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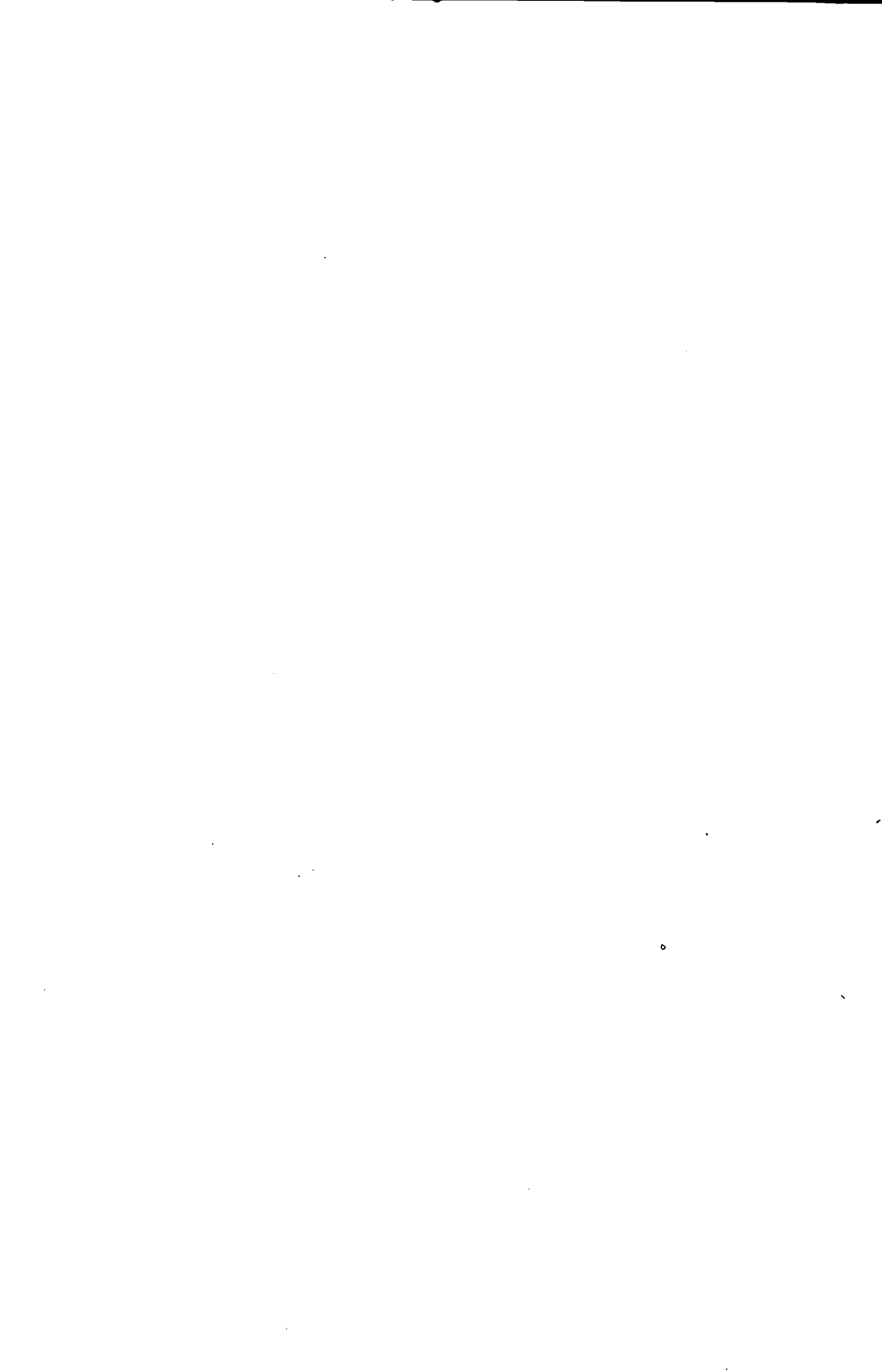
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Part Two

RECORD OF 1948

and

PLANS FOR THE FUTURE



## ACTIVITIES DURING THE YEAR

### NEW STUDIES

In the spring of 1948 Herbert Hoover, Chairman of the Commission on the Organization of the Executive Branch of the Government, requested the National Bureau to survey and appraise the organization and efficiency of the statistical agencies of the federal government and make recommendations within six months. The time was short, and there are many fields of statistics in which our staff has no special competence. Nevertheless we felt bound to accede to the request. Frederick C. Mills directed the study, with Clarence D. Long as collaborator. They enlisted the cooperation of a panel of experts from various fields, and submitted their report on the scheduled date, October 1. A summary with recommendations was published by the Commission in January 1949. The full report is being prepared for publication by the National Bureau in the near future.

The investigation has itself produced some rather striking statistics. About 10,000 federal employees in 67 agencies turn out the vast array of federal statistics, at a cost in 1948 of roughly 42 million dollars. This is less than 1 per cent of the total non-military budget. Another striking fact is that 80 to 90 per cent of the 'physical volume' of statistics is a byproduct of governmental administration and regulation. A brief summary of the conclusions reached and the recommendations advanced by Mills and Long is presented below in Section 1.

The investigation of the federal statistical services has delayed the completion of Long's study of the labor force and the inception of Mills' survey of changes during the last half century in the output, employment, and productivity of American industry. The survey is designed to summarize and integrate the Bureau's studies in this field, which have been conducted since 1938 under

generous grants by the Maurice and Laura Falk Foundation. Preparation of this summary report has begun.

Work on the new project dealing with the international economic relations of the United States is gradually getting under way. Ernest Rubin has begun a study, under the direction of Simon Kuznets, of the relation between immigration and the labor force. It is expected that Solomon Fabricant will turn to the study of foreign trade during the coming year, and that suitable arrangements for additional staff will be worked out before long.

Three new studies were started during the year by the Business Cycle Unit. Milton Friedman has begun a systematic investigation of the cyclical behavior of the money supply, its turnover, and associated changes in American banking since the Civil War. Rutledge Vining is exploring the regional variations in business conditions in the United States since 1919. Lawrence Klein has begun a study of the factors that account for differences in investment by different railroads, with a view to utilizing this information in an econometric model directed towards variations in investment over time.

Howard Greenbaum and Wilson Payne have been exploring ways of measuring flows of funds through financial institutions. If these studies are found to be feasible they might supplement Morris Copeland's fundamental investigation of money flows. The Financial Research staff has also been surveying other new fields of research, notably problems concerning the supply of equity capital and sources of financing for small business.

All these studies or explorations are described below, as are the new investigations of cyclical aspects of urban real estate finance by Stolper, of federal grants-in-aid by Maxwell, and of income tax changes by Seltzer.

#### PUBLICATIONS DURING 1948

The National Bureau published three books and three *Occasional Papers* during 1948:

Frank A. Hanna, Joseph A. Pechman, and Sidney M. Lerner,  
*Analysis of Wisconsin Income* (Studies in Income and Wealth,  
Volume Nine)

Thor Hultgren, *American Transportation in Prosperity and Depression* (Studies in Business Cycles, No. 3)

G. Heberton Evans, Jr., *Business Incorporations in the United States, 1800-1943*

James A. Maxwell, Recent Developments in Dominion-Provincial Fiscal Relations in Canada, *Occasional Paper 25*

Moses Abramovitz, The Role of Inventories in Business Cycles, *Occasional Paper 26*

Frederick C. Mills, The Structure of Postwar Prices, *Occasional Paper 27*

*Analysis of Wisconsin Income* consists of three reports on the distribution of income. While confined to a single state, the first report presents one of the few reasonably complete estimates available on the distribution of income by size; the second analyzes the relation between the size distribution of income and the amounts distributed as wages, interest, etc; the third traces the distribution of income for identical families over seven successive years in the 'thirties.

Hultgren's *American Transportation in Prosperity and Depression* is the third volume of Studies in Business Cycles, following *Business Cycles: The Problem and Its Setting* by Mitchell, and *Measuring Business Cycles* by Burns and Mitchell. Hultgren analyzes cyclical fluctuations in the volume of traffic handled by railroads, their costs, prices, and profits. The significance of the findings extends well beyond the boundaries of the railroad industry.

Evans' *Business Incorporations in the United States, 1800-1943* presents a systematic collection of monthly and annual records on the number of new corporations and their capital stock, together with an analysis of some of the implications of the data. A rich store of newly developed information on the history of American enterprise, the book should be of interest to students of economic trends and fluctuations.

A revealing picture of the inflationary process is given by Frederick C. Mills in *Occasional Paper 27*. Changes since 1938 in commodity prices, wages, costs of production, output, and labor productivity are considered, and earlier inflationary periods are compared with the latest one. The *Occasional Paper* by Abramo-

vitz presents a summary of findings which will be reported fully in his forthcoming volume on the role of inventories in business cycles. Maxwell's *Occasional Paper* analyzes the recent Canadian discussions concerning the concentration of taxing and spending power in the federal government. One of the subjects treated is the use of federal grants-in-aid, a matter of much interest in this country and one that Maxwell is pursuing further.

#### FORTHCOMING PUBLICATIONS

Two publications are being released in May. *Studies in Income and Wealth, Volume Eleven*, contains papers by Solomon Fabricant and Daniel Carson on the industrial distribution of gainful workers; Nathan Koffsky on the purchasing power of farm and urban families; Hans Staehle on the international comparison of real national income; Michael Sapir on the economic forecasts for the immediate postwar period; and Franco Modigliani on fluctuations in the saving-income ratio.

A *Technical Paper* by R. J. Saulnier, 'Costs and Returns on Farm Mortgage Lending by Life Insurance Companies, 1945-46', has been approved for publication by the Directors. Three reports are ready to be submitted to the Board: *The Statistical Agencies of the Federal Government*, by F. C. Mills and C. D. Long; *Taxable and Business Income*, by D. T. Smith and J. K. Butters; and *Studies in Income and Wealth, Volume Twelve* (containing papers on the measurement of wealth). Several other manuscripts are approaching the stage where they can be sent to the Directors.

