

A BALANCE SHEET OF
THE NATIONS ECONOMY.

By

Frank G. Dickinson

AND

Franzy Eakin.

X.73.N4
G6
041832

UNIVERSITY OF ILLINOIS BULLETIN

ISSUED TWICE A WEEK

VOL. XXXIV

NOVEMBER 24, 1936

[Entered as second-class matter December 11, 1912, at the
under the Act of August 24, 1912. Acceptance for mailing
age provided for in section 1103, Act of October 3, 1917.]

Dhananjayrao Gadgil Library



GIPE-PUNE-041832

BUREAU OF BUSINESS RESEARCH

COLLEGE OF COMMERCE AND BUSINESS
ADMINISTRATION

A BALANCE SHEET OF THE NATION'S ECONOMY

BY

FRANK G. DICKINSON

AND

FRANZY EAKIN



BULLETIN No. 54

PUBLISHED BY THE UNIVERSITY OF ILLINOIS, URBANA
1936

It is the purpose of the Bureau of Business Research of the University of Illinois—

- (1) to study and as far as possible to explain economic and industrial conditions within the State;
- (2) to direct attention to experience-tested practices of good business management; and,
- (3) to investigate methods for securing the best executive control of business.

BUREAU OF BUSINESS RESEARCH

CHAS. M. THOMPSON, Ph.D., LL.D., *Director*

A. C. LITTLETON, Ph.D., C.P.A., Assistant Director

BULLETIN No. 54

A BALANCE SHEET OF THE
NATION'S ECONOMY

BY

FRANK G. DICKINSON

DEPARTMENT OF ECONOMICS

UNIVERSITY OF ILLINOIS

AND

FRANZY EAKIN

COMPTROLLER, A. E. STALEY MFG. COMPANY

PUBLISHED BY THE UNIVERSITY OF ILLINOIS, URBANA

1936

Gokhale Institute of Politics
and Economics, Poona 4.

PREFACE

The scientific analysis of economic statistics and the careful preparation of accounting data of course antedate the World War. But that period of intense activity and long-felt results gave a new stimulus to the previously slow development of both statistics and accounting as scientific instrumentalities. Two technics have grown up, as it were, side by side, yet without much interchange. But accountants are coming to realize that their art is, in some respects, purely a statistical operation, that of recording and classifying data, and that most of the items reported in the financial statements constitute data for statistical series of very great importance. Economic statisticians on their side are becoming aware of the rich data-source which lies undeveloped in accounting.

When an economist who teaches statistics and a certified public accountant who lives his accounting as the comptroller of a large enterprise are closely associated for some time, it is not unlikely that, sooner or later, these developments will enter into their discussions, and that presently the possible union of statistics and accounting for certain purposes will suggest itself. Out of such discussions comes the present sketch of an area wherein the union of these two technics may easily establish a new high-water mark in the development of both fields of study.

Accountants will recognize the arrangement of the data in the proposed "National Balance Sheet and Income Statement" as the familiar working papers for compactly expressing the opening balance sheet, the closing balance sheet, and the interim transactions that explain the changes revealed. Statisticians will recognize the data used as drawn from familiar statistical sources with considerable freedom. The insufficiency of present-day statistical sources for any such comprehensive purpose will be made evident in the text.

Perhaps the time will soon come when national statistics may be assembled for the specific purpose of a coordinated display of the state of the nation; perhaps we are even now on the verge of a period of better understanding and mutually profitable interchange of ideas by accountants, statisticians, and economists. If this brief preliminary survey of the possibilities shall be even a small stimulus toward the accomplishment of such ends, the authors will feel amply repaid.

Throughout the study the term "Economic Planning" has been avoided because it has so many possible meanings. In its stead, the

words "Economic Coordination" and "Economic Proportionality" have been employed. In this way it is hoped to avoid possible confusion of thought.

We wish to acknowledge our indebtedness to the Bureau staff for their help in editing the manuscript.

FRANK G. DICKINSON
FRANZY EAKIN

September, 1936.

TABLE OF CONTENTS

	PAGE
I. ECONOMIC COORDINATION	7
II. A NATIONAL BALANCE SHEET.	9
III. AN EXPERIMENTAL SAMPLE	12
IV. SOURCES	26
V. EXPLANATION OF ITEMS IN BALANCE SHEET AND INCOME STATEMENT	27

I. ECONOMIC COORDINATION

The course of economic history does not run smoothly, nor does it show a series of close-set peaks and valleys of action and reaction. There are variations and changes, some sharp and noticeable, many only slowly manifesting themselves. When, for any reason—severe depressions, extensive wars, or the like—the variations are swift and violent, there are troubled times because innumerable established relationships are then disrupted. The effects of changed conditions upon different individuals and interests are bound to be unequal, and the reactions or rebounds that follow are in turn varied. Things get out of balance; a relative equilibrium once disturbed is difficult to restore, yet the restoration of a workable degree of coordination is vital.

Experienced business men have long been learning the lessons of preparedness—that is, lessons in looking ahead for such poor clues to the future as our intelligence has been able to discern. Financial and economic statistical data and the technics of statistical analysis have vastly extended the business man's vision of the distant horizon. Great developments in accounting, such as cost finding and budgeting, have deepened the business man's understanding of the interaction of details germane to his economic and financial affairs. Out of the combination of these two he has built a technic of planned coordination, which, imperfect—even deceptive at times—though it be, still constitutes a far more effective approach to the solution of administrative problems than business men have ever had before.

The question then appears: Cannot something of this same technic be used as an approach to our national problems? Troubled times are national as well as individual; the need for some vision of distant horizons is the same; definite goals must be selected in both cases and coordination sought in an effort to regain an acceptable degree of equilibrium and a sound inner proportionality. Cannot the technics of the statistician and the accountant be combined in the national interest as effectively as in the interest of individual business enterprises?

Specifically, is it not possible to obtain and organize statistics of national income, costs, wealth, debts, etc., according to the technic of working papers and consolidated balance sheets by which accountants combine widely scattered data into compact schedules? It should be just as feasible to view the total national wealth as the wealth of an individual at two different dates; it should be possible to organize

sources of data in such a manner that the net increase or decrease in national wealth between the two dates could be broken down into analytical, enlightening details, as is done by a business enterprise for its wealth changes.

II. A NATIONAL BALANCE SHEET

In a specific business enterprise one can turn to records of past events—sales, purchases, equipment, employment, prices—to get a picture of the status of that enterprise and prepare plans for the future. If consolidated statements, schedules, and accounts are available for all the members of a trade association, business men can use such statements as an aid in formulating their future program for the entire industry and the role that the individual companies will play. Unfortunately business men do not also have a national balance sheet and income statement to guide them in their enterprise and judgment.

This study advocates the development of account-statistics for all economic activities in the United States in order that it may be possible to view business activity in full perspective—a hazy view, perhaps, but properly proportioned.¹

The National Balance Sheet and Income Statement herein presented is scarcely more than a *pro forma* statement. Each figure must be accurate in order to present a current estimate of the net worth

¹The nearest approximation to a national balance sheet that has come to our attention is shown in the tables on pages 10, 11, 15, and 199 of Robert R. Doane's *The Measurement of American Wealth*. In these tables, a reasonably accurate statement is made of the items of "real" or tangible wealth. The statements of the items of "liquid" and "negative" wealth are incomplete and suggest that the author's concepts and understanding of these phases of wealth are inadequate. Furthermore, no serious attempt is made to portray the means by which changes occur in the balance-sheet amounts from time to time, nor are the elements of wealth related to the production and consumption or saving of income.

The net worth stated in the National Balance Sheet and Income Statement that is presented in this bulletin is substantially larger than any published estimates of national wealth. This is accounted for by reason of the failure of other estimators to include in their calculations the full amounts or valuations of "liquid" wealth which they deducted as "negative" wealth. Few, if any, of the estimators of national wealth have attempted to include all the elements of "liquid" and "negative" wealth.

