This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Some Measures of the Quality of Agricultural Credit

Volume Author/Editor: George K. Brinegar and Lyle P. Fettig

Volume Publisher: NBER

Volume ISBN: 0-87014-493-6

Volume URL: http://www.nber.org/books/brin68-1

Publication Date: 1968

Chapter Title: Front matter, "Some Measures of the Quality of Agricultural Credit"

Chapter Author: George K. Brinegar, Lyle P. Fettig

Chapter URL: http://www.nber.org/chapters/c1131

Chapter pages in book: (p. -16 - 0)

Some Measures of the Quality of Agricultural Credit

GEORGE K. BRINEGAR
LYLE P. FETTIG
UNIVERSITY OF ILLINOIS

TECHNICAL PAPER 19



NATIONAL BUREAU OF ECONOMIC RESEARCH
NEW YORK 1968

Distributed by COLUMBIA UNIVERSITY PRESS NEW YORK AND LONDON

Copyright © 1968 by National Bureau of Economic Research, Inc. 261 Madison Avenue, New York, N.Y. 10016

All Rights Reserved

Library of Congress Catalog Card Number: 68-30696

Printed in the United States of America

NATIONAL BUREAU OF ECONOMIC RESEARCH 1968

Officers

Arthur F. Burns, Chairman Theodore O. Yntema, Vice Chairman John R. Meyer, President. Donald B. Woodward, Treasurer Geoffrey H. Moore, Vice President-Research Victor R. Fuchs, Vice President-Research Douglas H. Eldridge, Vice President-Administration Hal B. Lary, Director of International Studies

Directors at Large

Joseph A. Beirne, Communications Workers of America Wallace J. Campbell, Foundation for Cooperative Housing Erwin D. Canham, Christian Science Monitor Robert A. Charpie, Bell & Howell Company Solomon Fabricant, New York University Frank W. Fetter, Hanover, New Hampshire Eugene P. Foley, International Ore and Fertilizer Corporation Marion B. Folsom, Eastman Kodak Company Crawford H. Greenewalt, E. I. du Pont de Nemours & Company Gabriel Hauge, Manufacturers Hanover Trust Company Walter W. Heller, University of Minnesota

Albert J. Hettinger, Jr., Lazard Frères and Company John R. Meyer, Yale University Geoffrey H. Moore, National Bureau of Economic Research J. Wilson Newman, Dun & Bradstreet, Inc. George B. Roberts, Larchmont, New York Robert V. Roosa, Brown Brothers Harriman & Company Boris Shishkin, American Federation of Labor and Congress of Industrial Organizations Gus Tyler, International Ladies' Garment Workers' Union Joseph H. Willits, Langhorne, Pēnnsylvania Donald B. Woodward, A. W. Jones and Company Theodore O. Yntema, Oakland University

Directors by University Appointment

Francis M. Boddy, Minnesota Arthur F. Burns, Columbia Lester V. Chandler, Princeton Melvin G. de Chazeau, Cornell Walter D. Fisher, Northwestern R. A. Gordon, California Gottfried Haberler, Harvard

Douglas G. Hartle, Toronto
Robert J. Lampman, Wisconsin
Maurice W. Lee, North Carolina
ll Lloyd G. Reynolds, Yale
n Robert M. Solow, Massachusetts Institute
of Technology
Henri Theil, Chicago
Willis J. Winn, Pennsylvania

Directors by Appointment of Other Organizations

A. G. Abramson, National Association of Business Economists
Emilio G. Collado, Committee for Economic Development
Thomas D. Flynn, American Institute of Certified Public Accountants
Nathaniel Goldfinger, American Federation of Labor and Congress of Industrial Organizations
Harold G. Halcrow, American Agricultural Economics Association

Walter E. Hoadley, American Finance Association
Douglass C. North, Economic History Association
Murray Shields, American Management Association
Willard L. Thorp, American Economic Association
W. Allen Wallis, American Statistical

Directors Emeriti

Percival F. Brundage Harold M. Groves Harry W. Laidler Shepard Morgan Jacob Viner Harry Scherman George Soule