A considerable number of National Bureau books are now out of print. From time to time the demand justifies reprinting, and last year we reprinted *Business Finance and Banking*, by Neil H. Jacoby and Raymond J. Saulnier. In an effort to gauge the demand for out-of-print books the members of the American Economic Association were circularized and asked to indicate which volumes they would like to see reprinted. The response was gratifying, but we would be glad to hear from other interested individuals.

## STAFF REPORTS

The research activities of members of the staff during the year are described in the following pages. The staff reports are grouped roughly into nine major divisions, and cross-referenced to facilitate use. The findings reported are tentative and provisional. They have not yet been subjected to the full critical review accorded the National Bureau's studies.

### I FEDERAL STATISTICAL AGENCIES

The work of the staff members assigned to the survey of the statistical agencies of the federal government was supplemented by an advisory panel consisting of George Soule, Martin R. Gainsbrugh, John D. Millett, Samuel S. Wilks, and P. K. Whelpton. Three general considerations are emphasized in the report:

The collection and dissemination of information concerning the structure and processes of national life are among the basic functions of government. In a mixed economy, partially controlled and partially free, both government and private enterprise must base decisions on information which government alone can supply. Social scientists are largely dependent on government for the observations from which an understanding of modern life may be drawn.

There will be continuing pressures for expanded and elaborated statistical reports. Provision must be made for orderly development or these pressures will give us an uncoordinated and wasteful system.

The functions of fact finding in government are to be clearly distinguished from activities involving the setting of social goals or the promotion of special aid programs. Statistical agencies must be representatives of the public, and not agents of special groups or advocates of special interests, whether those of business, agriculture or labor. Slanted releases and tendentious interpretations have no place in the work of these agencies.

Despite elements of strength in the present system of federal statistical agencies, there are notable defects that should be corrected: the elements of the system are incompletely coordinated; agency jurisdictions have not been clearly defined in all cases; there is lack of balance in the reporting system, with excessive

development in some directions, gaps in others; there is a lack of authenticated statistics on certain basic economic processes; statistics compiled by administrative and regulatory agencies as byproducts of their statutory duties are inadequately utilized; the burden of statistical reports on respondents is heavy; federal and state activities in statistical reporting are not sufficiently coordinated; relations with Congress are faulty, especially with respect to appropriation procedures which are based on a piecemeal approach to the problem and provide no over-all view of the statistical needs of the nation.

Major recommendations designed to correct defects in the system of statistical reports and analysis include the following:

Primary tasks of large scale repetitive enumeration and tabulation should be centralized in the Bureau of the Census. This Bureau should be a general service agency for all Federal offices.

Research and analysis in specialized fields and primary collection calling for special knowledge of subject matter should be performed by a small number of well staffed, objective, skilled and alert special purpose agencies. These agencies should stand in complementary and not in competitive relations with the Bureau of the Census and with one another. The Bureau of Labor Statistics, the Bureau of Agricultural Economics, and units of the Public Health Service, with functions clearly defined, would be elements of this strategically important system of specialized research agencies.

The collection and processing of all statistics entering into a unified national system of statistical intelligence should be subject to controls exercised by an Office of Statistical Standards and Services. This agency, located in the Executive Office of the President, should have responsibility to maintain authority to enforce economical operation and coordination among the elements of the system. Among its primary tasks would be the elimination of duplication among statistical agencies, the lightening of the burden of Federal reports upon small business enterprises and the formulation of a program for a national system of industrial and social statistics adequate to meet the needs of war or of other national emergencies. The routine duties of this agency should be kept to a minimum.

To assure proportionality and balance in the system of statistical reports and analysis, it should be subject to annual review by the Executive and Legislative branches of the Government. For this pur-

pose the Office of Statistical Standards and Services should prepare each year for the President, for submission to the Congress, an appraisal and report on statistical needs and services. This report should include a consolidated statement of the actual and proposed expenditures by governmental agencies on statistical activities.

Continuing needs of a high order of priority for statistical information on the basic processes of national life are certain. Since the resources to be devoted to governmental activities should and will be limited, instruments of efficient management must be provided and lines of systematic development laid down. The measures recommended to the Commission and documented in the report are proposed as means to these ends.

Clarence D. Long  
Frederick C. Mills

## 2 NATIONAL INCOME AND THE FLOW OF MONEY\*

### FLOW OF MONEY PAYMENTS

A paper entitled 'A Note on Negotiable Claims: Who Owns and Who Owes What' was presented before the Conference on Research in Income and Wealth in January 1948 and will be included in *Studies in Income and Wealth, Volume Twelve*. In it estimates from the moneyflows study of liquid and negotiable claims held by and outstanding against various sectors of the economy are set forth, and their relation to a comprehensive balance sheet exhibit for the economy is explored. Attention is centered on the figures for December 31, 1939, but figures are given also for the four preceding and the three following years.

In a paper, 'Social Accounting for Moneyflows', read before the American Accounting Association in September, the importance of portraying moneyflows as a set of social accounts for a proper understanding of the role of money and credit in our economy was explained. The social accounting approach was contrasted with the usual approach to moneyflows in terms of an

\* For other studies of income and the flow of money, see Stigler in Section 3, Creamer, Hultgren, and Friedman in Section 4, Seltzer in Section 7, and Saulnier in Section 8.

hydraulic analogy, and compared with the social accounting approach to wealth and production. Attention was called to the quadruple entry system basis for the moneyflows and claims accounts, to the use of combined statements, and to the reporting of transactions on close to a cash basis.

An article, 'Banking Assets and the Money Supply', appeared in the January 1948 *Federal Reserve Bulletin*. In it consolidated figures for gold stock held, loans and securities held, currency and deposit liabilities, and other claims balances of banks and U. S. monetary funds were presented and interpreted. Various dates from June 30, 1929 to September 30, 1947 were covered.

The exploratory study came formally to a close in 1948. The Federal Reserve System has undertaken to develop and maintain current estimates of moneyflows and claims balances. Substantial progress has been made toward this objective. The third of the above papers is the first published step in this direction. The banking figures are now on a monthly basis.

A draft of the main report on the exploratory study of moneyflows has been circulated for criticism. This report presents and explains the moneyflows and claims balances accounts that have been developed. It also explores their theoretical implications and offers a tentative reformulation of various aspects of monetary theory.

Morris A. Copeland

#### INCOME DISTRIBUTION

The basic estimates of the shares of upper income groups, for which income tax data are available, have been completed and the report itself has been started. As now planned, it will contain three parts: (1) summary of the evidence revealed by the estimates and suggestions concerning their implications; (2) a detailed description of the methods used in deriving the estimates and of whatever tests can be devised to check their reliability; (3) the estimates and their variants, thus presenting all the basic series together. Part 3 is complete. Of the five chapters planned for Part 2, four have been written and the fifth is in preparation. Some plans have been drawn for Part 1, and the report for the 1949 meeting of the Conference on Research in Income and Wealth covers some of the ground. It deals at length with main

findings on the level and shares of the upper income groups from 1914 through 1945; the extent to which inequality in the distribution of income, as revealed by the shares of upper income groups, is affected or determined by combination of various types of income and by mobility of income units within the distribution; the family size, place of residence, and occupational structure of the upper income groups, and the effect of these characteristics upon the purchasing power of upper group incomes, as compared with that of incomes below the top; the implications of income inequality, as revealed by the shares of the upper income groups, for the level and short term changes in the ratio of savings to the total income of individuals. This report has been circulated to members of the Income Conference for review and criticism.

Simon Kuznets

#### CONFERENCE ON RESEARCH IN INCOME AND WEALTH

As noted above, *Volume Nine of Studies in Income and Wealth* was published in 1948 and *Volume Eleven* is being published in May. *Volume Twelve* will contain the papers on national wealth presented at the 1948 meeting of the Conference. As soon as revisions on the last two have been received, copy will be ready to submit to the Directors.

The Studenski-Wyler manuscript on national income measurement in various countries is about ready for review. Part Two, made up of chapters on individual countries, is being edited; Part One, covering a methodological and historical summary, is being revised by the authors in the light of criticisms from the Conference advisory committee on the project.

Irwin Friend has substantially completed the first draft of a study on concepts and measurement of individual savings, which he has submitted to the Conference for possible publication. Part of the manuscript, including annual estimates for 1933-47 and quarterly figures for 1942-47, is now being reviewed by a special advisory committee.

At the invitation of the International Association for Research in Income and Wealth, the Conference has assumed responsibility for preparing an annotated bibliography of United States literature in the field of income and wealth, to form part of an inter-

national bibliographical service now being developed by the Association (see below). This project includes both an historical listing of references and a current quarterly series, beginning with the first quarter of 1948.

Several reports for the current series, prepared by Robert Graham with the assistance of a review committee, have appeared, together with reports from other countries, in a mimeographed quarterly bibliography issued by the Association. A preliminary draft of the United States historical bibliography, covering 1919 through 1947, is expected to be ready for review soon. This part of the project is under the direction of Raymond Bowman, chairman of a working committee consisting of representatives of the National Bureau of Economic Research, the National Industrial Conference Board, and the Departments of Agriculture, Commerce, and Labor, each responsible for the publications of his own agency, with several additional members covering all other references in the field. The publication of the United States bibliography as a volume in the Studies in Income and Wealth series is under consideration by the Conference.

The 1949 meeting of the Conference will deal exclusively with problems of the size distribution of income. The topics to be discussed include purposes and concepts, appraisal of field surveys, reconciliation of data from various sources, distribution of farm operators' income, estimates of the number of income earners, the internal stability of the income distribution, the effect of federal income taxes on the distribution, and the shares of the upper income groups in income and savings.

Another meeting on the measurement of national wealth is being planned for 1950. The program is being organized by Morris Copeland.

When Milton Gilbert went abroad he resigned the Chairmanship of the Executive Committee. An Acting Chairman was appointed to serve until the 1949 business meeting of the Conference.

Hildegarde Kneeland, *Acting Chairman*  
*Conference on Research in Income and Wealth*

INTERNATIONAL ASSOCIATION FOR RESEARCH IN INCOME AND WEALTH

The National Bureau has assisted in the program of the recently organized International Association for Research in Income and Wealth by serving as its fiscal agent and by contributing the part-time services of one of its staff, Daniel Creamer, to act as research secretary. Under the chairmanship of Simon Kuznets the International Association has begun to issue the *International Bibliography on Income and Wealth*. Three annotated quarterly reports appeared in 1948. The Association plans to meet in Cambridge, England, August 24-September 2 to discuss a series of technical papers.