The need for a national balance sheet has been presented in recent articles by George N. Peek, although his main interest has been in the recording and summarizing of the international position of a nation resulting from transactions in international trade and finance.

The idea of a national balance sheet has been sketched by Professor Morris A. Copeland, "National Wealth and Income—An Interpretation," *Journal of the American Statistical Association*, Vol. XXX: No. 190, June, 1935.

Frederic A. Delano has also suggested such a statement in "Our Nation's Balance Sheet," *Review of Reviews*, Vol. 93: 28, February, 1936.

For a different view see Wassily W. Leontief, "Quantitative Input and Output Relations in the Economic System of the United States," *The Review of Economic Statistics*, Vol. XVIII: 3, August, 1936 (Cambridge, Mass.)

of the entire national economy. Each item is important enough to warrant careful calculation.

Even if all the figures used in this national summary had been taken from the works of outstanding authorities on these items, the composite result would have been questionable because of overlapping concepts and conflicting definitions. Furthermore, it has been necessary to make estimates for various items not previously calculated; some of the estimates are scarcely more than guesses. The major purpose is to develop a concept and to strive for a reasonable degree of accuracy in the figures used to illustrate this concept. It would be confusing to include a lengthy appraisal of the methods here used and of the figures of other students whose results were employed. If more than one estimate was available, the one used herein was selected usually because the concept employed fitted the accounts best. It is not intended at this time to defend the adequacy of either the estimates made or the selection of figures from previously published sources; the desire is rather to suggest a research program.

The National Balance Sheet and Income Statement provides an accounting tool especially useful to those interested in the development of economic statistics by governments, private agencies, and individuals. A large mass of information has been compiled on many of these items, but there has been no device for testing their unity or completeness. The use of a national balance sheet and income statement constitutes a unique method of presenting these figures for a large number of separate items in a form that reveals changes in the individual items, as well as increases and decreases in the net worth of our economy from year to year. The gaps which have been found in the information indicate some of the important types and kinds of economic statistics that such agencies should supply in the future.

It is reasonable to suggest that the several fact-gathering agencies of the federal government could use this accounting device as one measure of the adequacy of federal business statistics now being collected. It affords an important test of unity and completeness; it discloses some very important relationships between items; it reveals the "state of the nation" at a glance, as well as many important factual changes that have taken place during the year.

There should be separate balance sheets, income statements, cost accounts, and special schedules for every industry or economic group; in fact, these data for the several important groups should be compiled first and later combined and consolidated into the one national state-

ment. This process of building up a larger and ever larger picture by combining the statements of the separate industries would utilize most of the economic statistics now available as well as new types and kinds of information.

The chief value of such a master check-list would not be to belittle fact-gathering surveys but rather to reveal clearly the wide gaps in our present knowledge of the totality of economic activity. This master check-list would show the need for expanding our information rather than prove an argument against present or proposed statistical research projects.

One of the inherent difficulties faced in the project was the general question of segregating the governmental items from the private or non-governmental. The balance sheet and income statement for all local, state, and federal government economic operations should be shown separately and in a consolidated form; these governmental accounts should be classified into producer and consumer accounts according to the nature of the economic activities. So desirable a treatment of public or governmental accounts is far beyond the limited scope of this study. Governmental items have therefore been recorded in both consumers' and producers' accounts, according to the apparent character of such governmental economic operations. The careful preparation of a national balance sheet and income statement of all governmental economic activities with the necessary supporting accounts and schedules for the current year (1936) would be a large research undertaking.

III. AN EXPERIMENTAL SAMPLE

The following pages are, for the most part, devoted to an illustration of a balance sheet and income statement for the nation. The purpose is to show the feasibility of the idea and to provide a procedure so that the way will be paved for more accurate and useful statements in the future.

The year 1929 has been selected for demonstration because the available data for that year are greater than for any subsequent year. Extensive use has been made of secondary sources in which the primary data have been summarized; summaries for more recent years will doubtless appear later. The considerable expansion of various special types of data—e.g., income and sales tax returns—during the past two years offered strong inducements to use 1934 or 1935. The amount of census data available for the closing year of the last decade, however, was the determining factor in the selection of 1929 as the most feasible year for the present use.

As shown by the accompanying statement² there are four distinct divisions or parts in this Balance Sheet and Income Statement of the nation. The first pair of columns shows a balance sheet or inventory of our economy for the end of 1928. The second pair of columns gives a record of the transactions of the entire year of 1929 shown as debits and credits. The third pair of columns shows the sources of the incomes during the twelve months and the disposition of those incomes. The last pair of columns is a balance sheet or inventory of the economy for the end of 1929. The plan of this summary statement is to show the assets and net worth at the end of the preceding year and at the end of the current year, together with the transactions during the year which account for the changes. The changes in net worth are recapitulated in summary form in a footnote at the bottom of the table on pages 14 and 15.

The net worth item is the end figure of the calculations. The present usage of this accounting term roughly coincides with the concept of national wealth. It is the balancing item and its accuracy depends upon the accuracy of all the items which it balances; a net worth of \$568.7 billions for December 31, 1928 and \$583.9 billions for December 31, 1929 are balancing figures and not estimates of national wealth previously published. The totals of \$1063.7 billions for the first pair of columns, as well as the totals of the second and fourth

²Another statement, identical in data and form, but with items cross-referenced, is presented on pages 28 and 29.

pairs, in general, have little meaning. The third pair of columns, however, shows a national income of \$82.1 billions, plus \$0.1 billion, the net change in the volume of money in circulation.

There are both debit and credit entries for most of the transactions during the year; that is, there are sales and purchases, costs and incomes, payables and receivables, deposits and withdrawals, exports and imports, etc. The debit and credit for many items are almost equal; the difference is usually the same as the difference between the balance-sheet item at the beginning and at the end of the year. For example, the amount of gold, silver, minor coins, and currency in the banks was \$3.7 billions on December 31, 1928 and \$4.1 billions on the last day of 1929; this increase of \$0.4 billion is exactly equal to the excess of the transactions debit of \$11.6 billions over the transactions credit of \$11.2 billions. Not all the transactions entries are of this type; they will be given further attention.

The income and disposition columns reveal the distribution of the national income of \$82.2 billions for the year 1929; for example, \$4.9 billions was devoted to land improvements, new buildings, and equipment and \$1.8 billions to additions to inventories—all items in producers' wealth.

As shown in the analysis at the bottom of the statement, the net worth of our national economy increased \$15.2 billions during 1929; \$6.7 billions was the net addition to our supply of capital goods (gross of \$11.1 billions less \$4.4 billions consumed in production); \$1.5 billions the net addition to consumption goods (\$8.0 billions gross less \$6.5 billions durable goods consumed); \$0.3 billion increase in investments abroad; \$0.3 billion increase in our stocks of gold and silver; the final \$6.4 billions of the increase in net worth was due to price changes.

This Balance Sheet and Income Statement has been prepared from the viewpoint of the nation's economy; in that sense the viewpoint is neither that of business nor government but rather that of the totality of the economic activities of all the persons composing a single nation. These items may be thought of as expressive of the means by which income is produced, distributed, and consumed; these transactions account for all the changes which occur in wealth from one year to another.

