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# CORPORATE CASH BALANCES 1914-43

## MANUFACTURING AND TRADE

By FRIEDRICH A. LUTZ

FINANCIAL RESEARCH PROGRAM Studies in Business Financing

NATIONAL BUREAU OF ECONOMIC RESEARCH

## CORPORATE CASH BALANCES 1914-43

The use of cash balances of business enterprises has attracted attention for many years. In the twenties corporations and other business units were accused not only of contributing to the stock exchange boom by lending part of their cash balances on call, but also of feeding the financial markets at the expense of the markets for commodities. During the thirties the charge was made that corporations contributed to the stagnation of the economic system by holding excess cash balances instead of investing them.

Dr. Lutz traces the behavior of cash balances of business enterprises over the three decades, 1914-43; analyzes the reasons for their behavior; and discusses some of the implications of the present cash balance position of corporations. The analysis attempts to answer such questions as: Does the behavior of corporate cash balances over the period 1919-39 show a definite pattern; if so, what factors determine this pattern? How did corporate cash balances behave during the period of World War I? What influence has World War II had on the movement of cash balances?

The study centers around manufacturing corporations, but a brief discussion of trade corporations also is presented. Annual financial statements of samples of corporations, collected in connection with the Business Financing Project of the National Bureau's Financial Research Program, provide the basic data for analysis. Cash

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# CORPORATE CASH BALANCES

# 1914-43

## Manufacturing and Trade

by

## FRIEDRICH A. LUTZ

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THIS MONOGRAPH ON CORPORATE CASH BALANCES in manufacturing and trade, undertaken as a special inquiry under the Financial Research Program's War Financing Project, was prompted by the spectacular growth in corporate cash balances since the outbreak of World War II, and by the question of the significance of this growth to the functioning of the financial system during and after the conflict.

So often in investigations of limited or specific objective, a demand soon develops to extend the scope of investigation and to make the fullest possible use of available data. In this instance the demand was especially compelling because of the need for historical perspective in judging the significance of wartime developments; in order to evaluate the abnormal, some reference base is required. This compulsion to expand the scope of inquiry was reinforced by another. In contemporary theories of the value of money and of the role of money in business fluctuations, the behavior of cash balances of consumers and business enterprises plays a central part. Yet theorists have never had an adequate body of empirical information from which to derive hypotheses or to test them. In other words, the initial problem of analyzing changes in the cash holdings of enterprise during the war period led into a strategic area, well-stocked with assumptions but poor in data. For these reasons the study was enlarged to its present scope, covering developments since the beginning of World War I.

The present study has been limited to manufacturing and trade corporations, and to samples of companies in each field, because consistent, tested financial data are available chiefly for these groups. The time period covered, 1914-43, is similarly explained; however, it covers a reasonably long time span, including two war periods of four years each and two decades of peace.

The study is included in the National Bureau's Studies in Business Financing because of its close relationship to other monographs in this series which have been published under the Business Financing Project of the Financial Research Program. Primary records of corporate financial data compiled under this Project have many uses aside from the specific purpose for which they were prepared, and it is the desire of the National Bureau's Committee on Research in Finance that these materials be fully exploited, with the object of contributing to a better understanding of how business enterprises finance their operations in good times and bad. From time to time as resources permit, supplementary studies covering special corporate financial problems will be issued.

The present study is sponsored jointly by the Economics Division of the Institute for Advanced Study and the Financial Research Program. Its author, Dr. Friedrich A. Lutz, is a member of the Institute's economics staff, on leave of absence from Princeton University where he is a member of the Faculty in Economics. The participation of the Financial Research Program was made possible in 1942 by a two-year grant from the Carnegie Foundation for a study of the impact of the war on business financial structure. The merging of research interests to explore a vital financial problem has resulted in a more adequate and thorough study than could otherwise have been produced.

We wish to acknowledge our debt to collaborators in the Financial Research Program for their generous and searching criticisms of the two drafts of this study. These include several university specialists, the author's associates at the Institute for Advanced Study, the economists of a number of banks, the technical experts of government agencies, and the members of the special committee appointed by the American Institute of Accountants to cooperate with the National Bureau's Committee on Research in Finance.

The statements made and the conclusions reached in the study are the sole responsibility of the author and do not necessarily represent the opinions of those who criticized the first draft or of the organizations that furnished financial support for the study.

> RALPH A. YOUNG Director, Financial Research Program

January 1945

IN THE PREPARATION OF THIS STUDY I have received valuable suggestions and criticisms from the group of experts who were kind enough to examine the first and second drafts of the manuscript. I am particularly grateful to Percival F. Brundage and Charles H. Towns, both members of the American Institute of Accountants, to Clark Warburton of the Division of Research and Statistics of the Federal Deposit Insurance Corporation, and to Frederick C. Dirks of the Board of Governors of the Federal Reserve System. Messrs. Dirks and Warburton not only wrote lengthy memoranda on the drafts of the study but they participated in a conference on the first draft at the Institute for Advanced Study with Walter W. Stewart and Robert B. Warren, both of the Institute's economics staff, and Ralph A. Young as the other participants.

I also am greatly indebted to Avram Kisselgoff, research associate of the National Bureau's Financial Research Staff, who made important contributions to the study. In particular, he developed the method of measuring "free" cash and prepared a number of correlation studies used in the analysis. My wife, Vera C. Lutz, collaborated on Chapters 8 and 9 and contributed ideas in frequent discussions. Ralph A. Young was in constant touch with me during my work on the manuscript and gave valuable suggestions concerning content and form.

Members of the staff of the National Bureau's Financial Research Program contributed substantially to the study by their capable handling of the typing and statistical work. Special thanks are due to Muriel Praete Fega, who bore the brunt of the statistical work, to Helen Morphy, Molly Silver, and Ruth Gross, who prepared the charts, and to Mildred Courtney and Ruth Finnegan, who supervised the typing of the manuscript.

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#### FRIEDRICH A. LUTZ

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Manufacturing and Trade

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