3 EMPLOYMENT AND PRODUCTIVITY

The following staff reports describe the current work on employment and productivity in the service and transportation industries. A volume summarizing the National Bureau's studies of employment and productivity will be started by Frederick C. Mills this year. Studies of the labor force are reported by Long in Section 6 and by Kuznets in Section 9.

SURVEY OF SERVICE INDUSTRIES

Family expenditures for services account for most of the sales of the service industries. The factors affecting these expenditures therefore require analysis in a survey of the development of the service industries. Attention is being paid to data describing relations, in a particular year, between a family's expenditures on services and its income level, the type of community in which it resides, and the number of persons in it. These 'cross-sectional' data throw only an oblique light on changes through time, but we hope they will contribute to our understanding of the relation between trends in service-industry employment since 1900 and concomitant growth in family income, trends toward urbanization, and the declining size of the family.

Solomon Fabricant

## GOVERNMENT

The resources currently utilized by government include the labor of government employees, the services of capital goods in the possession of government, and the goods and services purchased by government from private industry. Having already explored the first two groups, we focused attention last year on the third.

These government purchases consist not only of currently consumed materials, supplies, and services, but also of new roads, buildings, equipment, and other durable items built by private industry and added to the stock of governmental capital goods. To judge from our preliminary results, the resources acquired by purchase from private industry are similar in magnitude to the services of government employees—both measured in current dollars. Apparently too, the ratio of purchases to payrolls—also measured in current dollars—has either remained substantially unchanged since the opening of the century (of course apart from cycles, especially in outlays on capital goods) or has risen somewhat. Since salary rates have advanced relatively to commodity prices, the physical volume of goods and services purchased from private industry has apparently risen even more rapidly than the number of workers employed by government. We know that deflated capital assets per government worker have increased. The sixfold rise in government employment between 1900 and 1948, great as it is, thus understates the rise in the total volume of resources used in producing government services.

A paper on the growth of government's capital assets, prepared for the 1948 meeting of the Conference on Income and Wealth, has been expanded and rewritten for publication in *Volume Twelve of Studies in Income and Wealth*. A draft of an *Occasional Paper* on the rising trend in government employment is in the hands of a staff committee. My current task is putting these and other pieces of our work together into a monograph.

Solomon Fabricant

## EDUCATION

A draft of the essay on employment and compensation in education is being circulated for criticism. One of the most striking findings is the large and persistent rise of public school teachers' salaries relative to salaries of college teachers. The ratio of college

teachers' to urban school teachers' average salaries declined from 2.4 in 1910 to 1.6 in 1930 and 1.5 in 1940, and continued to fall slightly at least until 1947, the last year for which information is available. One episode in this period is of special interest: urban school teachers' salaries regained their pre-World War I purchasing power level by 1922; college teachers' salaries did not regain this level until 1931.

College teachers' salaries can be compared with earnings in the independent professions (law, medicine, and dentistry) only for the short period 1929-42. A long series of corrections—chiefly additions—must be made to professors' salaries if meaningful comparisons are to be made. The chief of these are for outside earnings, the long vacation, and the relative concentration of college teachers in smaller communities than independent professional workers. In addition, there are minor items such as the lower professional expenses of teachers, retirement contributions of employers, and sabbatical leaves. When the various corrections are made, it appears that in 1929 and in 1940 college teachers earned more than dentists but 10 to 20 per cent less than physicians and lawyers. Because of the short-run rigidity of money salaries of teachers, college teaching was more remunerative than any of the independent professions in 1932-34, and apparently considerably less remunerative than any of them during and after World War II.

About half of all college-trained women in the labor force in 1940 were public school teachers; the chief rival occupational groups (in the order of the number of college women) were stenographers, clerical workers, nurses, and saleswomen. In 1940 average school teachers' salaries, without any corrections for vacation, pensions, etc., were substantially above average earnings in these occupations in large cities.

George J. Stigler

#### TRADE

My inquiry into wholesale and retail distribution has several related phases. So far, the projection of wholesale and retail margins back to 1869 has absorbed the main effort. Roughly defined as the ratio of mark-up to selling price (or of 'value added' to 'value of product'), the distributive margin is influenced by many factors, but especially by the relative efficiency of wholesaling and

retailing on the one hand and of manufacturing and transportation on the other. The history of margins therefore furnishes an indirect approach to the study of productivity in distribution. To get material on margins prior to 1919 has not been easy, but files of trade periodicals have turned out to be an exceptionally rich source. A few states—notably Massachusetts and Indiana—made surveys. In addition I am indebted to some long established wholesale and retail firms who have generously placed their records at my disposal.

Another phase of the inquiry involves the estimation of retail sales by kind of store. With the help of this calculation for Census years since 1869, the widely scattered margin data can be combined into a single figure representing the share of the consumer's dollar absorbed by distribution. Whether the data on volume of sales can be deflated and used to measure the physical output of distribution services has not yet been determined.

Still other phases relate to the channels of trade, to the functions and services performed, and to the technology of distribution, at various periods since the Civil War. The channels of trade are being studied in order to assess changes in the relative importance of the wholesaler or 'middleman'—an essential ingredient of the 'margin' and 'sales' studies. Finally, the interpretation of the extensive materials on distribution cost will obviously require a study of the services performed by distributors and their technological methods. Should it be found that over the years distribution has in fact become more expensive (and this is not certain), how far are the more ample services offered by modern retailing, or a lag in its technological development, responsible?

Harold Barger

#### TRANSPORTATION

My manuscript on transportation—begun in 1940 and interrupted by wartime activities—has been completed. It presents measures of output, employment, and productivity for all types of commercial (i.e., contract and common carrier) transportation by land, water, and air for 1889, 1920, 1929, 1939, and 1946 in the United States and between the United States and foreign countries. The recurrent theme is the substitution of newer for older forms of

transportation. Yet one of the oldest—coastwise shipping—is as lusty as it ever was, and now carries more traffic (mainly oil) than ever before in its history. For the first time estimates have been made for ton-miles in coastwise shipping and American-flag foreign commerce. Somewhat surprisingly, water ton-miles considerably exceed rail ton-miles. In 1939, for instance, waterborne freight traffic roughly equaled all other types—rail, highway, pipeline, and air—combined.

Combined passenger and freight traffic of all agencies (land, water, and air) quintupled between 1889 and 1939, roughly keeping pace with manufacturing output. However, the combined figures conceal a fourfold rise in passenger and a sixfold rise in freight traffic. Consequently, freight traffic (measured in ton-miles) rose more rapidly than manufacturing output. The disparity is completely explained by the lengthening of haul associated with the growth of the country, for the movement of tons shipped closely parallels manufacturing output. Our ancestors do not seem to have been as fond of traveling as we are. In 1889 the average American traveled 200 miles by commercial intercity agencies; in 1920 nearly 500 miles. Despite the widespread private ownership of automobiles and the modern highway system, he still traveled 260 miles by rail, bus, air, or water in 1939—or 60 miles more than in 1889. Output per worker appears to have increased somewhat more rapidly in transportation (2.2 per cent yearly) than in manufacturing (1.8 per cent yearly).

Harold Barger

#### 4 BUSINESS CYCLES

Four 1948 publications deal, partly or entirely, with business cycles: Hultgren's *American Transportation in Prosperity and Depression*; Evans' *Business Incorporations in the United States, 1800-1943*; Abramovitz' *Occasional Paper, The Role of Inventories in Business Cycles*; and Mills' *Occasional Paper, The Structure of Postwar Prices*.

When he died, Wesley Mitchell had almost finished the first of two volumes he had planned. The volumes were to be a progress report on What Happens during Business Cycles, the first to deal

with varieties of cyclical behavior and their consensus, the second to analyze a typical business cycle, stage by stage—or, as Mitchell put it, to describe a trip around the cycle. Some work remains to be done on the first volume, but we believe that it can be made ready for publication in 1949.

Investigations in several new directions were begun during the year. Milton Friedman reports on his money and banking study below. Rutledge Vining and Lawrence Klein, who joined the staff as Research Associates in the autumn, also report on their studies below. In October Milton Lipton began to assist Arthur Burns in his study of investment, concentrating first on long cycles in construction. An exploratory survey of statistical data on economically significant time periods, such as production periods and contract periods, was undertaken by Richard Speagle in the summer.

Oskar Morgenstern expects to complete his manuscript on international financial transactions this year. Geoffrey Moore's manuscript on harvest cycles is being read by a staff committee.

Other business cycle studies are reported on below. See also the related reports in other sections: Kuznets on income distribution (Section 2) and on foreign trade (Section 9), Mills on commodity prices (Section 5), Maxwell on federal grants-in-aid (Section 7), Saulnier on urban real estate finance and Hickman on corporate bond research (Section 8).

#### PERSONAL INCOMES

A first draft of the materials on the cyclical behavior of labor income originating in manufactures has been written. The inquiry was carried on in terms of aggregate manufactures and for specific industry groups. This more intensive analysis confirms the broad relationships disclosed by the preliminary investigation described in the annual report for 1947. Among these findings is the pronounced tendency for average hourly earnings to lag behind the turning points in business cycles and in specific cycles of employment and payrolls for certain industries.

To utilize this finding fully, it is necessary to determine whether the relative movements in average hourly earnings are reliable indicators of relative movements in wage rates. We therefore analyzed the possible bases for any divergence in the movement of the

two, then marshaled the empirical materials bearing on these possibilities. The effect of employment at premium rates upon wage rates and hourly earnings, and the effect of the changing occupational composition of an industry's working force, are illustrated by the employment experience of the railroad industry.

However, direct evidence on the movement of wage rates, covering part of the period between the two World Wars, indicates unequivocally that there is a 'true' lag in wage rates. This evidence consists of an index of wage rates compiled by us for each of nine industries based on the changes in wage rates reported to the Bureau of Labor Statistics from 1919 to 1931 by the establishments in the monthly employment and payroll sample.