Senior Research Staff

Moses Abramovitz Gary S. Becker Arthur F. Burns Phillip Cagan Alfred H. Conrad James S. Earley Solomon Fabricant
Milton Friedman
Victor R. Fuchs
Raymond W. Goldsmith
Jack M. Guttentag
Daniel M. Holland
F. Thomas Juster

C. Harry Kahn
John W. Kendrick
Irving B. Kravis
Hal B. Lary
Robert E. Lipsey
Jacob Mincer
Ilse Mintz

Association

Geoffrey H. Moore Nancy Ruggles Richard Ruggles Robert P. Shay George J. Stigler Victor Zarnowitz

RELATION OF THE DIRECTORS TO THE WORK AND PUBLICATIONS OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

- 1. The object of the National Bureau of Economic Research is to ascertain and to present to the public important economic facts and their interpretation in a scientific and impartial manner. The Board of Directors is charged with the responsibility of ensuring that the work of the National Bureau is carried on in strict conformity with this object.
- 2. The President of the National Bureau shall submit to the Board of Directors, or to its Executive Committee, for their formal adoption all specific proposals for research to be instituted.
- 3. No research report shall be published until the President shall have submitted to each member of the Board the manuscript proposed for publication, and such information as will, in his opinion and in the opinion of the author, serve to determine the suitability of the report for publication in accordance with the principles of the National Bureau. Each manuscript shall contain a summary drawing attention to the nature and treatment of the problem studied, the character of the data and their utilization in the report, and the main conclusions reached.
- 4. For each manuscript so submitted, a special committee of the Board shall be appointed by majority agreement of the President and Vice Presidents (or by the Executive Committee in case of inability to decide on the part of the President and Vice Presidents), consisting of three directors selected as nearly as may be one from each general division of the Board. The names of the special manuscript committee shall be stated to each Director when the manuscript is submitted to him. It shall be the duty of each member of the special manuscript committee to read the manuscript. If each member of the manuscript committee signifies his approval within thirty days of the transmittal of the manuscript, the report may be published. If at the end of that period any member of the manuscript committee withholds his approval, the President shall then notify each member of the Board, requesting approval or disapproval of publication, and thirty days additional shall be granted for this purpose. The manuscript shall then not be published unless at least a majority of the entire Board who shall have voted on the proposal within the time fixed for the receipt of votes shall have approved.
- 5. No manuscript may be published, though approved by each member of the special manuscript committee, until forty-five days have elapsed from the transmittal of the report in manuscript form. The interval is allowed for the receipt of any memorandum of dissent or reservation, together with a brief statement of his reasons, that any member may wish to express; and such memorandum of dissent or reservation shall be published with the manuscript if he so desires. Publication does not, however, imply that each member of the Board has read the manuscript, or that either members of the Board in general or the special committe have passed on its validity in every detail.
- 6. Publications of the National Bureau issued for informational purposes concerning the work of the Bureau and its staff, or issued to inform the public of activities of Bureau staff, and volumes issued as a result of various conferences involving the National Bureau shall contain a specific disclaimer noting that such publication has not passed through the normal review procedures required in this resolution. The Executive Committee of the Board is charged with review of all such publications from time to time to ensure that they do not take on the character of formal research reports of the National Bureau, requiring formal Board approval.
- 7. Unless otherwise determined by the Board or exempted by the terms of paragraph 6, a copy of this resolution shall be printed in each National Bureau publication.

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

Contents

	Acknowledgments	ix
	Foreword by James S. Earley	хi
ı.	Introduction and Summary	1
	The Production Credit Association System	3
	The Federal Land Bank System	7
	Summary of Findings	7
	Grading Systems	10
	Loan Experience and Loan Quality Over Time	12
2.	Relations Between Loan Grades and Subsequent Loan	
	Experience	14
	Production Credit Association Loans	14
	Production Credit Association Loan Data	14
	Analysis of the Experience of Loans in Different Grades	15
	Relations Between Loan Grades in the Portfolio	21
	Federal Land Bank Loans	26
	Land Bank Loan Data	26
	Analysis of the Experience of Loans in Different	
	Collateral Grades	29
3.	Loan Experience Over Time	41
	Production Credit Associations	41
	Federal Land Bank	44
	The 1917–32 Period	44
	The 1933-57 Period	48
	Index	59

