxena, Robert Stubbs, and Dewitt Miller for suggestions and edits of Chapters 7 and 8. Robert (Rob) Gillam, the Chief Investment Officer of McKinley Capital Management, is acknowledged for his support of APT, which he brought into our firm seven years ago when he hired me, and Axioma, which we purchased last year. Any errors remaining are the responsibility of the author.

Anchorage, AK, USA

John B. Guerard, Jr.

Introduction to Financial Forecasting in Investment
Analysis

Guerard, J.

2013, XI, 236 p., Hardcover

ISBN: 978-1-4614-5238-6