PREDICTING TURNING POINTS IN THE INTEREST RATE CYCLE

James W. Coons

ROUTLEDGE LIBRARY EDITIONS: BUSINESS CYCLES



Volume 2

PREDICTING TURNING POINTS IN THE INTEREST RATE CYCLE

This page intentionally left blank

PREDICTING TURNING POINTS IN THE INTEREST RATE CYCLE

JAMES W. COONS



First published in 1994

This edition first published in 2015 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

and by Routledge 711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 1994 James W. Coons

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library

ISBN: 978-1-138-85286-0 (Set) eISBN: 978-1-315-71360-1 (Set) ISBN: 978-1-138-88798-5 (Volume 2) eISBN: 978-1-315-71365-6 (Volume 2)

Publisher's Note

The publisher has gone to great lengths to ensure the quality of this reprint but points out that some imperfections in the original copies may be apparent.

Disclaimer

The publisher has made every effort to trace copyright holders and would welcome correspondence from those they have been unable to trace.

PREDICTING TURNING POINTS IN THE INTEREST RATE CYCLE

JAMES W. COONS

GARLAND PUBLISHING, INC. New York & London / 1994 Copyright © 1994 James W. Coons All rights reserved

Library of Congress Cataloging-in-Publication Data

Coons, James W., 1957-

Predicting turning points in the interest rate cycle / James W. Coons p. cm. — (The Financial sector of the American economy) Includes bibliographical references and index. ISBN 0-8153-1777-8 (alk. paper) 1. Interest rates. 2. Business cycles. I. Title. II. Series. HB539.C774 1994 332.8'2—dc20 93-49430 CIP

> Printed on acid-free, 250-year-life paper Manufactured in the United States of America

To Maggie

This page intentionally left blank

Contents

| Preface xi |
|---|
| List of Illustrations |
| List of Tables |
| List of Abbreviations xvii |
| I. Introduction |
| Purpose and Scope |
| Research Methods |
| Delimitations |
| Limitations |
| Structure of the Book 7 |
| II. The Folly of Forecasting 11 |
| The Record of the Experts |
| Benchmark Measures |
| The Naive Approach |
| Expectations and the Term Structure |
| Expectations and the Futures Market |
| The Stumbling Block of Market Efficiency 18 |
| The Forecaster's Paradox |
| The Fallacy of Omission 21 |
| Toward a Redefinition of the Problem |
| III. The Interest Rate Cycle 29 |
| Elements of a Cycle 30 |
| Other Major Moves 30 |
| "I Know One When I See One" |
| Shooting in the Dark |
| What is the Interest Rate Cycle? |
| The Composite Interest Rate Cycle Index |

| Construction of the Index | 33 |
|---|------------|
| Standardization | 35 |
| Trend Elimination | 36 |
| Index Cumulation | 36 |
| Identification of Peaks and Troughs | 37 |
| In Search of a Method | 38 |
| The Guiding Light of Monetary Policy | 39 |
| Selection Rules and Results | 41 |
| Birds of a Feather | 44 |
| Summary | 45 |
| IV. Benchmark Turning Point Forecasts | 53 |
| The Naive Filter | 54 |
| Tuning in the Signal | 54 |
| Scoring the Benchmark Forecasts | 56 |
| A Broader Scope | 62 |
| V. Selecting a Leading Indicator | 67 |
| Factors Affecting Interest Rates | 67 |
| The Wicksellian Theory of Loanable Funds | 67 |
| The Gibson Paradox and the Fisher Effect | 68 |
| The Inflation-Interest Rate Link | 70 |
| Measuring the Theory | 71 |
| The Fisher Equations | 72 |
| The Loanable Funds Model | 73 |
| Selecting a Leading Indicator | 75 |
| How to Pick a Winner | 76 |
| The Leading Inflation Index | 77 |
| VI. Sequential Filter Turning Point Forecasts | 85 |
| In Search of a Signal | 85 |
| Sequential Analysis to the Rescue | 88 |
| Applying Neftci's Algorithm | 89 |
| The Framework | 89 |
| The Model | 90 |
| Application to the Interest Rate Cycle | 9 0 |
| Conditional Probability Distributions | 91 |
| Pick Your Poison | 93 |
| Empirical Results | 94 |
| Comparison with Benchmark Forecasts | 99 |
| | |