Tables

l.	Non-Real-Estate Loans to Farmers, Total Amount Outstanding Reported by Principal Lending Institutions and Percentage of Total for Each, United States, January 1, 1920–66	5
2.	Non-Real-Estate Loans to Farmers, Total Amount Outstanding Reported by Principal Lending Institutions and Percentage of Total for Each, by Farm Credit Districts, January 1, 1964	6
3.	Farm Mortgage Loans to Farmers, Total Amount Outstanding Reported by Principal Lending Institutions and Percentage of Total for Each, United States, January 1, 1920-66	8
4.	Farm Mortgage Loans to Farmers, Total Amount Outstanding Reported by Principal Lending Institutions and Percentage of Total for Each, by Farm Credit Districts, January 1, 1964	10
5.	Percentages of Current AB and C Loans Classified in Following Year as D, All PCA Districts, 1945-61	16
6.	Origin and Disposition of D Loans, Number and Percentage of Total, All PCA Districts, 1945-62	17
7.	Origin and Disposition of D Loans, Amounts and Percentage of Total, Nine PCA Districts, 1945-62	18
8.	Current-Year D Loans Classified by Type of Disposition on Inspection Date of Following Year, Totals for Entire Period, All PCA Districts, 1945-61	19
9.	Regression of Number of Loans Charged Off Upon Number of D Loans Under Three Alternative Lags, All PCA Districts, 1945-61	21

Regression of Dollar Losses on Loans Upon Amounts of D Loans Under Three Alternative Lags, All PCA Districts, 1945-62 Regression of Number of Loans Charged Off Upon Number of C Loans Under Three Alternative Lags, All PCA Districts, 1945-61 Regression of Dollar Losses on Loans Upon Amounts of C Loans Under Three Alternative Lags, All PCA Districts, 1945-62 Regression of Number of Loans Charged Off Upon Numbers of C and D Loans Under Three Alternative Lags, All PCA Districts, 1945-61	22 24 24
of C Loans Under Three Alternative Lags, All PCA Districts, 1945-61 Regression of Dollar Losses on Loans Upon Amounts of C Loans Under Three Alternative Lags, All PCA Districts, 1945-62 Regression of Number of Loans Charged Off Upon Numbers of C and D Loans Under Three Alternative Lags, All PCA	
Loans Under Three Alternative Lags, All PCA Districts, 1945-62 Regression of Number of Loans Charged Off Upon Numbers of C and D Loans Under Three Alternative Lags, All PCA	24
of C and D Loans Under Three Alternative Lags, All PCA	
	25
Regression of Dollar Losses on Loans Upon Amounts of C and D Loans Under Three Alternative Lags, All PCA Districts, 1945-62.	26
Regression of Number of D Loans Upon Number of C Loans Under Three Alternative Lags, All PCA Districts, 1945-61	27
Regression of Amounts of D Loans Upon Amounts of C Loans Under Three Alternative Lags, All PCA Districts, 1945-62	27
Credit Services Provided by the Federal Land Bank in New York State, 1917 to April 30, 1958	28
Number of Loans by Disposition and Collateral Grade, Derived From Data Collected at the Time the Loan Was Closed, All Land Bank Loans in New York State, 1917 to April 30, 1958	30
Amounts of Loans by Disposition and Collateral Grade, Derived From Data Collected at the Time the Loan Was Closed, All Land Bank Loans in New York State, 1917 to April 30,	
Loan Disposition by Collateral Grade, as Percentage of Total Loans Closed and Loans Disposed of, All Land Bank Loans in New York State, 1933 to April 30, 1958	31
Characteristics of Loans Closed, All Land Bank Loans of Known Collateral Grades Closed and Disposed of in New	- -
York State, 1933 to April 30, 1958	37