Moreover, the comparison of our index of wage rates with the index of average hourly earnings indicates that the turning points of the latter are usually reliable indicators of turning points in the former; also that the amplitude of the cyclical movement in average hourly earnings exceeds that in wage rates. These same relationships hold for the railroad industry.

During this year we plan to write a second draft of our analysis of the cyclical behavior of labor income, broadening the industrial scope of the inquiry but continuing to emphasize the cyclical pattern of labor income originating in manufactures. A draft of a paper on the wage rate-hourly earning comparison has already been prepared.

We plan to analyze also the cyclical behavior of British wage rates between the two World Wars. This study will be based on the monthly indexes of British wage rates developed some years ago for the National Bureau by Lorie Tarshis.

Daniel Creamer

#### INVENTORIES

A summary report of part of my study on manufacturers' stocks was published in the spring under the title, *The Role of Inventories in Business Cycles*, *Occasional Paper 26*. A revised draft of my book on manufacturers' inventories and business cycles is being reviewed by a staff committee. Part I deals with the theoretical literature on inventory fluctuations, describes the size of manufacturers' stocks and of stocks held by other industrial divisions, and

discusses questions of measurement. Part II describes the cyclical behavior of manufacturers' stocks and tries to present a reasoned account of that behavior by studying the diverse fluctuations in different types of inventory.

Part III is concerned with the rate of inventory accumulation during business cycles. It shows that inventory investment rises and falls almost synchronously with business activity, that a large share of the cyclical changes in aggregate production takes the form of changes in the pace at which goods are added to stocks, and that the size of this share probably varies inversely with the duration of expansions and contractions. It attempts to account for the magnitude and, more particularly, the timing of changes in the rate of inventory accumulation by studying different kinds of stocks. And, finally, it discusses the implications of the results for the duration and severity of cycles in business at large.

Moses Abramovitz

#### CONSUMPTION AND PRODUCTION OF CONSUMER GOODS

The first draft of *Consumption and Business Cycles—A Case Study: Footwear* is undergoing basic revision. Mimeographing of some of the chapters should start shortly. One piece of the work, to which this report is confined, involves an effort to learn what we can about factors underlying hide prices.

At a statistical level, we find that the monthly history of hide prices 1922-39 can be explained to a rather surprising degree by two time series: the deliveries of cattle hide leather to leather goods manufacturers, and the ratio of inventories of hides and leather awaiting further processing to those awaiting sale. We call the latter the 'stock-location ratio'. The inventories awaiting processing are raw or in-process hides held by tanners or leather held by leather goods manufacturers; the inventories awaiting sale are hides in the hands of dealers or packers and leather in the hands of tanners. A multiple regression, using monthly data, in which hide prices are estimated by these two variables produces a series in which all the major and most of the minor movements of hide prices are mirrored in the calculated series. Unfortunately no adequate impression of the excellence of fit can be conveyed without a chart.

The selection of the variables for the correlation analysis was of course predicated on tentative insights into how decisions to buy and sell leather and hides are made. The faithfulness with which the calculated series reproduces the history of hide prices further channelizes the story of market dynamics. A few aspects of the critical relationships may be briefly noted.

In the first place, hide prices are, apparently, determined as much in the market where leather is bought and sold as in those where hides are bought and sold. This seems reasonable in view of the fact that the larger shoe manufacturers, tanners, and packers endeavor to be fully informed about everything taking place in the whole range of activities from raw hide to finished shoe, especially as to the condition of stocks and the volume of shoe orders; they determine their hide or leather buying policies on the basis of this whole panorama including judgments concerning probable margins; the smaller companies watch the moves of the larger ones.

Second, other things being the same, hide prices are high when the flow of leather to leather goods manufacturers is large. At such times orders for shoes are likely to be heavy—a bullish sign since it implies an increase in demand for leather and hides relative to the more lethargic supply of hides. Manufacturers of shoes or leather, expecting a rise in materials costs, attempt to parry it by early buying. Moreover, they experience, in effect, an upward shift in their demand schedules supported by the belief that they can sell at a profit by using one or more of several expedients: reducing the quality of input without changing selling price; absorbing the higher costs through smaller per unit overhead consequent to the larger volume; passing the higher costs on to their customers.

Third, other things being the same, hide prices are higher the larger the proportion of total stocks of leather and hides that await further processing rather than sale. This is a reflection of a highly complex causal nexus; only a few aspects can be mentioned. The leather or hide buyer and seller interpret as bullish the knowledge, for example, that packers are sold up to current month kill, that only small quantities of hides are in 'secondary' hands, that tanners' stocks of finished leather are low; that, in other words, stocks awaiting sale are low. The two pools of stock—hide or leather awaiting sale by packer or tanner and hide or leather awaiting

processing by tanner or shoe manufacturer—move, over the cycle, in roughly opposite directions, the former inversely and the latter directly related to hide prices. For sellers to charge more when their stocks awaiting sale are low seems reasonable enough; more puzzling is why buyers are willing to pay more when their stocks awaiting processing are high—high in absolute terms and relative to the total supply of hides and leather, and also typically high relative to production or sales schedules. Here again the answer must lie in the shift in demand schedules following upon the belief that delay in buying will mean a still higher purchase price and that the higher purchase price can be passed on or absorbed.

Other factors such as the price of shoes and the proportion of total hide supply derived from federally inspected slaughter also appear to be material to an explanation of hide prices. Moreover, expectations concerning the course of hide prices could hardly be independent of events outside the industry. For about fifty years there has been a marked similarity between movements in the price of hides and in certain other prices—notably industrial stocks, steel scrap, slab zinc, and copper. What elements this ill assorted family of prices have in common would be an interesting question to investigate.

Ruth P. Mack

#### COSTS AND PROFITS

A study of diversities in the fortunes of industrial enterprises as indicated by their profits, requested by Mr. Mitchell for use in his survey of *What Happens during Business Cycles*, was completed. It is based upon profit data assembled by Harold Barger from the National City Bank's collection and other sources. We confined it to companies that published quarterly earnings statements for at least one full business cycle. Since the custom of publication has been spreading rapidly, we constructed a series of overlapping, progressively widening samples, beginning with 17 companies in 1920-23 and ending with 244 in 1933-38. At any one peak or trough an appreciable number of firms reach turning points in their profits before general business activity turns; another sizable group have belated turns. The percentage of companies with improving net income begins to fall long before a business peak and to rise long before a business trough. There were always a con-

siderable number whose fortunes ran contrary to the main course. The percentage of companies with falling profits was never less than 22 even in the prosperous 1920's, and the percentage with rising profits never less than 23 even in the great depression of the 1930's. Peaks and troughs in the aggregate profits of all the companies did not differ consistently from peaks and troughs in business activity at large.

The analysis of costs in large enterprises in the automobile and steel industries went forward. We have now computed continuous, if rough, figures on cost per unit of physical output, year by year, for five companies; similar information for others is in prospect. Our search for quarter-by-quarter figures was not equally successful. Only one company has published both cost and output over a fairly long period. In the last few years, however, there has been a notable change in this respect; future investigators of cycles in cost will be more fortunate.

The problem of measuring changes in cost can be approached indirectly. If we have an index showing the change in an industry's ratio of aggregate cost to sales during a business phase, and if we have a suitable index of the prices it received for its products, the product of the two indexes will indicate the change in its cost per unit of output. Working with less than ideal materials, we computed such products for some two dozen industries for which at least rough data were available for eight business phases. There were marked differences among industries. In every phase, the unit costs of some rose sharply while those of others scarcely changed or declined. The percentage of industries with rising cost in expansion, although sometimes less than 50, was consistently larger than the percentage with rising cost in contractions.

Data on profit margins, 1919-38, collected as part of the work on unit cost, suggest a net rise in margins during expansion, a net fall during contraction—again with considerable variation among industries. The 1919-20 and 1927-29 expansions did not conform to this rule. The first exception may be connected with the crudity of the time unit. The declines in 1927-29 were mild, and were followed by much more severe declines in the 1929-32 contraction.

During 1949 I plan to write two or three *Occasional Papers* describing the investigations mentioned above, to study costs and

profits of electric utilities, and to explore the literature on farm costs and profits.

Thor Hultgren

#### MONEY AND BANKING

This study deals with the cyclical behavior of monetary and banking phenomena since the Civil War. Active work, begun last year, was devoted primarily to surveying historical and background material, particularly for the period between the Civil War and the first World War, planning the organization of the study, and outlining the data to be compiled.

Plans call for organizing the empirical material under three main headings: (1) the supply and rate of use of generally acceptable means of payment, i.e., the role of 'money' as a medium of exchange; (2) the supply of assets easily marketable at virtually fixed nominal prices, i.e., the role of 'money' as an asset; and (3) the lending and investing activities of the banking system, i.e., the relation between the loan market and the creation of means of payment. Attention is currently being concentrated on the first.

Excellent data on the supply of generally acceptable means of payment for the period since the first World War are or will shortly be available. Monthly data on non-deposit currency are given in *NBER Technical Paper 4* by Anna Jacobson Schwartz and Elma Oliver. Mrs. Schwartz is currently compiling companion series on deposits, again using data from state banking reports to improve the rather unsatisfactory estimates hitherto available for banks that are not members of the Federal Reserve System. Work on these series has progressed rapidly and it is expected that they will be completed in the near future.

The data for the period prior to the first World War, though extensive, are much less satisfactory, primarily because of the paucity of reliable data for non-national banks. The compiled country-wide data for non-national banks are unreliable and are almost exclusively annual. Much work will have to be done to put them into usable form, and even so, major reliance will have to be placed on the data for national banks. To provide some evidence on the resulting errors and biases, it is proposed to make a special study, for a few cyclical periods of divergent character, of the relative behavior of the relevant items for national and non-national banks

in a few selected states for which state banking records are relatively good.

Milton Friedman

#### TRANSPORTATION AND COMMUNICATION

To help acquaint the public with our findings in *American Transportation in Prosperity and Depression* (published at the end of the year) I wrote a summary of them which appeared in *Railway Age* for January 1, 1949. In this connection I surveyed briefly the course of events since 1938, using data necessarily unavailable when the tabulations for the book were prepared. In both the expansion and the contraction of the traffic cycle that includes the war period, the cyclical changes in operating and financial ratios were quite similar, in my judgment, to what might have been expected from the analysis of earlier cycles presented in the volume.

