

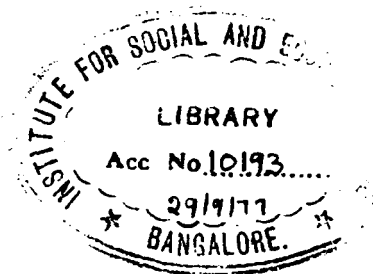
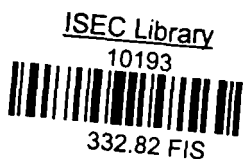
# THE THEORY OF INTEREST

AS DETERMINED BY IMPATIENCE TO SPEND INCOME  
AND OPPORTUNITY TO INVEST IT

BY

IRVING FISHER

[ 1930 ]



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TO  
*The Memory*  
OF  
JOHN RAE  
AND OF  
EUGEN VON BÖHM-BAWERK  
WHO LAID THE FOUNDATIONS  
UPON WHICH  
I HAVE ENDEAVORED  
TO BUILD

## PREFACE

THE tremendous expansion of credit during and since the World War to finance military operations as well as post-war reparations, reconstruction, and the rebuilding of industry and trade has brought the problems of capitalism and the nature and origin of interest home afresh to the minds of business men as well as to economists. This book is addressed, therefore, to financial and industrial leaders, as well as to professors and students of economics.

Inflation during and since the War caused prices to soar and real interest rates to sag in Germany and other nations far below zero, thus impoverishing millions of investors. In all countries gilt-edge securities with fixed return became highly speculative, because of the effect of monetary fluctuations on real interest rates. After the War the impatience of whole peoples to anticipate future income by borrowing to spend, coupled with the opportunity to get large returns from investments, raised interest rates and kept them high. Increased national income has made the United States a lender nation. At home, real incomes have grown amazingly because of the new scientific, industrial, and agricultural revolutions. Interest rates have declined somewhat since 1920, but are still high because the returns upon investments remain high. Impatience to spend has been exemplified by the organization of consumers' credit in the form of finance companies specially organized to accommodate and stimulate installment selling and to standardize and stabilize consumption.

This book, *The Theory of Interest*, was begun as a revision of *The Rate of Interest*, which was published in 1907, and has long since been out of print. Requests for another edition of that work have been made from time to time; but I have postponed it year by year for over two decades, because I wished to revise the presentation, and to rewrite those portions which, if I may judge from criticisms, have not been understood.

I have considered the criticisms of the former book which have come to my notice, and have, as a consequence, modified the form of presentation materially. Though, in substance, my theory of interest has been altered scarcely at all, its exposition has been so amplified and recast that it will, I anticipate, seem, to those who misunderstood my first book, more changed than it seems to me. The result has been a new book, *The Theory of Interest*, a complete rewriting of the former book, with additions of new material.

I was encouraged to write this new exposition of the theory of interest by various economists and leading business men and especially by Mr. Oswald T. Falk, one of the representatives of Great Britain at the Versailles Peace Conference, who was kind enough to say that he had gained more insight into economic theory from *The Rate of Interest* than from any other book.

Years after *The Rate of Interest* was published, I suggested the more popular term "impatience" in place of "agio" or "time preference." This catchword has been widely adopted, and, to my surprise, has led to a widespread but false impression that I had overlooked or neglected the productivity or investment opportunity side entirely. It also led many to think that, by using the new word impatience, I meant to claim a new idea. Thus I found myself credited with being the author of

"the impatience theory" which I am not, and not credited with being the author of those parts lacking any catchword. It was this misunderstanding which led me, after much search, to adopt the catchword "investment opportunity" as a substitute for the inadequate term "productivity" which had come into such general use.<sup>1</sup>

In economics it is difficult to prove originality; for the germ of every new idea will surely be found over and over again in earlier writers. For myself, I would be satisfied to have my conclusions accepted as *true* even if their origin should be credited by the critics wholly to earlier writers. While I hope I may be credited with a certain degree of originality, every thorough student of this subject will recognize in my treatment of interest theory features of his own. My own theory is in some degree every one's theory. Every essential part of it was at least foreshadowed by John Rae in 1834.

