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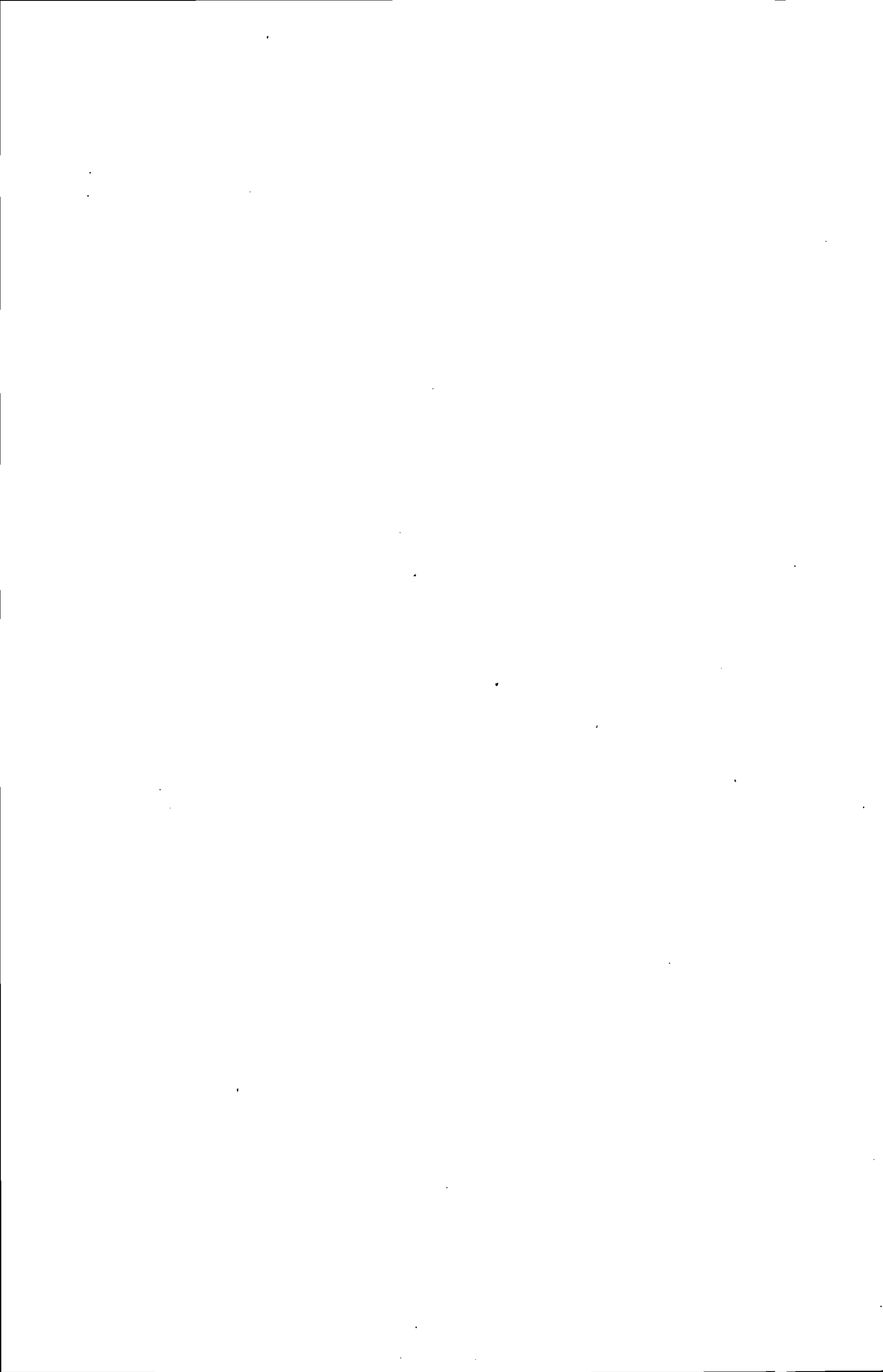