The term "wealth" has a rather definite meaning in economic discussions. In its primary and classic use it has reference to the physical goods which serve to satisfy the wants of man and which are of such limited quantity and such a nature that man may assert owner-

NATIONAL BALANCE SHEET AND INCOME STATEMENT FOR THE YEAR 1929

Billions of Dollars

Accounts	Balance Sheet Beginning of Year		Transactions		Income and Disposition		Balance Sheet End of Year	
	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>
WEALTH								
<i>Producers': (not including bankers)</i>								
Lands	325.0	.....	53.1	45.0	4.9	.....	333.1	.....
Buildings and equipment	48.3	.....	199.8	198.0	1.8	.....	50.1	.....
Inventories								
<i>Consumers':</i>								
Lands	36.2	.....	11.1	11.1	.....	.....	36.2	.....
Buildings and equipment	53.0	.....	6.7	2.6	3.5	.....	57.1	.....
Chattels	76.9	.....	4.5	3.9	4.5	.....	77.5	.....
<i>International:</i>								
Receivables and equities owned	18.6	.....	6.3	6.0	.3	.....	25.7	6.8
Payables and equities sold								
<i>Banking:</i>								
Gold, silver, minor coins	3.7	.....	11.6	11.2	.4	.....	4.1	.....
Currency								
Loans and other receivables	63.2	.....	189.1	189.6	.....	.....	62.7	.....
Deposits and other payables		59.0	935.1	935.0	.....	.....	58.9	.....
Tangible property	2.2	.....			.....	.....	2.2	.....
Capital stock		3.9	1.7	1.8	.....	.....		4.0
Surplus		6.2	.6	.5	.....	.....		6.1
<i>Credits:</i>								
Money in circulation	4.8	.....	33.4	33.5	.....	.1	4.7	.....
Receivables	188.7	.....	267.8	261.9	.....	.....	194.6	.....
Investments	243.1	.....	272.9	271.5	.....	.....	244.5	.....
Payables		265.0	253.1	256.0	.....	.....		267.9
Corporate stocks outstanding		106.1	269.0	272.7	.....	.....		109.8
Corporate surplus		54.8	.....	.3	.....	.....		55.1
PRODUCTION AND CONSUMPTION								
<i>Business Units:</i>								
Sales				199.8	.....	.....
Purchases			115.4		.....	.....
Salaries and wages			53.5		.....	.....
Depreciation and depletion			4.4		.....	.....

NATIONAL BALANCE SHEET AND INCOME STATEMENT FOR THE YEAR 1929 (Concluded)

Billions of Dollars

Accounts	Balance Sheet Beginning of Year		Transactions		Income and Disposition		Balance Sheet End of Year	
	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>
Business Units: (Concluded)								
Taxes			6.5	8.3				
Rents and royalties			4.2	1.3				
Interest			7.1	2.2				
Dividends			6.0					
Withdrawals			12.9					
Net increased value retained in business units						1.6		
INDIVIDUALS								
<i>Income:</i>								
Salaries and wages				53.5		53.5		
Rents and royalties				4.9		2.9		
Interest				5.9		4.9		
Dividends				6.0		6.0		
Withdrawals				12.9		12.9		
Foreign .....				.3		.3		
Capital gain				6.4				
<i>Consumption:</i>								
Food			19.8		19.8			
Home			21.5		19.5			
Attire			11.1		11.1			
Other living			17.4		16.4			
Depreciation and obsolescence			6.5					
NET WORTH		<u>568.7</u>						<u>583.9</u>
TOTALS	<u>1063.7</u>	<u>1063.7</u>	<u>2802.1</u>	<u>2802.1</u>	<u>82.2</u>	<u>82.2</u>	<u>1092.5</u>	<u>1092.5</u>

ANALYSIS OF CHANGES IN NET WORTH

Balance beginning of period			568.7
Add:			
Additions to capital goods	11.1		
Less: Capital goods consumed in production	<u>4.4</u>	6.7	
Additions to consumption goods	8.0		
Less: Permanent consumption goods consumed	<u>6.5</u>	1.5	
Increase in investments abroad .....		.3	
Discoveries and imports of gold and silver .....		.3	
Advances in values due to price changes		<u>6.4</u>	
Balance end of year			<u>583.9</u>

NOTE A: The amounts stated for balance sheets, income, and disposition are based upon data believed to be reasonably accurate. The amounts stated for transactions are estimated from data contained in certain incomplete tabulations.

NOTE B: All the amounts stated are subject to revision as further research work is completed.

ship of them. This primary and classic meaning does not necessarily include the idea of valuation in terms of dollars or any other monetary unit. With the development of our elaborate and intricate economic systems there have developed methods of valuation of these items of physical wealth; these valuations are expressed in terms of dollars and other monetary units. In the National Balance Sheet and Income Statement these valuations of physical wealth are stated in Items 1 to 5, 7, 9, 10, and in the corresponding items in the other sections of the Balance Sheet. (See pages 28 and 29 for numbering of items.)

Concurrent with the development of the idea of valuation in terms of monetary units, certain other concepts of wealth came into being. These concepts are "liquid" wealth and "negative" wealth, and, from the standpoint of a national economy, the additional concept of "international" wealth.

Liquid wealth refers to the claims of persons against other persons when such claims are to be paid in monetary units, physical wealth, or services to be performed. In the National Balance Sheet and Income Statement, Items 8, 11, and 12, and the corresponding items are measurements of this kind of wealth.

Negative wealth is the opposite of liquid wealth. It is expressive of the liabilities of persons to other persons, which liabilities are to be liquidated by payment of the monetary units, goods or services. Items 13 to 18 and the corresponding items are expressive of the amounts of such negative wealth.

In a world economy the totals of liquid and negative wealth are always equal in amount. In a national economy there may be some difference; but such a difference is a portion of the international wealth item. International wealth has meaning only as it relates to a national economy or to some phase of a national economy. It expresses both receivable and payable claims of persons (and government) of one national economy to persons (and government) of other national economies. It is possible for the concept of international wealth also to include elements of real or physical wealth. In the National Balance Sheet and Income Statement, Item 6 and the corresponding items are expressive of this kind of wealth. The estimates employed for international, liquid, and negative wealth do not always conform to the concepts as stated. Further research will permit the reclassification of certain elements of these estimates, so that the economic Balance Sheet and Income Statement of the nation will tend to record measurements in accordance with the concepts presented. Investigations of these elements suggest that in both a national and a world economy

the actual measurements of these four kinds of wealth do conform to these concepts.

The net income produced should be understood to be the value that is placed upon the net quantity of goods and services that is produced by all the citizens of an economy. Income paid out is the net amount paid by all business units for wages and other costs incurred in the production of goods and services. It also includes the amount of dividends and distributions of profits that are paid by business units to individuals. Income received by individuals is the same in amount as income paid out, but represents the receipts by the individuals rather than the disbursements by the business units.

Income produced and income paid out are seldom, if ever, equal in amount in any period of time. The difference between these two totals is the amount which is retained by business or which is disbursed by it in excess of the values of goods and services which it has produced.⁸

Income consumed by individuals is the value of the portion of income produced that is used by individuals in the satisfaction of their wants. Income saved is the difference between the income produced and the income consumed by individuals.

These concepts may not be so complete as they should be; it is likely that the measurements stated in the National Balance Sheet and Income Statement are not in exact conformity with these concepts. It is quite possible that further research along the lines here indicated will clarify the concepts used and will also make possible more accurate measurements and statements of amounts.

The term "Transactions," the caption of the second pair of columns in the exhibit, includes all dealings involving the transfer of values between persons—the purchases and sales of goods and services, and the claims receivable and liabilities payable that arise out of these transactions. Furthermore, it includes all settlements, regardless of how made, between persons for their purchases, sales, receivables, and payables, and any adjustments of values whether they arise from reappraisals, depreciation, depletion, losses, or other causes. The Balance Sheet and Income Statement, as a whole, is a summary designed to reveal the action of the causes of economic activities and the relationships of changes in any of these activities to changes in other activities.

The Balance Sheet and Income Statement of the nation is an

⁸For a more detailed explanation of these terms see *National Income, 1929-32*, Senate Document No. 124, 73rd Congress, 2d Session.

adaptation of the form of the working balance sheets and income statements generally used by the accountant. As the statement is here presented, the accountant may criticize it because a departure from strict accounting practice has been introduced to a limited extent in the columns captioned "Income and Disposition." The departure was made in order to keep the statement relatively simple, and at the same time to reveal the relationships between income produced, income received, income consumed, and income saved. Strict accounting practice would suggest introducing another pair of columns into this statement that would show the eliminations that were made in reducing certain items in the transactions columns to the proper amounts for the purpose stated above.⁴

The sources of the figures employed in the balance sheet and income statement that were taken from published estimates and a brief explanation of estimates which were made for the remaining items are given on page 27 *et. seq.* In this way details are kept from interfering with the explanation of the figures and their concepts, as well as with the possible utility of an accurate balance sheet and income statement. No statements for particular industries and economic groups, cost analyses, or detailed schedules are included because there is reasonably complete material for so few. Furthermore, the preparation of all or a considerable portion of such tables would require a large staff for clerical and statistical assistance. A separate set of records and ac-

⁴The following eliminations, in journal entry form, were made in order to reduce the amounts in the Income and Disposition columns to net balances.