After a few final touches the manuscript of an *Occasional Paper*, *Transport and the Trade Cycle in Britain*, will be circulated to the staff with a view toward publication in 1949. I hope also to wind up a brief study of cycles in the telephone industry.

Thor Hultgren

#### REGIONAL ASPECTS OF BUSINESS CYCLES

Recently we completed a memorandum outlining a plan for regional analysis of business cycles, and presented a paper dealing with this plan at the 1948 meeting of the American Economic Association. We attempted to indicate why we chose to study a set of regional units as a functioning system rather than to select separate regions for intensive study.

Our immediate objective is to discover some procedure for obtaining a more detailed view of the cyclical evolutions of a national economic system than can be obtained from national averages and totals. National aggregates cover up some of the adaptive processes at work within the system. For example, cross-country flows of money funds and real resources seem to have a cyclical pattern in their shifts in direction. It appears that in an expansion funds tend to flow from some regions and into others. As the expansion wears out and passes into contraction, the system of flows develops different tendencies.

We hope to discover modes of arranging the data by which such spatial flow characteristics of an economic system in motion, so to

speak, may be revealed and studied. For example, a cyclical pattern of financial flows is implied by regional differences in 'cycle sensitivity' or rates of economic change. What we have done so far is to view the rate of economic change from period to period in the total national economy as a parameter of a frequency distribution of the rates of change in the component regions. The shapes of these distributions are regular, tending toward logarithmic normality, and there seems to be a characteristic evolution of the parameters of the distribution as the 'national' business situation moves from phase to phase. These regular features are suggestive of some structural binding together of regional economies. Studies of industrial location and regional economic specialization suggest that the main connecting link between a given region and other regions is provided by industries whose products are sold in 'external' markets and that depend for their demand primarily upon income in 'external' regions. By way of these industries, economic 'disturbances' are conducted from region to region. Preliminary studies indicate that the proportion of a region's employment engaged in producing these 'active' products would typically be about 30 per cent. The picture is that of an interlacing set of economies each of which has a definite channel through which 'disturbances' enter or leave. The magnitude and qualitative features of this channel determine for a given region its sensitivity to external shock or to cyclical forces in the national economy.

This leads to the question whether economic regions fall systematically into groups showing significantly different behavior. That is, do measures of economic change for certain classes of regions shift systematically within the entire frequency distribution? I think it will be possible to set apart a class of regions that react relatively sluggishly, another class that are less sluggish in their response to 'national' change, and so on to those that respond with marked vigor. Other characteristic group shifts may be detected. A study of the properties (industrial structure, etc.) of these separate classes will then be in order.

For the experimental phase of this work, it is desirable to use inexpensive methods and data. The most readily available data are certain banking statistics by cities—debits, deposits, and re-

serve funds. Supplementary use may be made of department store sales and business failures. Part of my problem is to develop an economical method of analyzing these data, which cover two hundred to four hundred cities, so that whatever elements of order and regularity exist will be exposed. Rutledge Vining

#### ECONOMETRIC STUDIES

During the last two months of 1948, I initiated some investigations into possibilities of improving econometric estimates of some fundamental characteristics of social behavior. My main problem is to see how much additional information can be gained from studies of different independent sources of statistical data. Much econometric work has been confined to studies of annual, aggregative time series. In recent years theorists have made significant contributions to the proper econometric treatment of such data, but, as would be expected, there is far too little information in, say, twenty or thirty annual observations for the major aggregative series of the United States.

Two sources of statistical data that should help us to make empirical inferences by econometric methods are quarterly or monthly time series and cross-section studies of households or business firms at a given time. The proper treatment of both types of data raises interesting and difficult questions. At present I am studying, particularly, the use of cross-section material and hope later to consider monthly or quarterly time series and their associated complications.

The railroad industry presents a wealth of data that can readily be utilized in cross-section studies. For all Class I railroads, annual balance sheets, income statements, and miscellaneous operating statistics are in an accessible form for many years past. Moreover, there are certain advantages in inaugurating cross-section studies in a regulated industry with a uniform accounting system and certain variables under direct government control. My intention is to study input-output relationships (production functions), investment behavior, and other interesting characteristics of railroad operations. The approach is to try to work within the framework of a complete model for the industry and to develop statistical techniques suited to this kind of data. The project is not entirely

methodological, however, for the behavior of railroad investments is an interesting economic phenomenon in itself and an attempt will be made to discover something useful about it. The long run nature of railroad investment is of special importance to business cycle theory, for it is this aspect of railroad investment that gives play to such variables as interest rate and financial liquidity. From the detailed statistics of the railroad industry, we should have a good opportunity to observe the quantitative importance of investment determinants whose influence has been a matter of serious debate.

In addition to attempting to get new information from cross-section studies, I feel it important to reconcile the results obtained from time series analysis and from cross-sections; therefore I propose to investigate some of the time series for the railroad industry and to compare the findings with those obtained from the spatial distributions of the several economic variables associated with each railroad.

All the many studies made on cross-sections of households drawn from family budget data are limited in usefulness because a very few variables have been considered determinants of family behavior patterns. Much more complex models involving more variables and more equations are called for in this research. It is hoped that adequate data can be obtained from the more recent surveys of households to develop more satisfactory cross-section analyses of this sector of the economy.

Lawrence R. Klein

#### STATISTICAL INDICATORS

An objective method has been developed for ranking statistical series on the basis of the consistency with which their movements have conformed to cyclical fluctuations in business, and their turning points have led, lagged, or roughly coincided with turns in general business activity. A principal difficulty here is that some series in our collection cover many, some cover few business cycles. While the method devised for ranking series of different lengths is necessarily somewhat arbitrary, we believe it will provide a useful guide to the utilization of the array of data before us—some 800 series in all. Toward the latter part of the year we began to

prepare lists of series ranked by this method, with accompanying measures of each series' cyclical behavior.

These measures and rankings are based on all the cycles covered by a series. To avoid ambiguities due to differences in time coverage and to possible changes in behavior, it is desirable to have also measurements and rankings based upon a fixed and recent period for all series. Consequently, a second set of lists and measurements is being prepared for 1919-38, a period covered by most of the series.

Some thought has been given to the desirability of developing and applying other criteria at this point. The present sets of rankings constitute a preliminary selection of indicators, and additional information characterizing their behavior can be made available, which will afford a further basis for judgment. Since in the practical problem of selecting and using indicators other matters than cyclical behavior, such as promptness of publication or availability of seasonal adjustment, are often decisive there may be little advantage in refining the selection further on the basis of cyclical behavior alone. Moreover, the lists of series and measures described above are useful for other purposes than the selection of statistical indicators, for they show what are the leading and what are the lagging processes in business cycles, and enable one to make all sorts of analytical comparisons. Indeed, such comparisons are not limited to the series in our collection; an investigator utilizing other series might find it useful to know how his series stand in relation to some of those in our list.

Consequently, rather than attempt now to apply further criteria to the selection of indicators, we have begun certain tabulations that we think ought to accompany the lists and measures for individual series. These tabulations are designed to show the behavior in successive cycles of the various groups of series precipitated by our ranking method. The preliminary results demonstrate statistically, in more striking fashion than any other materials I know, the cumulative character of business cycles. Idealizing somewhat, the following picture seems to emerge. A few months after a business cycle trough, the series that typically lag begin to rise; shortly after most of the laggards have started to rise the series that typically lead begin to fall; then the group that typically turn in the

neighborhood of business cycle peaks decline; once the general decline is well under way the laggards begin to fall; on their heels come the processes that lead, which begin to rise; they are soon followed by upturns in the group whose turns tend to coincide with business troughs; then the laggards begin to show their heads again and the round of events is repeated. It is hoped that at least a preliminary publication on Statistical Indicators will be possible in 1949.

Geoffrey H. Moore

#### ANALYSIS OF TIME SERIES

Since the revision of our techniques in 1940, the emphasis in the computing unit has been on reference cycle analyses, which describe the behavior of a time series during periods occupied by cycles in general business in the country to which the series refers. This year we have turned our attention increasingly to specific cycle analyses, the aim of which is to provide supplemental measures of the behavior of a series during periods delineated by its own cyclical turning points. In all, 120 series were processed on this plan during the year, and the great majority of series in the United States collection have now been analyzed on the revised basis.

Work on new series has not added largely to our collection this year, but a painstaking inquiry by Hanna Stern has yielded a series on privately held public debt from 1917 to 1939, matching the currently published series which begins in 1939. The series represents the public debt of the United States outstanding at the end of each month, after all United States obligations owned by federal agencies or trust funds have been deducted. We have also thoroughly re-investigated our index of railway equipment orders, undertaken certain revisions, and shall prepare a memorandum on the construction of the index and the main considerations bearing on its use and interpretation.

This year we began to draw together the National Bureau's experience with the adjustment of data for seasonal variations. Several experimental studies were undertaken by Julius Shiskin some years ago, and Geoffrey Moore once prepared a memorandum summarizing two years' experience in reviewing the seasonal adjustments of a large share of the United States collection of monthly

and quarterly series. More recently we have experimented with various regression techniques, seeking to relate changing seasonals to such factors as number of working days, calendrical variations (Easter, etc.), and cyclical fluctuations. On the technical side there is thus a body of experience deserving integration; on the substantive side materials are at hand for carrying forward Kuznets' work in *Seasonal Variations in Industry and Trade*, if that should prove desirable.

A further technical problem that received some attention is how to adjust monthly and quarterly series to annual or biennial benchmarks. Procedures were worked out for making adjustments along a smooth line and at the same time assuring equality between adjusted annual totals and the benchmark totals. Either additive or ratio adjustments satisfying these conditions can be made.

Millard Hastay

## 5 COMMODITY PRICES\*

### CYCLICAL BEHAVIOR OF PRICES

The analyses of current price movements the National Bureau has published from time to time were extended in *Occasional Paper* 27. The Structure of Postwar Prices deals with the cost structure of American industry and inter-commodity price relations in mid-1948, in comparison with relations prevailing in 1912-14, 1924-27, and 1938-39.