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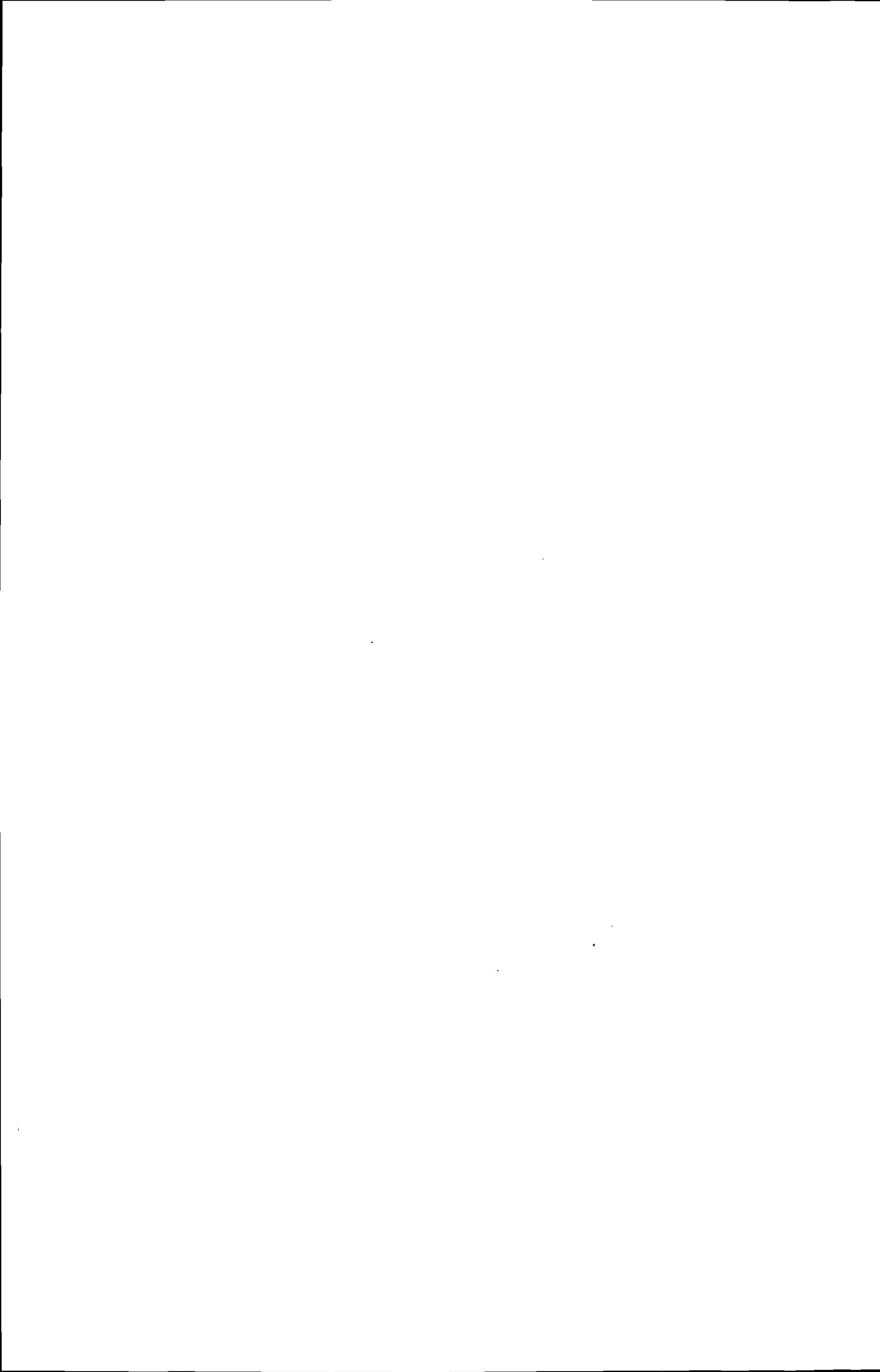
(Resolution adopted October 25, 1926, and revised February 6, 1933, February 24, 1941, and April 20, 1968)

To John, Laird, and David



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Preface

> [T]he paper currency in common use, being a currency provided by bankers, is all issued in the way of loans, except the part employed in the purchase of gold and silver. The same operation, therefore, which adds to the currency also adds to the loans: the whole increase of currency in the first instance swells the loan market. Considered as an addition to loans it tends to lower interest.
>
> John Stuart Mill, *Principles of Political Economy,* New York, Kelley, 1961, p. 646 (in the original 6th edition, 1865)

Mill's explanation of monetary effects on interest rates, with its emphasis on bank loans, could be duplicated many times from earlier and later writers down to the present time. It is part of the tradition of monetary theory. Yet it has many points of conflict with other well-established theories of money. The present book is a theoretical and empirical analysis of the points of conflict.

This study originated in my earlier work on interest rates, in which examination of their historical movements revealed a significant inverse association with the rate of change of the money stock. This was not a surprising result, but it had not been analyzed statistically before. The association was shown to reflect a short-run monetary influence on interest rates. The ability to measure this relationship opened up the opportunity of testing the two reigning theories of how money affects interest rates in the short run. These two are the credit and the quantity theories of money, the former stressing the first-round effects of money creation through credit expansion and the latter stressing portfolio adjustments by the public to a change in its money balances. The test involves dividing monetary growth into two parts, one representing credit expansion and the other representing all remaining sources of monetary growth. A multiple regression then deter-

mines the contribution of each part to the total effect of monetary growth on interest rates.

Most of the statistical results came first, and to interpret them the theoretical analysis was done later. The results are not favorable to Mill's view, expressed above, and support instead the quantity theory. The two theories have important but conflicting implications for the proper conduct of monetary policy.

An earlier version of the statistical results of Chapters 4 and 5 was circulated in 1966 and elicited many helpful comments. I am most indebted to Milton Friedman, who encouraged me to expand the work and made many suggestions for improving it. A National Bureau staff reading committee consisting of Friedman, Robert Lipsey, H. Laurence Miller, and Anna J. Schwartz was also extremely beneficial. I wish to thank the members of the directors' reading committee, Francis M. Boddy, Maurice W. Lee, and Robert V. Roosa.

Parts of three other chapters have been previously published. Revised versions are presented here. Chapter 3 appeared in the *Review of Economics and Statistics,* August 1966, and was reprinted as *National Bureau Occasional Paper 100.* Chapter 6 was presented at a Brown University conference on monetary growth models and was subsequently published in the *Journal of Money, Credit, and Banking,* May 1969. I am grateful for the comments of the conference discussants of that paper, Carl Christ and James Tobin. The results of the first part of Chapter 7 were presented in collaboration with Arthur Gandolfi at the 1968 meetings of the American Economic Association and published in its *Proceedings,* May 1969.

Indispensable computational assistance was rendered at various stages of the study by Josephine Trubek Crouse, Jae Won Lee, and Irene Abramson. Martha T. Jones of the National Bureau's data processing department was continually helpful.

The text was greatly improved by the careful editing of Ester Moskowitz. The charts were expertly drawn by H. Irving Forman.

This study was financed by a grant from the Life Insurance Association of America, and their assistance is gratefully acknowledged. Their concurrence with the results is not to be assumed.