	(Billions of dollars)	
	<i>Debit</i>	<i>Credit</i>
<i>Producers</i> (except bankers)		
Lands, buildings, and equipment-price changes.....	...	3.2
<i>Consumers</i>		
Buildings and equipment		
Depreciation.....	2.7	...
Price changes.....	...	3.3
Chattels		
Depreciation.....	3.8	...
Price changes.....	.1	...
<i>Individuals</i>		
Income		
Rents and royalties.....	2.0	...
Interest.....	1.0	...
Capital gain.....	6.4	...
Consumption		
Home.....	...	2.0
Other living.....	...	1.0
Depreciation.....	...	6.5
	<u>16.0</u>	<u>16.0</u>

counts for all governmental activity would be very valuable for improving the data; unquestionably the federal government—perhaps state and local units also—has played an increasingly important role in the sum total of all transactions during recent years.

Every gainfully employed person makes decisions which influence in some degree the course of economic events; a seemingly unimportant choice, such as a young person's decision to become a mechanic or a stenographer instead of a farmer or a clerk, makes its small imprint upon future business activity. Those who employ only one worker influence the turn of events. The large corporations give much direction to economic affairs through their production, purchases, sales, finance, and labor policies. Each person, as well as each group, therefore, has some influence on the wealth-getting and wealth-using activities of mankind.

It is a source of never-ending wonder to observers of economic affairs that out of this maelstrom of competition, this vast working army with many captains and majors but no general, this following of primitive urges to secure comfort and prestige—that out of these should emerge an economic system or an economic order. We often wonder why the merchant has the things we find that we wish to buy, even articles produced in a foreign land; we did not tell him what to obtain for us.

Economic coordination within a nation involves some preconceived notion of the course which future economic events should follow for the general welfare and of the existence of ways and means of so directing events that they will follow this course. It is good for men to dream and plan for the future of their economy. There is nothing dangerous in attempts at economic coordination except that "directing" may become "forcing."

A corporation must look ahead because it sells *in the future* many goods and services completed in the present, or at least produced from facilities now made available. Every business man has to be a business forecaster whether he wants to or not. He must try to push back the veil that conceals the unknown future ahead, looking meanwhile at what lies in the past for possible clues.

How does a corporation do its planning? At the outset the executives study the accounting records, the balance sheet, the income and loss statement, the cost studies, and the various schedules. Shall a new product be added? Is the probable margin between price and cost sufficient to justify the use of funds which might be devoted to other purposes? Shall plant and equipment be increased?

By analogy, there comes the suggestion that similar accounting devices could be used to portray the current state of our entire national economy. Armed with such information, presented in familiar forms, the business man should be better able to plan his own operations intelligently and in keeping with the nation's business. With such information, local, state, and federal officials would have the ideal of a well-proportioned economy always before their minds.

The people of a nation can not know too much about their economic affairs. Long and careful research into the nature and problems of our economic system must lie at the foundation of this knowledge and the policies which grow out of it. The development of adequate national balance sheets, income statements, schedules, and accounts, covering each economic group and the entire economy should be a major item in every program for the accumulation of that knowledge which is a *sine qua non* of adequate economic coordination and sound economic proportionality.

Most of the present day economic principles, theories, and laws have been developed by a long list of scholars during the past two centuries. These men approached the study of economics from a background of philosophy, history, and kindred subjects. The doctrines they have enunciated and the laws they have formulated and explained have been based almost entirely upon deductive reasoning. The origin of such principles does not warrant criticism of the men who formulated them. But it should be frankly recognized that factual materials concerning the operations of a complicated economic system were lacking.

These writers tried to establish an explanation of the functioning of the whole economic system without the benefit of a factual picture of the system which they were attempting to describe. They were handicapped, furthermore, by the tardy development of accounting and by the absence of comprehensive statements summarizing the affairs of individual enterprises and groups of business enterprises. Accounting has been considered by many of them as too detailed and practical for their consideration:

The formulation of a balance sheet and income statement of the nation's economy with supporting schedules and accounts would constitute an important foundation of fact upon which to build a structure of economic principles; such summary statements would also offer a check upon the operation of economic principles previously formulated. At the very least, such statements would afford many useful illustrations of economic truths.

It is often said that the distribution of income and the cost of production are, for the most part, two sides of the same concept. Upon examination of the balance sheet it is found that the elements of business cost, business income, and individual income are in balance: that is, items for salaries and wages, taxes, rents and royalties, interest, dividends, and withdrawals total \$92.0 billions (Items 37, 39, 40, 41, 42, 43, and \$1.8 billions of Item 47); the income Items (67, 68, 69, 89, 90, 91, 92, and 93) also total \$92.0 billions. A further illustration of the value of this way of presenting "the state of the nation" is seen in its application to social insurance plans. The only real security for the gainfully employed population obviously lies in having sufficient current national income from a productive capacity sufficiently active to produce the volume of national income that would be required.

Another illustration of the value of such a national balance sheet and income statement will be evident in any consideration of the economic implications of savings. The amount of savings of any economy can be represented only in wealth itself. Bank deposits are considered assets by their owners; but these deposits are also liabilities of the banks. The National Balance Sheet and Income Statement can be used to clarify the confusing and conflicting economic theories concerning the possibility of investments exceeding savings, or *vice versa*, during the several phases of the business cycle. Accounts receivable and investments of all types are considered assets by their owners; yet these same items are also liabilities for those persons in the economy who owe them. The sums of all these types of asset and liability in an economy are always equal. To illustrate, the total of Items 8, 11, and 12 is \$495.0 billions; the total of the credit or liability Items 13, 14, 15, 16, 17, and 18 is also \$495.0 billions. The difficulty with the traditional approaches to the problem of spending and saving, investments, and debts is that the approach has been made from the standpoint of either debtor or creditor and not from the viewpoint of the whole economy.

The National Balance Sheet and Income Statement has at least two more educational uses: it presents a new way of recording economic history; it will facilitate the education of business men because accounting is their language.

Much of the confusion encountered by the thoughtful college student in his first course in economics is attributable to the inability of his instructor to present a panoramic view or a comprehensive picture of the entire system of wealth-getting and wealth-using activities of his country. The writers of textbooks for these students find

it difficult, if not impossible, to present such a perspective. The Balance Sheet and Income Statement should be of real assistance in formal education in the preparation of subject matter for courses in economics. It will certainly demonstrate that cost and income are two sides of the same picture; this feature alone will greatly help in the study of proposed reforms.

Statisticians have been quick to use data derived from the accountant's records in the measurement of wealth, income, and fluctuations in business activity. Unfortunately these statisticians have neglected to adopt the coordinated summarizing devices of the accountant—balance sheet, income statement, etc.—in attempting to condense their figures into summaries, tables, and charts. Accounting offers not only the figures but also the concepts that will add to the clarity of statistical summaries prepared for business people and governmental officials.

Students of quantitative economics will always dream of the day when they will be able to measure the totality of economic progress; the more conservative leaders are inclined to agree with the theoretical economists that it will always remain a dream until someone invents a measuring rod for the final utility of consumption, the ultimate reality of economic experience. Those who continue to hope will welcome a device borrowed from the accountants and will explore its possibilities in trying to present the changing picture of economic life.