| Asleep at the Switch? | 99 |
|----------------------------------|-----|
| Twice as Nice | 99 |
| State of Rates Recognition | 100 |
| The Current State of Rates | 101 |
| Keeping in Touch | 102 |
| VII. Summary and Conclusions | 107 |
| The Model and the Test | 108 |
| Specific Findings | 108 |
| Conclusions | 109 |
| Suggestions for Further Research | 109 |
| Afterword | 113 |
| Bibliography | 117 |
| Index | 129 |

This page intentionally left blank

Preface

Someone once said that forecasting is very difficult, especially if it is about the future. Vast amounts of resources have been devoted over the years in attempts to overcome this difficulty. The state-of-theart today relies on a heavy dose of statistical analysis, usually involving some form of regression application. The poor track record of forecasters, particularly when it comes to interest rate forecasting, is a serious indictment of such attempts. The purpose of the study presented in this book is to evaluate an alternative approach—the sequential filter—to managing the uncertainty inherent in the future course of the interest rate cycle.

The book has a direct bearing on the work of asset-liability managers in financial institutions, and is accessible to those with an undergraduate-level background in statistics. The application of the sequential filter to the interest rate cycle has relevance to portfolio managers, securities traders, finance professionals, and individual investors. All forecasters should have an interest in the general approach.

The study presented in this book was prepared and submitted in June 1990 as a thesis in partial fulfillment of the requirements for graduation from the Stonier Graduate School of Banking conducted by The American Bankers Association at The University of Delaware. The thesis was one of eight studies selected by a committee of eight seniorlevel bankers and academicians in the industry to receive the prestigious Library Award, based on the significance and originality of the topic, the clarity of presentation, and the thoroughness of the research. A revised version of the thesis was presented during the Contributed Papers session at the thirty-second annual meeting of the National Association of Business Economists in Washington, D.C. Since the initial study was completed, the methods described and employed have been used to augment the interest rate forecasting process at The Huntington National Bank in Columbus, Ohio. The material presented in this book draws on the research of many individuals, but especially that of Salih Neftci. Neftci's clever application of A.N. Shiryayev's formula to the problem of detecting turning points in the business cycle offers an entirely new approach to forecasting. I am indebted to senior management of The Huntington National Bank, especially Frank Wobst, Zuheir Sofia, Don Stuhldreher, and Judith Fisher, for their support, without which this book would not exist. Ed O'Hara provided valuable suggestions for the outline of the research project and the writing of the thesis. My friend and colleague Al Pankratz made many insightful comments that kept the project on track. I was also fortunate to receive the thoughtful and patient editorial assistance of Robert MacKenzie and Chuck Bartelt. Most of all, I am grateful to my wife, who gave me immeasurable support and encouragement.

> James W. Coons Columbus, Ohio

Illustrations

| 1 | One-Year Treasury Note Yield: | |
|---|---|----|
| | January to December 1989 | 13 |
| 2 | Selected Interest Rates: 1980 to 1989 | 33 |
| 3 | The Composite Interest Rate Cycle Index (CIRCI): 1953 to 1989 | 38 |
| 4 | Interest Rates and the Business Cycle: 1946 to 1989 | 40 |
| 5 | Cyclical Peaks and Troughs in the Composite Interest Rate Cycle Index (CIRCI): 1953 to 1989 | 42 |
| 6 | Comparison of the Timing of Turning Points in the CIRCI and its Components: 1953 to 1988 | 48 |
| 7 | The Credit Market | 69 |
| 8 | The Leading Inflation Index and the CIRCI:1953 to 1989 | 79 |
| 9 | The Case of the Missing Signal: January to December 1981 | 87 |