If this combined "impatience and opportunity" theory can be said to be at all distinct from all others, it is because it explicitly analyses opportunity, and fits together impatience and opportunity and income. The income concept plays the basic rôle in the theory of interest. I venture to hope that the theory, as here presented, will be found not so much to overthrow as to co-ordinate previous theories, and to help in making the chain of explanation complete and strong.

<sup>1</sup> This term, investment opportunity, seems to be the nearest expression in popular language to suggest or denote the technical magnitude  $r$  employed in this book. The full expression for  $r$  is the rate of return over cost, and both cost and return are differences between two optional income streams. So far as I know, no other writer on interest has made use of income streams and their differences, or rates of return over cost per annum. The nearest approximation to this usage seems to be in the writings of Professor Herbert J. Davenport, particularly his *Economics of Enterprise*, (Macmillan, New York, 1913) pages 368, 379, 381, 394, 395, 396, 410, 411.

Chapter I is added for the purpose of giving the reader who has not read my *Nature of Capital and Income*, a brief summary of its contents.

I have, for the first time, in a book on pure economic theory, introduced mathematics into the text, instead of relegating it entirely to appendices. This is done in view of the increasing use of mathematics and the increasing numbers of students equipped to read mathematical economics and statistics.

Parts of Chapters II and XIX, with their appendices, have appeared in different form in my monograph, "Appreciation and Interest." Thanks are due to the American Economic Association for permission to use parts of this monograph unaltered. Since it appeared three decades ago, the view expressed in it (that appreciation or depreciation in the value of money should, and to some extent does, lower or raise the rate of interest) has gained considerable currency, and has been illustrated and verified by war-time experience.

Chapter XIX is made up, for the most part, of a new and intensive study of the relationships existing between prices and interest rates. These relationships are tested by new and rigorous statistical methods of analysis. While the conclusions presented as the results of these analyses are only tentative, yet they are, I think, worthy of further statistical studies into the relation of interest rates on the one hand, and prices, business activity, bank reserves, and bank loans on the other.

In the preparation of the original book I received important aid from many persons. Finance Minister Böhm-Bawerk, whose writings on interest and whose history of the subject are classic, kindly read and criticized the chapter devoted to his theory of interest. Afterward, in the third edition of his *Positive Theorie des Kapitals*

and the *Exkurs* thereto, he devoted more than 100 pages to discussions and criticisms, favorable and unfavorable, of *The Rate of Interest* as it first appeared. I have taken account of his criticism in Chapter XX.

In preparing this book I have received suggestions and assistance from so many economists and others in the United States and abroad, that it is impracticable to mention them all by name. My associates, Dr. Royal Meeker, Dr. Max Sasuly, and Mr. Benjamin P. Whitaker, have contributed in helpful criticism, as well as in gathering material, preparing the manuscript for the printer, and reading the proof. I am especially indebted to my brother, Mr. Herbert W. Fisher, for his suggestions as to style and the manner of presentation, and to Professor Harry G. Brown for his criticism of my statement of the opportunity principle. Others who have helped me especially are: Prof. Lionel D. Edie, Mr. C. O. Hardy, Mr. R. G. Hawtry, Prof. Frank H. Knight, Prof. J. S. Lawrence, Prof. Arthur W. Marget, Prof. H. B. Meek, Prof. Wesley C. Mitchell, Mrs. Clara Eliot Raup, Prof. Henry Schultz, Prof. Henry R. Seager, Mr. Henry Simons, Mr. Carl Snyder, Prof. Jacob Viner.

I have also received valuable suggestions from members of my class in the economics of distribution; namely, Howard Berolzheimer, A. G. Buehler, Francis W. Hopkins, Richard A. Lester, Daniel T. Selko, Andrew Stevenson, Jr., and Ronald B. Welch.