The difficulty of securing reasonably satisfactory estimates of many of the 119 items here used will perhaps be advanced as a reason for doubting the value of research along these lines. It is admitted that several different estimates—for example, the value of inventories—have been made which do not agree; this same lack of agreement is apparent in the available estimates of the value of all lands, buildings, and equipment. These differences arise both from the samples used and from differences in ideas on valuation. Although larger samples are being used, the matter of valuation will continue to be a stumbling block in the way of statistical agreement, especially in periods of violent price fluctuations. What is the total value of our railroads or of our public utilities? Judicial determination of the rights of equity and lien holders in businesses affected with a public interest introduces considerations that make the valuation of utility property more difficult than the appraisal of other lands, buildings, and equipment not owned by regulated public monopolies.

Other difficulties will arise in extending such research. How can a satisfactory figure for obsolescence and depreciation of consumers

goods and producers' durable goods be calculated?⁵ Every accountant knows that any figure for depreciation and obsolescence involves either an arbitrary use of averages or a forecast of the unknown future lifetime of an asset, or both. Our national balance sheet items could be at least as reliable as the allowances for these two items made by the accountants of business establishments. Few critics would condemn the proposal on this ground alone; planning ahead in business has been effectively done even though some accounting terms are subject to somewhat different interpretations by equally qualified men. In fact, the use of accounting devices seems capable of bringing economic coordination down to earth, where deficiencies in the factual information will be revealed. A frank recognition of the inexactness of many of the accounts and concepts used in preparing a national balance sheet and allied statements would also have its usefulness.

Great progress has been made in the measurement of national income and its disposition. The technic has been improved and the supporting sample enlarged; hence the resulting estimates are more reliable. The items appearing in the third pair of columns have been taken from such studies. These columns will continue to present more reliable figures than the first two (assets and liabilities) as long as our estimates of national income continue to be more reliable than similar estimates of national wealth.

Let us suppose that these difficult and baffling statistical obstacles will yield to patient and extensive research, and that the educational, business, and governmental uses of such national financial statements will justify the expenditure of a large sum in an expanded statistical and accounting research program. What else can be said for the undertaking?

It seems reasonable to suppose that this type of information would enable business and governmental leaders to see the need for changes that should be urged from time to time in our economic and political structure in order that grave problems may be solved before the situation gets out of hand. The repeal of laws and the enactment of laws could thus be better fitted to our changing national, state, and local needs.

In the past and present, business executives have studied such data as have been available to them with a view to planning their

⁵Solomon Fabricant, *Measures of Capital Consumption, 1919-1933*, Bulletin No. 60, National Bureau of Economic Research, June 30, 1936. This bulletin arrived too late to be used in making these estimates.

individual business in such a way that it will balance with the activities of other business establishments. Their purpose in planning is to attain a continuous and growing prosperity for their individual businesses. If their information were more adequate they would be better able to accomplish this result and in their individual accomplishments would realize for the economy as a whole a healthy expansion. Unfortunately the data that have hitherto been available and the explanations of the operations of the economy based upon these data have been so inadequate that individual business men in their planning have not attained the sound proportionality they sought. The failure of the business men to attain this balance has been among the major reasons for the periods of crises and depressions.

This notion of proportionality is evidenced in the attempt of the head of every business to maintain a balanced relationship between the several products which he produces and between his product or products and the products of others. This process also manifests itself in the substitution by the consumer of another product for the one that he formerly purchased. It is only a short step from this concept of balance between the different phases of one business to a balance between all the productive efforts in our economy. It may be truly said that no business plans for a depression; rather it directs its main efforts toward a continuing increase in the production and sale of all its products. It seems reasonable that, if the individual business man (particularly the small business man) had adequate information as to the operation of the whole economy, he would be more nearly able always to maintain his business in a state of balanced growth, or to adjust his business more rapidly to the new conditions created by any major economic, social, or political upheaval, such as war, for example. This statement does not imply that it will ever be possible in any kind of relationship between business men themselves, and between them and government as representing the consumers and investors, to achieve and maintain a perfect adjustment between all the units which make up the economy; but few would deny that further progress can be made along these lines.

The greatest problem faced by any business in attempting to expand its operations is to discover and measure the ability and desire of consumers to buy its products. If balance sheets and income statements with accompanying schedules and accounts could be developed for each industry, a considerable number of the business errors resulting from such lack of knowledge could be avoided. Very little

comprehensive information of this sort is today available; that which is available is not assembled in such form as to aid the business man in his planning problems.

Armed with the records of their own business enterprise and further implemented with a clear concept of the place of that enterprise in the whole national economy as revealed by a national balance sheet and income statement, each economic unit could more effectively plan production, sales, and expansion. Until this larger picture of the structure and function of the whole economy is available, business executives, labor leaders, merchants, farmers, mining operators, and governmental officials will continue to make errors that are due to the lack of such knowledge.

IV. SOURCES

Anyone interested in attempting to verify or check the amounts stated in the exhibit presented herein, or in expanding or extending the work here begun, will find much useful information and data in the following secondary sources.

Robert R. Doane, *The Measurement of American Wealth* (Harper & Bros., New York, 1933).

National Income, 1929-32, Senate Document No. 124, 73rd Congress, 2d Session.

Maurice Levin, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume* (The Brookings Institution, Washington, 1934).

Edwin G. Nourse and Associates, *America's Capacity to Produce* (The Brookings Institution, Washington, 1934).

Harold G. Moulton, *The Formation of Capital* (The Brookings Institution, Washington, 1935).

William Lough, *High Level Consumption* (McGraw-Hill, New York, 1935).

Statistical Abstract of the United States, 1934, U. S. Bureau of Foreign and Domestic Commerce.

George N. Peek, "In and Out" (*Saturday Evening Post*, May 16, 23, and 30, and June 6, 13, and 20, 1936).

Those who are interested in primary sources will find many excellent references in the works named. However, particular reference is made to the following publications of several departments of the federal government.

<i>Statistics of Income</i>	Treasury Department
<i>Reports of the Comptroller of the Currency</i>	Treasury Department
<i>Census of Retail Distribution</i>	Bureau of the Census
<i>Census of Wholesale Distribution</i>	Bureau of the Census
<i>Census of the Construction Industry</i>	Bureau of the Census
<i>Census of Manufactures</i>	Bureau of the Census
<i>Agricultural Yearbook</i>	Department of Agriculture

V. EXPLANATION OF ITEMS IN BALANCE SHEET AND INCOME STATEMENT

Computation of Items

Items 1 to 5 and 95 to 99 were computed from estimates published in Doane's *The Measurement of American Wealth*. As these estimates do not conform exactly to the concepts of the study, adjustments were made.

Items 6, 25, 54, 81, 100, and 107 were computed from estimates by George N. Peek.

Items 7 to 10, 13 to 15, 28, 82, 87, 101 to 104, and 108 to 110 were computed from reports of the Comptroller of the Currency.

Items 11, 12, 16 to 18, 105, 106, and 111 to 113 were estimated from data contained in Doane's *The Measurement of American Wealth*, *Statistics of Income*, and other sources.

Items 19 and 114 are sums of the "real" and "international" wealth of the economy.

Items 20 to 24, 26, 27, 29 to 36, 49 to 53, and 55 to 66 were computed and estimated from data published by the Bureau of the Census, the Department of Agriculture, the Comptroller of the Currency, the Treasury Department, and *The Measurement of American Wealth*. For several of the items the information available was limited and incomplete. In such cases estimates were made of the probable volume of transactions, using the ratios derived from business experience. It is recognized that further studies may arrive at amounts substantially different from those stated.

Items 37, 39 to 47, 67 to 76, 83 to 86, and 88 to 94 were computed from estimates contained in *America's Capacity to Consume* and in *National Income, 1929-32*.

Item 38 is from *Statistics of Income*.

Items 77 to 80, 115, and 116 are estimates based on data contained in publications of the Bureau of the Census. These derived items may be subject to error both as to classifications and amounts.