viii	Tables
------	--------

22.	Average Rank Assigned to Characteristics of Loans in Each of Three Dispositions, All Land Bank Loans Closed and Disposed of in New York State, 1917–57	39
23.	Composition of Total Loans Outstanding on Examination Date, Percentage of Total, All PCA Districts, 1945-65	42
24.	PCA Net Losses During Year Ending December 31, All PCA Districts, 1945-62	43
25.	Loss Rates, by Number and Amount as Percentage of Loans Closed in Each Year, Loans Closed Minus Outstandings, and Loans Foreclosed, Land Bank Loans in New York State, 1917–58	45
26.	Percentage of All Loans Closed Minus Outstandings in Each of Three Dispositions, Land Bank Loans in New York State, 1917–58	47
27.	Composition by Collateral Grade of Total Loans Outstanding on December 31, Percentage of Total, Land Bank Loans in New York State, 1933 to April 30, 1958	49
28.	Composition by Collateral Grade of Total Loans Closed During Year, Percentage of Total, Land Bank Loans in New York State, 1933 to April 30, 1958	50
	FIGURE	
1.	. Farm Credit Districts	4

Acknowledgments

A STUDY of this sort is possible only with the assistance and cooperation of many groups and individuals. The Farm Credit Administration in Washington, D.C., provided the data on the loans made by the Production Credit Associations. The Federal Land Bank loan data were furnished by the Federal Land Bank in Springfield, Massachusetts.

The project was supported by a grant from the Merrill Foundation for Advancement of Financial Knowledge, Inc., as well as by other funds of the National Bureau. The authors, while preparing this report, were on the staff of the University of Illinois, and for a period the senior author was on the staff of the University of Connecticut. Both universities cooperated in making this study possible.

At various stages of the study, many individuals provided indispensable help. Geoffrey H. Moore has, throughout the study, been our most severe critic and of greatest help. Our debt to him is great. We are also indebted to James S. Earley, for making comments on earlier drafts of the study; James F. McRee, Jr., for major editing of the manuscript; Harlan Lampe, for designing some of the programs for processing the data; Martha Jones, for processing much of the basic data; Russell Engberg, for providing the Production Credit Association data; A. R. Gans, for providing the Federal Land Bank data; Gerald R. Paul, for editorial assistance; Sophie Sakowitz, for checking the tables; Norma Robinson, Patricia Lantz, and Norma Wortman, for typing drafts of the manuscript; and Maxine Nichols, for many hours of careful and patient work on the computations involved.

Our thanks go also to: Willis J. Winn, Harold G. Halcrow, and Solomon Fabricant—the reading committee of the National Bureau's Board of Directors. We are indebted to John A. Knechel of the Bank of America for his helpful suggestions, which are incorporated in this study, and Walter E. Hoadley and Joseph A. Beirne—Board members who also read the manuscript.

. . . .

Foreword

THIS STUDY of the quality grading systems of the Production Credit Associations and the Federal Land Banks is the fifth publication in the National Bureau's program of research on the quality of credit in various sectors of the economy. The checkered performance of farm credit through American history, and the truly disastrous record of the Great Depression, make agriculture potentially a sector of unusual interest from the credit quality standpoint. In agriculture, too, the public or quasi-public character of much lending has created a large volume of official statistics extending over many years, which present unusual opportunities for securing credit quality data.

The examination of these data was begun in 1959 by George Brinegar on an experimental basis, in order to include the ratings made by federal farm credit officials in the general study then being undertaken of credit ratings made by federal bank examiners and by Dun and Bradstreet, Moody's, and other private rating agencies. Later it was decided to encompass agriculture in the Quality of Credit program along with all other sectors in which the potential risk of delinquency and default was appreciable. At that time, further analysis of the official farm credit records was undertaken by the authors. The

¹ The four studies already published are: The Quality of Bank Loans: A Study of Bank Examination Records by Albert M. Wojnilower, Occasional Paper 82, New York, NBER, 1962; The Quality of Trade Credit by Martin H. Seiden, Occasional Paper 87, New York, NBER, 1964; Trends in Corporate Bond Quality by Thomas R. Atkinson, assisted by Elizabeth T. Simpson, New York, NBER, 1967; and The Quality of Consumer Instalment Credit by Geoffrey H. Moore and Philip A. Klein, New York, NBER, 1967. In press is Home Mortgage Delinquency and Foreclosure by John Herzog and myself. Edgar Fiedler and Maude Pech are revising their preliminary manuscript, Measures of Credit Quality, a compendium of time-series statistics on credit quality. George H. Hempel is in the process of completing his study of postwar municipal bond quality. I am in the late stages of final revision of my volume summarizing the credit quality program as a whole, The Quality of Credit in the U.S.: A Summary Volume.

xii Foreword

Production Credit Association study could be enlarged to include the entire country and carried down through 1965. Lack of resources prevented the analysis of the Federal Land Bank data from going beyond the initial sample data of the Springfield (Massachusetts) Bank for the period ending in 1958.