Patterns of cyclical change in the wholesale prices of 193 commodities for 1890-1938 have been defined and detailed descriptive measurements computed. Average patterns have been established for major commodity groups and for all commodities in combination for each of the thirteen business cycles covered by this record. These measurements supplement the observations relating to a smaller sample of commodities being utilized in an intensive study of price-quantity relations in business cycles.

The regular work of this unit was laid aside during part of the year in order that the National Bureau might conduct a survey of

\* Ruth Mack's report in Section 4 deals with cyclical movements in hide prices.

statistical agencies for the Commission on the Organization of the Executive Branch of the Government.

Frederick C. Mills

#### CONFERENCE ON PRICE RESEARCH

The report of the Committee on Governmental Price Fixing is nearing completion. Eight of the eleven chapters are ready for final editing. Of the remaining three chapters, one is being mimeographed for distribution to the Committee; another is ready for mimeographing; and the last, Appraisal and Conclusions, is being prepared. The authors have set July 1 as the date for submission of the full report to the National Bureau.

The study will present a systematic account of the establishment of minimum prices for all bituminous coals under the Bituminous Coal Act of 1937, and an appraisal of both the Act and the methods used. It provides an arresting example of the complex task assumed by government when the price-making decisions of hundreds of thousands of buyers and sellers are replaced by administrative order.

A proposed pamphlet on areas towards which price research may fruitfully be directed, the concluding project of the Conference, has not yet been finished by the committee in charge.

## 6 THE LABOR MARKET

#### WAGES AND TRADE UNIONISM

In the findings of the National Bureau's wage studies there is evidence of marked changes in the structure of wages during periods of sustained and substantial rise or fall in the wage level. During both World Wars I and II wage rates of leading industries more than doubled. At the same time the wages of unskilled and common labor made considerably bigger gains than the wages of the skilled. In the 20 years between the two World Wars, the unskilled lost all or a part of their war gains.

#### PERCENTAGE UNSKILLED WAGE RATES ARE OF SKILLED

	1914	1920	1929	1939	1948
Manufacturing*	70	77	73	74	78
Construction	31	55	40	47	60
Railroads	38	55	39	38	59

\* Unskilled wage rates as a percentage of rates of skilled and semi-skilled.

Both policy and conditions in the labor market account for this behavior. The diversion in wartime of able-bodied young men from the labor force into the armed services produces, in an otherwise tight labor market, a relative shortage of unskilled labor. Hence their wage rates rise more rapidly than those of skilled labor. When the war is over, the armed services are demobilized, men return to civilian occupations, and this trend is reversed. In wartime, also, public and private policy has tended to favor lower paid labor by granting it larger percentage increases, or, as was almost the universal custom during World War II, making wage increases in terms of absolute cents per hour instead of in percentages. Only in 1948 was there an observable tendency to return to the percentage method of wage adjustments.

Probably the most striking divergency in wage behavior, caused mainly by economic conditions but also by labor union and public policy, is illustrated by comparing the movement of the wage rates of farm labor and factory employees for the indicated years, 1914-48. The depressed state of agriculture between the two wars stead-

PERCENTAGE FARM LABOR WAGE RATE IS OF MANUFACTURING HOURLY EARNINGS

<i>1914</i>	<i>1920</i>	<i>1929</i>	<i>1939</i>	<i>1948</i>
100	97.2	62.0	38.4	61.8

ily lowered the relative position of farm labor. Although farm wage rates had more than tripled since 1939, they remained in 1948 less than two-thirds of factory hourly earnings.

The manuscript for a monograph, *A Half Century of Union Membership*, should soon be ready for staff review.

Leo Wolman

#### THE LABOR FORCE

My study of the labor force under changing income and employment, to be finished this summer, will stress the rather remarkable over-all stability of the labor force of various countries as a proportion of the population in the face of great economic change and conspicuous variation in internal composition.

It is true that, at a moment of time, some tendency exists among cities, or countries, for the labor force to be relatively small when the income per worker is relatively high. This inverse relation be-

tween income and the labor force proportion is especially marked for women, children, and old people; but it exists in some degree for males and even for the entire labor force. In the United States, for every \$100 advance in income per worker, 5 to 10 persons in every thousand of standard age and sex 'leave' a city's labor force. A 1 per cent rise in income is associated with a decrease in the labor force proportion of one-sixth of 1 per cent. If the same decline in the labor force persisted as income doubled, one worker in every six would withdraw.

This association roughly confirms the findings of Paul Douglas; but it is confined to urban areas and does not appear for rural areas or for the United States as a whole (although we do derive a very similar association by comparing labor force and income levels of sixteen nations around 1930). The association appears much more clearly in comparisons of one area with another at a given time than in comparisons of the same area at different times. As pointed out in my report for 1947:

In the United States, from one decade to another, the rate of income rise apparently influences the labor force proportion; it is "pulled up" by rapidly rising income and "let down" by slowly rising income. In the United States, Germany, Great Britain, and Canada it tends to fall off slightly in times of great unemployment . . . and to recover when employment again reaches a high level.

Work done in 1948 has added the following conclusions:

- a) The labor force proportion in rural and urban areas in the United States for the relatively high employment decennial years 1890-1930 shows a stability in each area similar to that for the entire country.
- b) The over-all labor force proportion is stable not only for a population of standard age and sex, but also for primary workers (males, 25 to 64) and secondary workers (all other workers combined). This is true in all the countries studied and adds support to the idea that some law of compensation may be at work. In my study I consider some explanations for such a possible 'law of compensation'.

c) During World War II the labor force of the United States increased, from one or two million below normal to about six million above normal, about 14 per cent. As the armed forces demobilized, it subsided in 1946 and 1947 to normal or slightly below. By normal we mean here the labor force proportion projected by age and sex from the high employment years 1890, 1900, 1920, and 1930. In the present postwar period the United States labor force is slightly above its depressed prewar level, but stands at the same proportion of population it occupied after World War I or in 1900 or 1890. The same pattern of behavior was manifested in Canada and Great Britain, except that in neither country did the labor force increase as much as in the United States. In Britain it did not rise as much during the war because its peacetime level is higher than in the United States; Britain cannot call upon the reserve this country has by virtue of its smaller peacetime labor force proportion. In Canada the percentage mobilization of the armed forces was not nearly as great as in the other two countries. But in all the countries the end of the war brought the return of the labor force to normal or near-normal proportions.

Some preliminary work has been done on an inquiry into the Russian labor force in relation to that of the United States and Great Britain—its present size and composition, and its growth since 1897. This study, of which some tentative results were recently presented before the Industrial College of the Armed Forces, will compare also in rough terms the 'quality' of the labor force in these countries.

Clarence D. Long

Readers interested in the labor market are referred also to reports on the studies of employment trends (Section 3), Creamer's study of wage rates and labor income (Section 4), and the study of immigration and the labor force (Section 9).

## 7 FISCAL STUDIES

During 1948 work in fiscal studies was directed to completing investigations, preparing manuscripts, and planning and undertaking two new projects.

*Taxable and Business Income* was revised by the authors, Dan T. Smith and J. Keith Butters, Harvard University, and is now

being mimeographed for submission to the Directors and to members of the Conference on Research in Fiscal Policy. Lawrence H. Seltzer, Wayne University, and M. Slade Kendrick, Cornell University, report on their studies below. The latter study is an outgrowth of the survey of fiscal problems in reconstruction and peace begun in 1943, and has been preceded by several interim reports. These successive documents, based as they were on facts and opinions current at the time, constitute an interesting set of experiments with an important and difficult problem. Kendrick, collaborating with W. L. Crum, expects to spend a few months at the National Bureau revising the manuscript and preparing it for publication.

Two studies were started in 1948: Federal Grants-in-Aid, by James A. Maxwell, Clark University, and Survey of Income Tax Changes, by Lawrence H. Seltzer. The first was undertaken partly in response to the report of the exploratory subcommittee which submitted in 1947 a plan for a study of federal-state fiscal relations in the United States, and partly in response to an expression of interest by the Council of Economic Advisers to have a study made of federal grants-in-aid during business cycles. The second study will portray in brief compass the effects of changes in normal and surtax rates, exemptions, and credits for dependents on the disposable incomes of individuals and families in various income groups, from the beginning of the federal income tax to the present.

In the summer of 1947 Maxwell explored the needs for research on the fiscal aspects of social security and early in 1948 submitted a draft of his report to the Chairman of the Conference. His manuscript was designed to aid the Conference in planning projects in the event that social security finance should be selected as an area for research. No decision on this point has, however, yet been reached.

Upon his resignation from Harvard University to accept an appointment at the University of California, W. L. Crum resigned as Chairman of the Conference on Research in Fiscal Policy. Pending final decision concerning the reorganization of the administrative direction of the Conference with a view to closer and more

effective contact between the National Bureau staff and the work on fiscal policy, an Acting Chairman was appointed.

William J. Carson, *Acting Chairman*  
*Conference on Research in Fiscal Policy*

#### TAX TREATMENT OF CAPITAL GAINS AND LOSSES

I had planned to finish the manuscript on the nature and tax treatment of capital gains and losses in 1948, but various factors, mainly personal, prevented me. The delay has not been without some compensations: it has enabled us to bring our statistical material more nearly up to date and to take account of recent changes in the tax treatment of capital gains in other countries. I have had invaluable assistance in the latter connection from Price, Waterhouse and Company. At the instance of Percival F. Brundage, a Director of the National Bureau, this firm generously made available to me the services of its foreign offices for the purpose of checking and clarifying our description of the tax treatment in these countries.

The tax treatment of capital gains and losses varies greatly in different countries, and the large and intricate body of statutes, court decisions, and administrative regulations and practices can be indicated only in broad outline here. Some capital gains and losses enter into the computation of the taxable income of individuals or corporations in nearly all 15 of the countries studied. In most instances, however, they are excluded from the taxable income of individuals unless they were incurred 'in trade', through a business firm, from speculative transactions, or from property held less than a stipulated interval.