Description of Items

Item 1—Current valuation of all lands, buildings, equipment, and other means of production. It includes government-owned lands, buildings, etc., that are used to produce goods or services for consumption. Some of these are capital buildings, postoffices, public utilities, etc. The tangible wealth of bankers might have been included here; it has been omitted in order to include it in the banking section of the statement, so that the nature of banking and its function in the national economy might be more accurately portrayed.

Item 20—Current valuation of all purchases and other acquisitions, such as by gift, mortgage, inheritance, etc., of the elements of wealth included in Item 1. This amount also includes new constructions, additions, and improvements. Furthermore, it includes any increases in valuations as a result of reappraisals, etc.

Item 49—All sales and other dispositions of the elements of wealth included in Item 1. Herein are included losses by fire, wind, accident, etc., and reductions in valuation as a result of depreciation, depletion, obsolescence, and reappraisals.

Items 20 and 49—Taken together, these items reveal all the changes which occur during the year in the valuations, changes in ownership of real wealth, increases and losses in capital goods (except banking), however caused. These items, when properly analyzed, probably afford a better understanding of the changes in capital goods than can be acquired by any other means.

NATIONAL BALANCE SHEET AND INCOME STATEMENT FOR THE YEAR 1929

Billions of Dollars
(Reference Numbers in Parentheses)

28

Accounts	Balance Sheet Beginning of Year		Transactions		Income and Disposition		Balance Sheet End of Year	
	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>
WEALTH								
<i>Producers': (not including bankers)</i>								
Lands	325.0(1)		53.1(20)	45.0(49)	4.9(77)		333.1(95)	
Buildings and equipment								
Inventories	48.3(2)		199.8(21)	198.0(50)	1.8(78)		50.1(96)	
<i>Consumers':</i>								
Lands	36.2(3)		11.1(22)	11.1(51)			36.2(97)	
Buildings and equipment	53.0(4)		6.7(23)	2.6(52)	3.5(79)		57.1(98)	
Chattels	76.9(5)		4.5(24)	3.9(53)	4.5(80)		77.5(99)	
<i>International:</i>								
Receivables and equities owned								
Payables and equities sold	18.6(6)		6.3(25)	6.0(54)	.3(81)		25.7(100)	6.8(107)
<i>Banking:</i>								
Gold, silver, minor coins								
Currency	3.7(7)		-11.6(26)	11.2(55)	.4(82)		4.1(101)	
Loans and other receivables	63.2(8)		189.1(27)	189.6(56)			62.7(102)	
Deposits and other payables		59.0(13)	935.1(28)	935.0(57)				58.9(108)
Tangible property	2.2(9)						2.2(103)	
Capital stock		3.9(14)	1.7(29)	1.8(58)				4.0(109)
Surplus		6.2(15)	.6(30)	.5(59)				6.1(110)
<i>Credits:</i>								
Money in circulation	4.8(10)		33.4(31)	33.5(60)		.1(87)	4.7(104)	
Receivables	188.7(11)		267.8(32)	261.9(61)			194.6(105)	
Investments	243.1(12)		272.9(33)	271.5(62)			244.5(106)	
Payables		265.0(16)	253.1(34)	256.0(63)				267.9(111)
Corporate stocks outstanding		106.1(17)	269.0(35)	272.7(64)				109.8(112)
Corporate surplus		54.8(18)		.3(65)				55.1(113)
PRODUCTION AND CONSUMPTION								
<i>Business Units:</i>								
Sales				199.8(66)				
Purchases			115.4(36)					
Salaries and wages			53.5(37)					
Depreciation and depletion			4.4(38)					
Taxes			6.5(39)	8.3(67)				

BULLETIN No. 54

NATIONAL BALANCE SHEET AND INCOME STATEMENT FOR THE YEAR 1929 (Concluded)

Billions of Dollars
(Reference Numbers in Parentheses)

Accounts	Balance Sheet Beginning of Year		Transactions		Income and Disposition		Balance Sheet End of Year	
	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>	<i>debit</i>	<i>credit</i>
<i>Business Units: (Concluded)</i>								
Rents and royalties.....			4.2(40)	1.3(68)				
Interest.....			7.1(45)	2.2(69)				
Dividends.....			6.0(42)					
Withdrawals.....			12.9(43)					
Net increased value retained in business units.....						1.6(88)		
INDIVIDUALS								
<i>Income:</i>								
Salaries and wages.....				53.5(70)		53.5(89)		
Rents and royalties.....				4.9(71)		2.9(90)		
Interest.....				5.9(72)		4.9(91)		
Dividends.....				6.0(73)		6.0(92)		
Withdrawals.....				12.9(74)		12.9(93)		
Foreign.....				.3(75)		.3(94)		
Capital gain.....				6.4(76)				
<i>Consumption:</i>								
Food.....			19.8(44)		19.8(83)			
Home.....			21.5(45)		19.5(84)			
Attire.....			11.1(46)		11.1(85)			
Other living.....			17.4(47)		16.4(86)			
Depreciation and obsolescence.....			6.5(48)					
NET WORTH.....		568.7(19)						583.9(114)
TOTALS.....	1063.7	1063.7	2802.1	2802.1	82.2	82.2	1092.5	1092.5

ANALYSIS OF CHANGES IN NET WORTH

Balance beginning of period.....		568.7(19)
Add:		
Additions to capital goods.....	11.1(115)	
Less: Capital goods consumed in production.....	4.4(38)	6.7(117)
Additions to consumption goods.....	8.0(116)	
Less: Permanent consumption goods consumed.....	6.5(48)	1.5(118)
Increase in investments abroad.....		.3(81)
Discoveries and imports of gold and silver.....		.3(82)
Advances in values due to price changes.....		6.4(76)
		<u>15.2(119)</u>
Balance end of year.....		<u>583.9(114)</u>

NOTE A: The amounts stated for balance sheets, income, and disposition are based upon data believed to be reasonably accurate. The amounts stated for transactions are estimated from data contained in certain incompletable tabulations.

NOTE B: All the amounts stated are subject to revision as further research work is completed.

- Item 77—This item purports to state the amount of current savings out of income which was added to capital goods.
- Item 95—This is the same as Item 1 except that it is the valuation at the end of the year instead of the beginning of the year. The ending figure reflects changes due to transactions during the year.
- Items 1, 20, 49, 77, and 95—These should be separated into their component parts, such as land, buildings, and equipment. The data at hand were inadequate for such a separation, however useful such an illustration might be.
- Item 2—Valuation of inventories of producers, and also consumers' goods in the hands of manufacturers, wholesalers, retailers, and other business units holding the goods for processing or for sale.
- Item 21—The debit entry for inventories shows the total purchases by all business units of goods for processing and sale. This amount is equal to Item 66. It is considerably in excess of the value of the national income, for the reason that goods are transferred between business units several times before they are completed and disposed of to consumers or to producers of capital goods.
- Item 50—This credit to inventories represents the sale of goods and services by all business units to other business units or to consumers. The comments on Item 21 should be considered in conjunction with this item.
- Items 21, 50—These figures in the National Balance Sheet and Income Statement do not measure inventories in the full concept of that term.
- Item 78—The amount of the current year's income that was saved and invested in increased stocks of goods.
- Item 96—Valuation of the same class of goods as defined for Item 2, except that it is for the end of the year instead of the beginning.
- Items 3, 4, 5—Valuation as of the beginning of the year of all lands owned by government, associations, and individuals for the purpose of consumption by individuals. The idea of consumption as here used means use for homes, recreation, etc.
- Items 22, 23, 24—Current valuation of all purchases and other acquisitions of lands, buildings, equipment, and chattels for the purpose of consumption as defined in Items 3 and 4. These items include improvements, such as landscaping, roads, fertilization, sewers, etc. They also include any increases in valuations for any reason whatsoever.
- Items 51, 52, 53—These items express the valuation of all sales and other disposals of consumers' lands, buildings, equipment, and chattels. They include depletion, losses, and reductions in valuations.
- Items 97, 98, 99—Valuation of consumers' lands, buildings, equipment, and chattels at the end of the year.
- Items 79, 80—Amount of current year's savings invested in consumers' lands, buildings, equipment, and chattels.
- Items 23, 24, 52, and 53—The amounts stated for these items appear to the writers to be considerably less than they should be. Inadequacy of data and classifications of some transactions in Items 20, 49, 22, and 51 may account for the understatement of these amounts.
- Item 6—This is a statement of the net amount of two distinctly different classes of accounts. The first class is composed of all holdings of foreign properties and equities and of all loans and receivables due from foreign governments and citizens. The second class comprises all properties and equities owned by foreigners and all loans and other payables due to foreign governments and citizens. Data are not available which would permit the segregation of these different classes of "real," "liquid," and "negative" wealth.