The Brinegar-Fettig study does not of course purport to evaluate a cross section of U.S. agricultural credit. It is primarily a methodological study. It and other studies do in fact demonstrate that all types of farm credit, short- and long-term and in virtually all parts of the nation, have had remarkably strong performance records since World War II. Hence less interest has developed in postwar credit quality problems in agriculture than in some other sectors, e.g., small business firms and nonfarm households. But the Brinegar-Fettig study does indicate that the grading and examination procedures used by the farm credit agencies generate data which are generally valid discriminators of differential credit quality. The spectacular rise from depression lows in farm incomes and land values during World War II and thereafter make it difficult, if not impossible, to evaluate the time series behavior of the data, but the authors do show that the records of the federal farm lending agencies provide potentially valuable information for analyzing temporal trends in farm credit quality as well.

> JAMES S. EARLEY, Director Quality of Credit Program

2,005,985

Wational Bureau of Economic Research, Inc.

Brinegar, George K

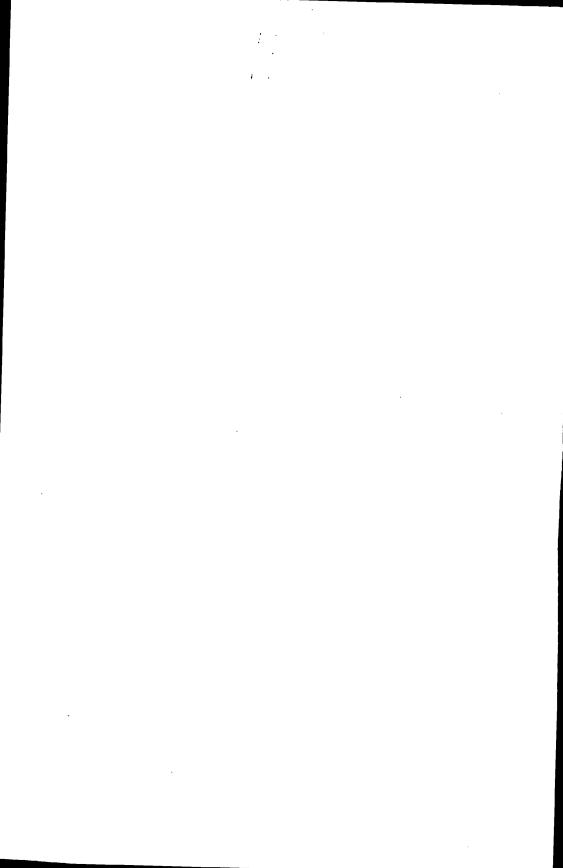
Some measures of the quality of agricultural credit tby1 George K. Brinegar and Lyle P. Fettig. New York, National Bureau of Economic Research; distributed by Columbia University Press, 1968.

xii, 51 p. ilius. 23 cm. (National Bureau of Economic Research. Technical paper 19) \$2.25

1. Agricultural credit—U. S. 1. Fettig, Lyle P., joint author. II. Title. (Series) 68-30696

HG2051.U5B67 332.3'1'0973

MATERIAL SUBMITTED BY PUBLISHER.



68-30696

National Bureau of Economic Research. Inc.

Brinegar, George K 1918-

Some measures of the quality of agricultural credit by George K. Brinegar and Lyle P. Fettig. New York, National Bureau of Economic Research; distributed by Columbia University Press, 1968.

xii, 51 p. lilus. 23 cm. (National Bureau of Economic Research. Technical paper 19) \$2.25

332.3'1'0973

1. Agricultural credit-U. S. . Fettig, Lyle P., joint author. II. Title. (Series)

HG2051.U5B67

MATERIAL SUBMITTED BY PUBLISHER