In Great Britain, Canada, Australia, South Africa, and New Zealand capital gains and losses are excluded from the taxable incomes of both individuals and corporations unless they were incurred 'in trade'. In France, Belgium, Switzerland, and the Netherlands they are exempt when realized by individuals outside the course of their business, but are taxable as ordinary income when received in the course of business by corporations, firms, or individuals. In Sweden they are exempt for both individuals and corporations if derived from real estate held ten years or more or from securities or other property held five years or more, but are

otherwise taxable as ordinary income. In Norway they are exempt for both individuals and corporations unless derived from property that was purchased with the intention of reselling, from property used in business, from patents and copyrights, or from building sites or other real estate held less than ten years. In Greece the capital gains of both individuals and corporations are taxable as ordinary income.

Much of the manuscript is now in finished form and I expect to submit the complete report within a few months.

Lawrence H. Seltzer

#### THE FEDERAL BUDGET IN THE FIRST POSTWAR DECADE

This study is being made by W. L. Crum and myself. A preliminary manuscript has been circulated among members of the National Bureau staff and the Conference on Research in Fiscal Policy. It presents projected estimates of average expenditures and revenues for 1947-57, by categories. From this analysis the prospect emerges that federal expenditures will continue to be extremely large during the next decade.

The next stage is to revise the manuscript in the light of the comments that have been received and recent developments.

M. Slade Kendrick

#### FEDERAL GRANTS-IN-AID

During the summer of 1948 I made a preliminary study of federal grants-in-aid and business cycles. Edwin G. Nourse, Chairman of the Council of Economic Advisers to the President, indicated a wish to cooperate with the Conference in this research, and I spent six weeks in Washington at the quarters of the C.E.A., receiving assistance particularly from Messrs. Kidd and Christian of the C.E.A., and from Mr. Rightor of the Bureau of the Budget.

Federal expenditure for grants-in-aid rose and fell with unemployment in 1929-47, but with a lag of at least a year. In an attempt to refine this over-all picture of cyclical variation two broad types of grant—those for public assistance and for public works—have been considered in some detail.

Total payments for grant-supported assistance show little sensitivity to changes in business conditions. The decline in the number of recipients 1941-45 was more than offset by the increase in the

average payment. Distributional defects in the existing system of grants and plans that have been proposed as remedies have been examined. A preliminary analysis has been made also of payments for general assistance, responsibility for which rests upon state and local governments, unsupported by federal grants. Payments for this purpose and the number of recipients have been highly variable, suggesting a cyclical pattern. Future variability will, however, be affected by the fiscal capacity of state and local governments, as well as by definitions of eligibility and the needs of eligible persons.

Expenditure for public construction, unlike expenditure for welfare purposes, is not related directly to the current needs of individuals. New public construction declined markedly after 1930, despite a rise in federal grants. The decline reflected a sharp drop in state and local construction which, in 1929-47, varied directly with private construction. The relative share of the federal government in total new construction has grown sharply since 1930, and direct federal construction has grown more than that for which grants are given. The record of public construction 1929-47 has been analyzed with a view to appraising the practical impediments to countercyclical spending.

A preliminary manuscript has been drawn up and consideration is now being given to the directions in which this research might most usefully be carried forward.

James A. Maxwell

## 8 BANKING AND FINANCE

The activities of the Financial Research Program during the past year consisted mainly in the continuation of researches initiated in 1943-45 in the general fields of urban mortgage credit, agricultural credit, and corporate bond experience. The work being done in each of these general areas is reported on below, as well as the status of certain studies carried over from earlier projects and plans for research. A study of the cyclical aspects of money and banking is reported on by Friedman in Section 4.

#### URBAN REAL ESTATE FINANCE

One of the major investigations we have been making in this field—The Impact of Government on Real Estate Finance in the United States—was completed by Miles L. Colean in first draft and circulated for critical reading. It will shortly be revised and brought up to date with an account of actions taken in the state legislative sessions of 1948 and 1949, in the last session of the 80th Congress, and in the first session of the 81st Congress. It describes in detail the development, recently greatly accelerated, whereby laws and regulations at various levels of government have narrowed the range of private decisions in the field of real estate finance and investment.

Among the studies close to completion and expected to be circulated in mimeographed form this year are E. M. Fisher's 'Urban Real Estate Markets and Their Financing Needs', and my own 'Urban Mortgage Lending by Life Insurance Companies'. Fisher analyzes the effect of the liberalization of mortgage credit terms on real estate prices during a buyer's market as part of his description of the markets for lease and ownership of the major types of urban property. My monograph describes the city mortgage market served by life insurance companies, analyzes their place in the mortgage financing market, and examines in detail two major problems of mortgage lending—the costs incurred in extending mortgage credit and the losses on mortgage loans made 1920-46. In the latter analysis we attempt to measure differences in losses on loans made under different economic circumstances, with different contract characteristics, or secured by different types of property. Preliminary findings suggest that the losses sustained on urban mortgage loans made 1920-46 by life insurance companies would have absorbed reserves accumulated during that period at an annual rate of 0.75 per cent. Loans of certain types, particularly full-amortization loans of moderate amount on single-family properties, had a much more favorable record than others. These findings, together with the closely related studies of administrative costs in mortgage lending, will further advance our knowledge of the factors other than the so-called pure interest rate that determine the level of actual money rates and yields.

Additional monographs are being prepared on other mortgage lending institutions, each describing the market served and, as far as data permit, the loss experience of the institution concerned. Under a cooperative agreement with the Federal Deposit Insurance Corporation Carl F. Behrens is studying Commercial Bank Activities in Urban Real Estate Finance. Edward E. Edwards, Indiana University, is working on Urban Real Estate Financing by Savings and Loan Associations; and C. Lowell Harriss, Columbia University, the History and Policies of the Home Owners Loan Corporation.

Behrens' study relies heavily on a sample of 8,500 mortgage loans supplied by 173 cooperating commercial banks and on reports of lending costs prepared by 32 banks. These data are less effective for the analysis of mortgage loan experience than those we have obtained from insurance companies but they should give a more accurate picture than ever before available of the mortgage market served by commercial banking institutions. A similar sample is being used in the study of savings and loan associations; Edwards is working with approximately 6,000 case histories of mortgage loans. Harriss will review the history of the Home Owners Loan Corporation, unique in the annals of American economic and political history, and describe in detail its functioning in the mortgage market. The principal findings of these institutional monographs will be brought together and supplemented with materials on the urban mortgage market as a whole in *Comparative Markets and Risk Experience of Mortgage Lenders* by J. E. Morton, Cornell University.

The last in the real estate credit series—*Economic Fluctuations and Urban Real Estate Finance*—was begun in September under the direction of Wolfgang Stolper of Swarthmore College. It is planned to investigate how urban real estate financing affects and is affected by general economic fluctuations, along lines similar to those followed in Gottfried Haberler's *Consumer Instalment Credit and Economic Fluctuations* (1942).

Raymond J. Saulnier, *Director*  
*Financial Research Program*

#### AGRICULTURAL FINANCE

The first of our studies in agricultural finance—Costs and Returns on Farm Mortgage Lending by Life Insurance Companies, 1945-47—will soon be published. Using materials reported to the National Bureau on a uniform basis by a number of life companies, the study examines the relation between lending cost, expressed as a percentage of each company's holdings of farm mortgage loans, and the scale of lending operations. Gross returns on farm mortgage loans for companies with large portfolios are fairly similar. Since most large-portfolio companies reported gross returns of 4.0-5.0 per cent and total costs of something over 1.0 per cent in 1947, the net yield would seem to have been about 3.3 per cent, before allowance for potential loss. Broadly speaking, gross yields on mortgage loan portfolios were lower for large than for small portfolios while the opposite was true of costs; in consequence, the lowest net yields were reported by the largest lenders. Our work in developing techniques for empirical cost measurement in the field of farm mortgage credit and in measuring cost-portfolio size relationships for 1945-47 will be carried forward currently by the Investment Research Committee of the Life Insurance Association of America.

Donald C. Horton's manuscript on the Characteristics of Agriculture in Relation to Its Financing Needs and the study by David Durand and Lawrence Jones of Mortgage Lending Risks in Agriculture are both being completed with the generous cooperation of the Division of Agricultural Finance, Bureau of Agricultural Economics, Department of Agriculture.

Horton explains differences among farm enterprises in the extent to which total capital requirements are met with equity investment of farm operators, as contrasted with equity investment of non-operators and creditor investment, in terms of differences in asset and product characteristics. The empirical evidence suggests a definite functional specialization of lenders in providing debt funds for agriculture. The Durand-Jones study is beginning to indicate that much of the mortgage distress that, in the early and middle 'thirties so seriously affected the agencies supplying credit to agriculture is traceable to mistakes made in estimating long term production potentials, particularly for newly settled

areas. Both studies will make major contributions to our understanding of the unique credit problems that agricultural activities present to public and private financing agencies.

E. F. Koller is preparing a manuscript on the financial structure, activities, and policies of farmers' cooperatives based on financial reports obtained with the aid of the Farm Credit Administration. Owners' equities provided about 57 per cent of all funds in use in 1945; common and preferred stock accounted for 11 and 8 per cent respectively, and a wide variety of ownership certificates, book credits in lieu of certificates, surplus and reserves, and other items issued for net margins retained in the business, for the rest. Among the important developments during 1936-45 in the capital structures of these enterprises were increases in the ratio of current assets to total funds and in non-stock ownership equities.

A first draft of *Credit in Relation to Land Tenure* by John D. Black of Harvard University, in collaboration with James McNulty, is being reviewed by the National Bureau staff.

Howard G. Diesslin's *Agricultural Equipment Financing* is being supplemented by tabulations portraying the development of this type of financing by the implement manufacturing companies and their experience as holders of a large volume of farmers' notes secured by equipment. Retail farm equipment dealers financed their own sales of new and used equipment to the extent of 6 and 4 per cent, respectively, in 1947, and outside financial agencies financed an additional 10 per cent of the new and 3 per cent of the used equipment sales; about 70 per cent of the dealers had arrangements with banks or finance companies for handling their credit sales, commercial banks had about \$100 million of loans outstanding in mid-1947 secured by farm equipment, and about 15 per cent of all Production Credit Association loans were of this general type. Significant decisions are now being made concerning how this important segment of the agricultural credit supply will be provided during the coming years, especially concerning the financing role of equipment manufacturers. Diesslin's study may be expected to cast much light on this range of questions.