- Item 25—Amount of all exports, remittances, and payments to foreigners. This also includes the purchase of any foreign properties (except such as are imported) and equities. Increases in valuation of foreign properties and equities owned are included herein.
- Item 54—Valuation of all imports, receipts, and payments from foreigners. Sales of properties (except such as are exported) and equities to foreigners and decreases in valuation of foreign properties and equities are here included.
- Items 25 and 54—It should be noted that dissimilar transactions are included in each of the items. If Item 6 were separated into its component parts, these accounts could be classified properly.
- Item 81—Net amount of the current year's savings invested in foreign properties and equities, and payment on debts due foreigners.
- Items 100 and 107—End-of-the-year valuations of the elements of wealth defined for Item 6. Item 100 states the valuation of the first class there defined and Item 107 states the valuation of the second class. The data used separated these items as of the end of the year but not as of the beginning of the year.
- Item 7—Valuation of gold, silver, minor coins, and currency held by the banks as of the beginning of the year.
- Item 26—Amount of money, as defined by Item 7, deposited in banks during the year.
- Item 55—Amount of money, as defined by Item 7, withdrawn from the banks during the year.
- Item 82—Amount of the current year's savings invested in money. This item should be considered in conjunction with Item 87. The net increase in these two items is \$0.3 billion, which is the difference between the \$0.4 billion increase of moneys in the banking system and the decrease of \$0.1 billion of moneys in the credit system. Accounting procedure requires that both these accounts appear rather than the difference or net increase. This increase is the value of "hard moneys" added to the stocks of the national economy. This increase could arise from importations, new discoveries, and coinage of money from gold, silver, and other monetary stocks previously held by persons or corporations not included in banking.
- Item 101—Valuation of money, as defined in Item 7, as of the end of the year.
- Item 8—Amount of loans and other receivables held by the banks as of the beginning of the year.
- Item 27—Amount of loans made by the banks and of securities and investments other than real property purchased by the banks during the year.
- Item 56—Amount of loans paid to the banks and of securities sold by the banks from their portfolios during the year.
- Item 102—Amount of loans and other receivables held by the banks as of the end of the year.
- Item 13—Amount of deposits and other liabilities of the banks as of the beginning of the year.
- Item 28—Total amount of all debits by the banks to deposits and other liability accounts. This item should represent all payments made by the persons of the economy when such payments are made by checks, drafts, or any similar negotiable instruments drawn on a banking institution.
- Item 57—Total amount of all credits made by banking institutions to their liability accounts.
- Items 28 and 57—These amounts are considerably less than a complete tabulation of the transactions would reveal.

- Item 108—Amount of deposits and other liabilities of the banks as of the end of the year.
- Item 9—Amount of real estate, buildings, and other tangible equipment owned by the banks as of the beginning of the year.
- Item 103—Amount of real estate, buildings, and other tangible equipment owned by the banks as of the end of the year.
Comment: In the transactions column there should be recorded the amount of sales, purchases and other transactions related to the tangible properties owned by the banks. No data were found from which to formulate an estimate of this item; therefore, it has been omitted. It is obvious that if amounts were to appear in the debit and credit columns; they would balance in this year, since the opening and closing balances were the same.
- Item 14—Amount of capital stock of banks outstanding as of the beginning of the year.
- Item 29—Amount of purchases, retirements, and cancellations of bank stock during the year.
- Item 58—Amount of new issues, sales, and increases of bank stock during the year.
- Item 109—Amount of bank stock outstanding at the end of the year.
- Item 15—Net worth of the banks in excess of their capital stock as of the beginning of the year.
- Item 30—Dividend payments, losses, and other decreases in surplus accounts during the year.
- Item 59—Profits, gains, and other increases in surplus accounts during the year.
- Item 110—Net worth of the banks at the end of the year in excess of the stock outstanding.
- Item 10—Amount of money in the hands of the public and outside the banking system as of the beginning of the year.
- Item 31—Receipts of money from the banks and payments in cash made between the persons of the economy during the year.
- Item 60—Deposits of money in the banks and receipts of money by persons during the year.
- Item 87—Decrease in money held outside the banking system during the year.
Comment: Pertaining to Item 82 above.
- Item 104—Amount of money held outside the banking system as of the end of the year.
- Item 11—Valuation of all receivables due to persons of the economy as of the beginning of the year. (Receivables in the nature of open accounts.)
- Item 32—Amount of accounts opened during the year.
- Item 61—Amount of payments and other liquidations of receivables during the year.
- Item 105—Amount of all receivables in the nature of open accounts due to persons of the economy as of the end of the year.
- Item 12—Amount of all stocks, bonds, mortgages, and other evidences of indebtedness owned or held outside the banking system by persons of the economy as of the beginning of the year.
- Item 33—All issuance and other increases of the securities defined in Item 12 during the year.
- Item 62—All payments and other liquidations of the securities defined in Item 12 during the year.
- Item 106—Amount of all stocks, bonds, mortgages, and other evidences of indebtedness owned or held outside the banking system by persons of the economy as of the end of the year.

- Item 16—Amount of all open accounts, loans, and other payments due by persons of the economy (except banking) as of the beginning of the year.
- Item 34—All payments and other liquidations of the liabilities defined in Item 16 during the year.
- Item 63—All issuance and other increases of the liabilities defined in Item 16 during the year.
- Item 111—Amount of all open accounts, loans, and other payments due by persons of the economy (except banking) as of the end of the year.
- Item 17—Amount of stocks of all corporations (except banks) as of the beginning of the year.
- Item 35—Amount of purchases, retirements, and other decreases of corporate capital stock (except banking) during the year.
- Item 64—Amount of all issuance, sales, and other increases of corporate stock (except banking) during the year.
- Items 35 and 64—The definition and amounts stated for these two items may not conform to the best concepts which should be used. It might be reasonable to include the amount of purchase and sales of corporate capital stock in Items 33 and 62.
- Item 112—Amount of stocks of all corporations (except banks) as of the end of the year.
- Item 18—Net worth of corporations (except banks) in excess of their capital stock as of the beginning of the year.
- Item 65—Net increase in net worth of corporations (except banks) during the year.
- Comment: Item 65 should not be a net figure. An amount should be stated in the debit column to express the dividends paid by the corporations (except banks), losses, and other reductions in their net worth. An amount should be stated in the credit column which would include all profits, gains, and other increases in corporate surplus during the year. Inadequacy of data compelled this to be stated as a net figure.
- Item 113—Net worth of corporations (except banks) in excess of their capital stock as of the end of the year.
- Item 19—Net worth or total value of all items of "real" wealth including net international claims. The amount, \$568.7 billions, is the sum of Items 1 to 7, 9, and 10. It will be noted that the items of liquid wealth expressed in Items 8, 11, and 12 are exactly balanced and offset by the items of "negative" wealth, 13 to 18.
- Item 114—Net worth, or total value, of all items of "real" wealth including net international claims as of the end of the year.
- Item 66—Amount of all sales of goods and services made by business units. This definition is subject to the qualification that taxes received by governments, rents, royalties, and interest received by business units are not included. These items are 67, 68, and 69.
- Item 36—Purchases by business units of goods and services produced by other business units.
- Item 37—Amount of wages and salaries paid to individuals and business units.
- Item 38—Depreciation and depletion of producers' goods used in production.
- Item 39—Amount of taxes paid by business units.
- Item 67—Taxes collected by all forms of federal, state, and local governments.
- Item 40—Amount of rents and royalties paid by business units.
- Item 68—Amount of rents and royalties received by business units.
- Item 41—Amount of interest paid by business units.
- Item 69—Amount of interest received by business units.

