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Volume Title: The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937

Volume Author/Editor: Walter A. Chudson

Volume Publisher: NBER

Volume ISBN: 0-870-14135-X

Volume URL: <http://www.nber.org/books/chud45-1>

Publication Date: 1945

Chapter Title: Front matter, preface, acknowledgement, table of contents

Chapter Author: Walter A. Chudson

Chapter URL: <http://www.nber.org/chapters/c9208>

Chapter pages in book: (p. -13 - 0)

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STUDIES IN BUSINESS FINANCING

THE PATTERN
OF CORPORATE
FINANCIAL STRUCTURE

A Cross-Section View of Manufacturing, Mining, Trade,
and Construction, 1937

by

WALTER A. CHUDSON

NATIONAL BUREAU OF ECONOMIC RESEARCH
NEW YORK 1945

PREFACE

THIS STUDY IS ONE OF A SERIES prepared under the Financial Research Program's Business Financing Project, an investigation of changes in the financial structure of American business, 1900-1940, begun early in 1940 with the support of grants from the Association of Reserve City Bankers and the Rockefeller Foundation.

The project has had the following objectives: first, to determine from statistical analysis of business accounting records the general character of the financing services obtained by business enterprise from financial institutions currently and in the past; second, to trace the structural and cyclical changes that have occurred in business credit demands since the turn of the century; and third, to describe the adaptations that institutions providing short- and medium-term credit to business have made in recent years in response to changing credit demands.

Work on these objectives has been organized into two divisions: one entitled "Changes in the Financing of Business Enterprise, 1900-1940", and devoted to the first and second objectives; the other entitled "Business Financing Tendencies and the Emerging Problems of Commercial Banks," and concerned primarily with the third objective, but also to some degree with the first. The procedure followed has been to develop, from separate bodies of primary materials, special technical studies whose findings are to be integrated into a single analysis. The present report is one of the technical studies made under the first division of the work.

When work on the Business Financing Project was initiated, no comprehensive tabulations of corporate financial data, compiled according to uniform standards and covering a long period of time, were available as a basis for analysis. The first problem, therefore, was to test the usefulness of existing compilations, and to build up new materials to supplement and extend those already available. With the cooperation of a number of public and private agencies, several additional samples of business financial data were developed from state tax report files, federal corporate income

tax returns, industrial loan files of the Federal Reserve Banks of New York and Philadelphia, Dun and Bradstreet reports, bank credit files, and other sources.

Variations in the coverage and characteristics of the data thus assembled presented many statistical problems. As the analysis of our samples of data progressed, it became increasingly clear that we urgently needed a comprehensive picture, for one recent year, of the distinguishing financial features of incorporated manufacturing and trade enterprise, grouped by industry, size of corporation, and profitability. Detailed knowledge of the pattern of variation of balance-sheet accounts, systematic and otherwise, according to industry, size of corporation, and profitability, would aid in the comparative interpretation of our various samples of corporate financial data for long periods, since both the quantity and quality of these historical data diminish as one moves back in time.

Walter A. Chudson, who has collaborated in the project from the outset, undertook the responsibility for preparing such a study, and after some exploration he came to the conclusion that the most promising sources on which to base the study were the *Statistics of Income* of the Bureau of Internal Revenue and the *Statistics of American Listed Corporations* of the Securities and Exchange Commission. The year 1937 was selected as the one for reference analysis because it was in general a year of high business activity, and our long-period study of changes in financial structure was being developed on the basis of data pertaining to selected years of "peak" business activity over the period 1900-1940. In addition, the compilations for 1937 were the most recent ones available when the study was begun, and had the advantage of providing a more detailed classification of balance-sheet accounts, particularly current liabilities, than the tabulations for previous years. Dr. Chudson has also used data for other years, notably 1931, in his study, but his use of such data has been largely for purposes of testing the findings from his more intensive analysis for 1937.

Dr. Chudson has been concerned with a variety of interesting and highly relevant questions. How do manufacturing and trade corporations, differing in size and profitability and belonging to different industries, vary with respect to the composition of their assets and liabilities? Do they differ systematically in respect to inventory holdings, cash, and accounts receivable? Do large cor-

porations have a higher turnover of their current or working assets than do medium-sized and small corporations? Is the proportion of current assets and liabilities more directly related to type of industry or to size of corporation? How are different levels of industrial profitability reflected in balance-sheet ratios? Is the proportion of short-term debt—i.e., trade credit and notes payable to banks and other institutions—related more closely to business holdings of inventory, or to other characteristics?

In answering such questions Dr. Chudson has employed the ratio method of balance-sheet analysis, using as his bases both total assets and sales. This method, though conventional, is especially well adapted to the questions on which Dr. Chudson has focused his analysis. In evaluating his findings, it must be recalled that his objective is limited to determining the cross-section pattern of variation in financial structure with respect to industry, corporate size, and reported profitability. The data with which he has worked have not been all that one would hope to have, and they were not compiled to order. The significance of the findings, however, fully justifies their use for the purposes in mind. Appendices A, B, C, and D contain a detailed discussion of the characteristics of the data and of the methods of analysis, which will be of particular interest to technical readers in appraising the findings.

We are indebted to the Bureau of Internal Revenue and to the Securities and Exchange Commission for help in the assembly of materials for this study. The Bureau of Internal Revenue permitted us to make transcriptions of tables covering the financial statements of minor industrial divisions from its *Source Book of Statistics of Income*. The Division of Research and Statistics of the SEC kindly prepared for our use some supplementary tabulations of data for corporations covered in the Division's Survey of American Listed Corporations for 1937.

The tables on which the analysis is based are not contained in this volume. They are to be made available, along with other basic corporate financial data compiled under the Business Financing Project, in a separate volume entitled *Corporate Financial Data for Studies in Business Finance*.

RALPH A. YOUNG

Director, Financial Research Program

January 1945

AUTHOR'S ACKNOWLEDGMENTS

IN THIS STUDY I HAVE PROFITED considerably from the generous counsel and encouragement of Ralph A. Young, Director of the National Bureau's Financial Research Program, and of Winfield W. Riefler, Chairman of the Committee on Research in Finance.

In preparing the manuscript, which is one of a series dealing with the financial structure of American corporations, I have gained much assistance from the constant interchange of ideas with my colleagues, Sidney S. Alexander, Carl Kaysen, Albert R. Koch, Charles L. Merwin, and Raymond J. Saulnier, who have been working on related aspects of the subject. I am especially grateful to Carl Kaysen for advice in dealing with statistical problems.

I also owe much to the statistical and clerical staffs of the Financial Research Program for the cooperation which has made possible such a large-scale quantitative analysis, particularly to Sophie Polah, under whose direction the tables were prepared and checked, to Renée Courtney, who put the tables in their final form, and to Helen Morphy, who executed the charts. In addition I am indebted to Lorine Pruette, who edited a preliminary version of the manuscript, and to Dorothy Wescott, who was in full charge of the editing for publication.

A substantial part of the data has been derived from unpublished sources, and I wish to express my thanks to E. D. White, of the Bureau of Internal Revenue, and to Raymond A. Goldsmith, of the Securities and Exchange Commission, for making these materials available to me.

WALTER A. CHUDSON

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