Finally, a study of *Agricultural Credit Institutions*, reviewing their development and present status in our economic system, has

just been started; considerable research was completed last summer on the capital needs of agriculture and work is now going forward on a descriptive analysis of the supply side of the agricultural credit market. F. F. Hill of Cornell University and I have been collaborating in this work. Raymond J. Saulnier

#### CORPORATE BOND RESEARCH

The Corporate Bond Research Project was organized in August 1946 for the purpose of drawing up basic tables on corporate bond experience and for planning and initiating analytical studies of bond performance. The original objectives have, in the main, been met; henceforth, emphasis will be on analyzing materials at hand and preparing final reports.

Sections of the tables have been used by students and various financial and industrial groups; for example, by committees in drafting recommendations for changes in the New York legal list, by business corporations in analyzing the market for their obligations, and by trust officers in setting up loss reserves for certain types of trust accounts.

The completion of the tabulating program on its present scale would not have been possible without the generous assistance of the International Business Machines Corporation. Originally, the Corporation had placed at our disposal, on a part-time basis, its elaborate machine installation at the Watson Scientific Computing Laboratory, Columbia University; in March 1948 it set up, and has since maintained, a modern machine unit at 'Hillside'. Since the installation is quite flexible it can be used to advantage in almost all types of large scale statistical analyses, the only limitation being that the specifications for an analysis be reducible to a finite sequence of elementary arithmetic operations.

Present plans call for the publication of one or more annotated statistical compilations covering the characteristics and experience records of corporate bonds. A paper, 'The Volume of Corporate Bond Financing, 1900-1944', is in preparation and some thought has been given to another, 'Loss Rates on Corporate Bonds, 1900-1944'. The former will contain four interrelated time series: bond offerings, extinguishments, net changes in amounts outstanding (offerings minus extinguishments; that is, net new financing via

the corporate bond market), and amounts outstanding (the volume of long term corporate debt in bond form). Our offerings series differs from other published series in time coverage and the definition of the universe covered. The other three series constitute the first continuous estimates of these types available. As far as the data permit, monthly estimates will be made for all four series. Our preliminary estimates of outstandings, in millions of dollars, are presented herewith, as of January 1 of the indicated quadrennial years.

1900	\$5,845	1912	\$15,425	1924	\$21,127	1936	\$26,157
1904	9,030	1916	17,240	1928	26,438	1940	25,153
1908	12,613	1920	18,079	1932	28,937	1944	22,664

Several findings bear directly upon important theoretical and practical problems. The loss rate is the difference between the promised yield at the time the bond was purchased and the yield actually realized after taking account of default losses, call premiums, and the like. Loss rates were computed for all bonds in our records for which relevant information was available and for several investment periods during the life of each bond, particularly from the date of offering to extinguishment and for a number of shorter chronological periods. The loss rates and realized yields of bonds held from offering to extinguishment are, of course, most relevant for investors who, like the large life insurance companies, typically purchase at offering and hold to extinguishment, whereas figures for the shorter periods are relevant for investors who, following the practice of some commercial and savings banks, purchase outstanding securities in the market and sell prior to maturity.

The practical importance of the loss rate lies in the fact that it is the annual rate of capital loss on an issue, i.e., the amount that will offset the capital loss if set aside annually out of income. From the viewpoint of the theoretical economist, the significance of the loss rate is that, for many investors, the promised yield at date of purchase is the yield they expect to realize; for them the loss rate measures the amount by which expectations failed to be realized.

Our preliminary estimates indicate that the average loss rate for all corporate bonds offered and extinguished between January

1, 1900 and January 1, 1944 was .05 percentage point. On called bonds, realized yields exceeded promised yields at offering on the average by 1.28 per cent (negative loss rates equal capital gains); on bonds paid in full at maturity, the loss rate was zero; on bonds extinguished following default, 3.95 per cent. In all, 58 per cent of the bonds were extinguished by call, 22 per cent by payment at maturity, and 20 per cent were extinguished following default.

The report will give loss rates on various types of bonds. Broadly speaking, yields promised at offering and in the market for outstanding obligations are less for high than for low grade issues; they are also somewhat lower for issues of large obligors than for those of small companies (size of obligor is measured here by total assets). Realized yields computed from offering to extinguishment, on the other hand, vary in inverted order with quality and size (i.e., they are highest for high grade issues and bonds of large obligors). Consequently, the loss rates are largest for low grade issues and those of small obligors.

Loss rates computed for various chronological periods, on the basis of market prices prevailing at the beginning and end of each period, show that in expansions large capital gains accrue on the lower grade issues and on those of small obligors; correspondingly large losses accrue in the recession phases of the bond market cycle. Thus, these materials provide evidence in support of the hypothesis that the investment cycle is characterized by waves of excessive optimism and pessimism.

W. Braddock Hickman

#### CARRY-OVER RESEARCH ACTIVITIES

During the past year several studies growing out of earlier projects were completed. Sergei Dobrovolsky finished his interesting study of Corporate Income Retention and Avram Kisselgoff completed all the research, and is now engaged in writing a report, on his analysis of Factors Affecting the Demand for Consumer Installment Credit. Professor Higgins' *Lombard Street in War and Reconstruction* is being published as *Occasional Paper 28*. Wilson Payne finished a paper—A Technique for Tracing the Flow of Funds Through Corporations—incorporating the results of his exploration of methodological problems in tracing the flow of funds through economic units. Work on the study of Economic and Fi-

financial Characteristics of Applicants for Loans from the Federal Reserve Bank of New York has been in abeyance.

#### RESEARCH PLANNING

The Central Staff has been planning new studies in two fields. Howard Greenbaum has been attempting to develop a reporting form that will enable us to compile data on the flow of funds through financial institutions. This grows out of Payne's explorations into the problem of tracing the flow of funds and has been conducted so far exclusively on the basis of data made available by several mutual savings banks in New York State. If a method of measurement can be worked out that is feasible and gives promise of illuminating aspects of our financial markets not revealed by present statistical materials and methods of analysis, it is hoped that it can be extended to the study of all major types of financial institution.

Wilson Payne has been exploring the problems and possibilities of research on the general question, is there a shortage of equity capital? An effort is being made to reformulate this question in a manner that will permit the application of quantitative techniques.

Finally, consideration has been given to a study of the actual sources of financing for small and medium-size business concerns. A pilot field investigation, supplemented by studies conducted with the cooperation of several university research groups, would be an effective means of executing such a study and might develop techniques that could be followed on a uniform basis in other areas. Questions of fact often block discussion of the financing problems of small and medium-size businesses; some can be answered, it is hoped, by coordinated regional studies.

## 9 INTERNATIONAL ECONOMIC RELATIONS

Since my time and effort continued to be absorbed by the study of shares of upper income groups and by the activities of the Universities-National Bureau Committee, I could do little work during 1948 in this area. However, beginnings were made in two directions described below.\*

\* Related studies are being conducted by Morgenstern (see introduction to Section 4), Vining (Section 4), and Long (Section 6).

#### IMMIGRATION AND THE LABOR FORCE

The long term effects of immigration on the growth of the American economy have often been discussed, but seldom if ever have the statistical data been studied without the heat of passions generated by pressure of economic interest or the bias of firmly held cultural patterns. As one of the necessary bases for interpreting the past and as a prerequisite for understanding the present or for intelligent hypotheses concerning the future, this problem must be given proper attention.

Exploratory work is being initiated on a part-time basis by Ernest Rubin, who has had years of experience in the research section of the Immigration Service. Mr. Rubin's first topic is the technical one of checking the immigration and the foreign born data by comparing the two during inter-census intervals (particularly recent ones). In addition, a preliminary inventory of the Census data on the foreign born is being made. The general sequence of analysis is from immigration to residence as foreign born and to participation in the labor force, at possibly changing occupational levels. The work must at first be exploratory, concerning itself with the availability and reliability of data; broader attack on the problem must await the results. At some future time other lines through which immigration exercised its effect (capital import and export, general population growth, etc.) will have to be considered.

#### FOREIGN TRADE

Solomon Fabricant has formulated plans for a study of the foreign trade of the United States. He states:

We hope to begin work first on the volume and composition of commodity imports and exports. Attention is to be paid to secular, cyclical, and wartime changes in this trade. Among the questions to be dealt with are: How have cyclical fluctuations in our foreign trade been influenced by secular changes in its composition? How have these changes in composition been related to changes in the industrial structure of the domestic economy? What has been the role, in these developments, of alterations in our terms of trade with other countries? What effects, temporary and permanent, have wars had on our foreign trade? Immediate tasks to be undertaken include a reclassification of our imports and exports into various meaningful

groups; preparation of long term series on the physical volume of trade; and checks of our import and export series against foreign records of trade with us, tonnage of ships cleared, production of goods from imported materials, and so on.

Fabricant expects to make also a survey and systematic restatement of the data on our international balance of payments.

Simon Kuznets

## THE UNIVERSITIES-NATIONAL BUREAU COMMITTEE

Following the tentative program adopted at its meeting in November 1947 and summarized in last year's report, the Committee explored various topics for special conferences, decided upon two for immediate action, and considered plans for improving the structure of its organization.

The topics chosen as foci of greatest interest are the economic growth of nations and research in business cycles. In view of the vast scope of the former field, it did not seem advisable to hold at once a conference to summarize the state of knowledge on the topic. It was thought best to have first a discussion of a few exploratory papers in connection with the regular meeting of the full Committee. Accordingly, papers dealing with various aspects of the field (by John M. Clark, Joseph J. Spengler, Carl E. Thomas, Edgar M. Hoover, Jr. and Joseph L. Fisher, and Simon Kuznets) were discussed at the meeting in New York, November 26 and 27. The prepared papers will be mimeographed for wider circulation, prefaced by an introduction indicating the unifying threads and suggesting lines of fruitful research. The Committee thought that further substantive work in the field should be encouraged with a view to another meeting in three or four years.

The special conference on research in business cycles is designed to review the various approaches now followed and to summarize the results of work on selected problems. A planning committee under the chairmanship of Gottfried Haberler has mapped out the program, assigned the various papers, and selected the discus-