Item 42—Dividends paid by business units to individuals.

Comment: This item should be stated at a larger amount and be offset in the credit column to show the amount of dividends received by business units. Six billion dollars is the amount paid to individuals.

Item 43—Withdrawals by individuals from the business units owned and controlled by them other than withdrawals for purposes of salaries or wages.

Item 70—Amount of wages and salaries received by individuals from business units, including withdrawals for purposes of salaries or wages.

Item 71—Amount of rents and royalties received by individuals from business units, and the amount received by individuals from other individuals as rents on consumers' goods.

Item 72—Interest received by individuals from business units and from other individuals as interest on loans for the purpose of owning consumers' goods.

Item 73—Dividends received by individuals from business units.

Item 74—Withdrawals by individuals from businesses owned or controlled by them other than withdrawals for purpose of salary or wages.

Item 75—Net gain to individuals as a result of international trade and settlements.

Item 76—Speculative profit received by individuals as a result of their sales and transactions in "real" and "liquid" wealth.

Item 44—Expenditures of individuals for food.

Item 45—Expenditures of individuals for the purpose of maintaining homes. This item includes the rents paid by individuals to other individuals.

Item 46—Purchases of clothing and similar items by individuals.

Item 47—All other purchases and expenditures of individuals for consumption goods. This includes the amount of interest paid by individuals to other individuals in connection with loans for the purpose of owning consumers' goods.

Item 48—Depreciation of consumers' goods as defined in Items 3, 4, and 5.

Item 88—Excess of income produced by business units over the income paid out to individuals.

Item 89—Amount of wages and salaries received by individuals from business units.

Item 90—Amount of rents and royalties received by individuals from business units.

Item 91—Interest received by individuals from business units.

Items 90 and 91—These items do not include the amount of rents and interest received from other individuals in payment of the use of consumers' goods or loans for purpose of owning consumers' goods. In accordance with the concept used here, payments between individuals for and in connection with consumers' goods add nothing to the national income. They only serve the purpose of further distributing the shares among the individuals.

Item 92—Dividends received by individuals from business units.

Item 93—Withdrawals by individuals from businesses owned or controlled by them, other than withdrawals for purposes of salaries or wages.

Item 94—Net gain accruing to individuals as a result of international trade and settlements.

Item 83—Expenditures of individuals for food.

Item 84—Expenditures of individuals for maintenance of homes.

Item 85—Expenditures of individuals for clothing and similar items.

Item 86—All other purchases and expenditures of individuals for consumption goods.

- Items 84 and 86—These items do not include payments made by individuals to other individuals for purposes of rents or interest in connection with the use or ownership of consumers' goods. See comments on Items 90 and 91.
- Item 115—Total amount of constructions, replacements, and other additions to the physical elements of producers' wealth.
- Item 116—Total amount of constructions, replacements, and other additions to the physical elements of consumers' wealth—the sum of Items 79 and 80.
- Item 117—Net amount of increase in producers' goods.
- Item 118—Net amount of increase in consumers' goods.
- Item 119—Net increase during the year in the total stated wealth of the economy.

BULLETINS OF THE BUREAU OF BUSINESS RESEARCH
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
UNIVERSITY OF ILLINOIS

1. Illinois Taxes in 1921. (*Out of print.*)
2. Illinois State Revenue, 1895-1920. (*Out of print.*)
3. The Tax Rates of Illinois Cities in 1921. (*Out of print.*)
4. Books About Shoes. (*Out of print.*)
5. Methods of Training Employees in Stores of Moderate Size. (*Out of print.*)
6. Books About Books.
7. The Statistical Characteristics of Bookstore Sales. (*Out of print.*)
8. The Method of Analyzing Business Data. (*Out of print.*)
9. The Current Ratio in Public Utility Companies. (*Out of print.*)
10. The Productivity Ratios of Public Utility Companies. (*Out of print.*)
11. The Natural Business Year. (*Out of print.*)
- ✓ 12. State Expenditures in Illinois, 1895-1924.
13. The Disposition of Income in Public Utility Companies.
- ✓ 14. Illinois Appropriations for Social and Educational Purposes.
15. The Earning Power Ratios of Public Utility Companies. (*Out of print.*)
- ✓ 16. The Nature of Cyclical Fluctuations in Electric Power Production Data.
- ✓ 17. Chicago as a Money Market. ✓
18. Property Investments in Public Utility Companies.
19. The Automobile and the Village Merchants. (*Out of print.*)
- ✓ 20. The Sources of Public Utility Capital.
21. An Analysis of Bankers' Balances in Chicago. (*Out of print.*)
22. Books About Business Cycles. (*Out of print.*)
23. Stockholders' Equity in Chicago Banks.
- ✓ 24. Capital Stock, Surplus, and Undivided Profits of Chicago Banks.
25. The Determination of Secular Trends. (*Out of print.*)
26. Standard Financial Ratios for the Public Utility Industry. (*Out of print.*)
27. The Financial Plan of Gas Companies. (*Out of print.*)
- ✓ 28. An Analysis of Earning Assets of Chicago Banks.
- ✓ 29. Balance Sheet Structure of Automobile Manufacturing Companies.
- ✓ 30. Seasonal and Cyclical Movements of Loans and Investments of Chicago Banks. (*Out of print.*)
31. A Test Analysis of Unsuccessful Industrial Companies. (*Out of print.*)
- ✓ 32. The Financial Plan of Department Stores.
33. The Banking Structure of the Seventh Federal Reserve District. (*Out of print.*)
- ✓ 34. A Community Labor Survey.
35. The Financial Plan of Electric Light and Power Companies.
- ✓ 36. Grocery Wholesaling in Illinois from 1900 to 1929.
37. The Operating and Earning Power Ratios of Gas Companies.
38. A Market Research Bibliography. (*Out of print.*)
- ✓ 39. Investment Banking in Chicago. (*Out of print.*)
40. A Demonstration of Ratio Analysis. (*Out of print.*)

BULLETINS OF THE BUREAU OF BUSINESS RESEARCH
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
UNIVERSITY OF ILLINOIS

-
- ✓ 41. Business Mortality of Illinois Retail Stores from 1925 to 1930. By P. D. CONVERSE.
42. Operating and Earning Power Ratios of Electric Companies. By RAYMOND F. SMITH. (*Out of print.*)
43. The Expenditure of State Funds in Illinois. By M. H. HUNTER. (*Out of print.*)
44. A Survey of a Retail Trading Area. By FRED M. JONES. (*Out of print.*)
45. Costs of Township and County Government in Illinois. By M. H. HUNTER. (*Out of print.*)
46. Department Store Food Service. By INA M. HAMLIN AND ARTHUR H. WINAKOR. (*Out of print.*)
47. Some American Proposals for War Debt Revision. By E. L. BOGART.
48. Legal Provisions Affecting Real Estate Tax Delinquency, Tax Sales, and Redemption. By M. H. HUNTER. (*Out of print.*)
- ✓ 49. Maintenance of Working Capital of Industrial Corporations by Conversion of Fixed Assets. By ARTHUR H. WINAKOR.
- ✓ 50. Financial Aspects of Corporate Net Worth. By ARTHUR H. WINAKOR.
51. Changes in the Financial Structure of Unsuccessful Industrial Corporations. By RAYMOND F. SMITH AND ARTHUR H. WINAKOR. (*Out of print.*)
- ✓ 52. Costs and Services of Local Government in Selected Illinois Counties. By H. K. ALLEN.
- ✓ 53. Capacity to Pay Current Debts. By ARTHUR H. WINAKOR.
- ✓ 54. A Balance Sheet of the Nation's Economy. By FRANK G. DICKINSON AND FRANZY EAKIN.