IRVING FISHER

*Yale University,*  
*January, 1930*



## SUGGESTIONS TO READERS

1. The *general reader* will be chiefly interested in Parts I, II, and IV.
2. *Readers with a distaste for mathematics* will find the essential theory stated in words in Part II.
3. *Those interested in statistical analysis* should read Chapter XIX.
4. The Appendix to Chapter XIX contains the statistical tables used in the analysis presented in the text.
5. The analytical table of contents, the index, and the running page headings have been constructed with especial reference to the varying needs of different classes of readers. The book presents a complete theory of interest, and it is hoped that those who approach it from special viewpoints may, in the end, read it all.

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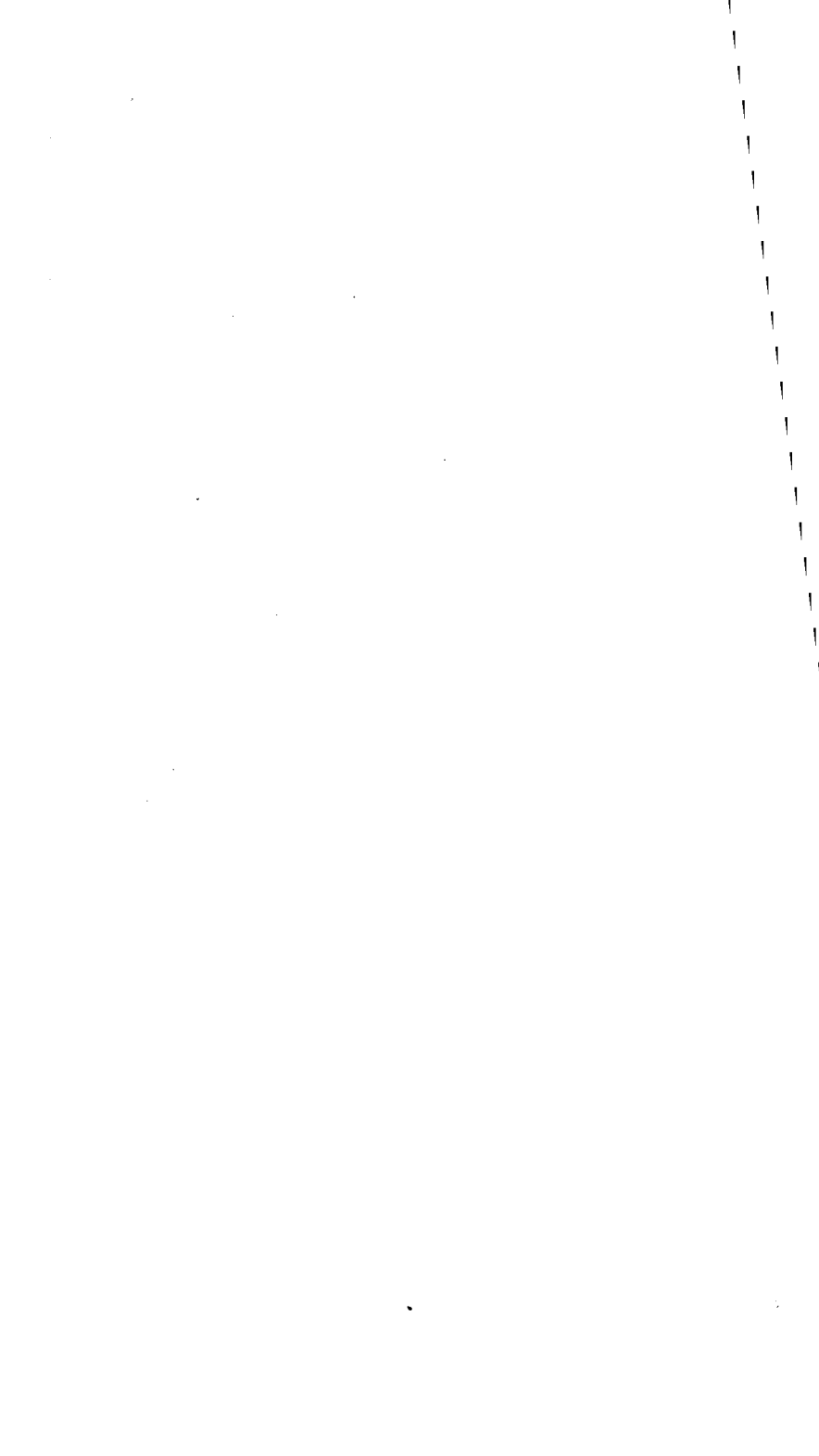
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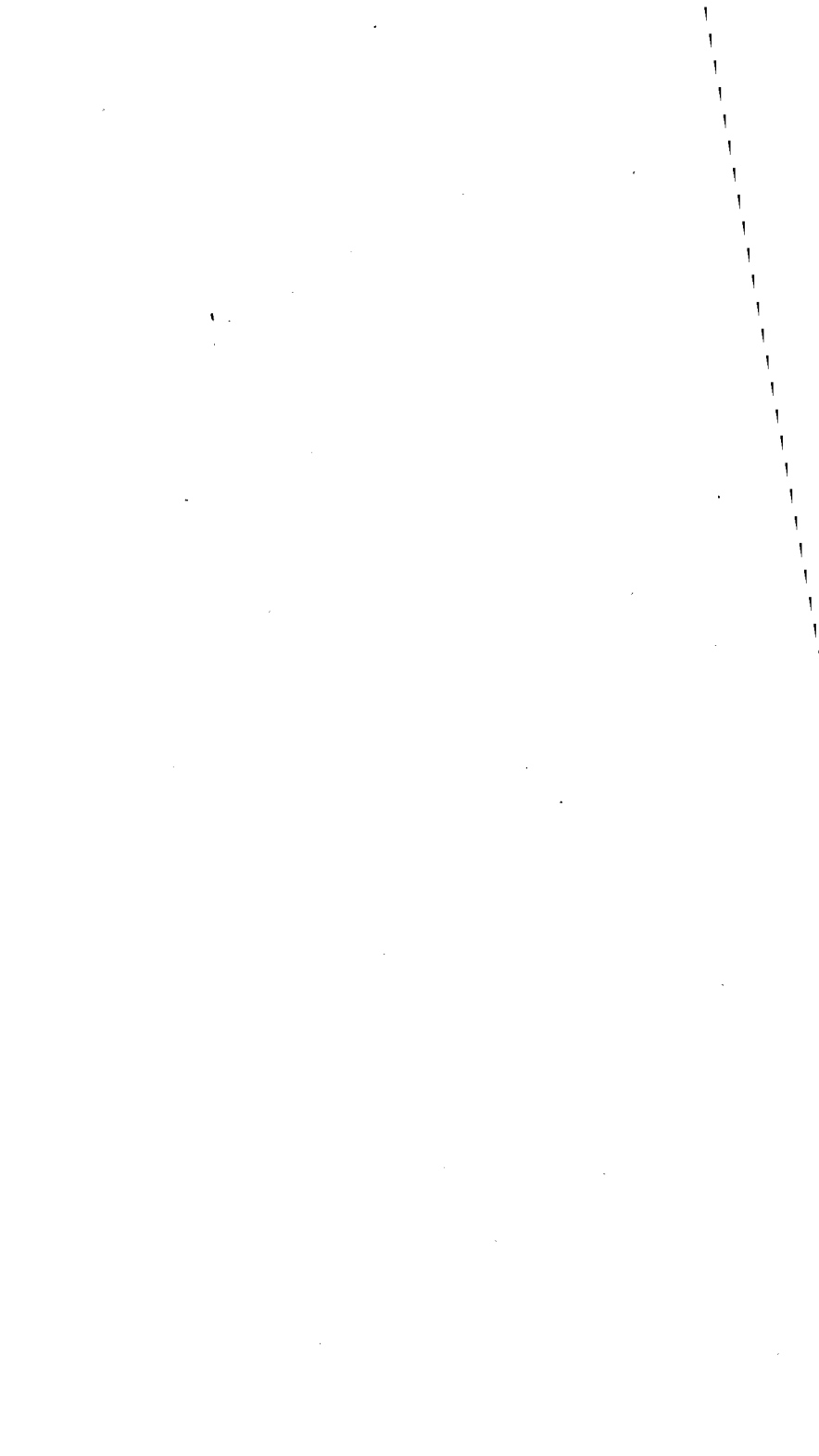
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