

FINANCIAL STATISTICS OF CITIES HAVING A POPULATION OF OVER 30,000: 1911.

INTRODUCTION.

CHARACTER AND IMPORTANCE OF MUNICIPAL STATISTICS.

Scope of report.—The present report of the Bureau of the Census is limited to a presentation of statistics of the financial transactions of the 193 cities having a population of over 30,000 on July 1, 1911, during what is here called the fiscal year 1911, and of the financial condition of those cities at the close of that year. The report presents statistics as accurate and comparable as it has been feasible to compile from the records of the cities, relating to a number of subjects, the principal of which are (1) the total and per capita receipts of revenue and of each of its principal classes; (2) the total and per capita expense for all governmental activities and for each principal municipal service, such as those for police and fire protection and for the education of children in the public schools; (3) the total and per capita interest on public indebtedness; (4) the total and per capita outlay for the acquisition and construction of public properties, improvements, and equipment; (5) the total and per capita value of public properties, improvements, and equipment; and (6) the total and per capita municipal indebtedness.

Increase in the number and population of cities.—The growing importance of a report such as that described above is shown by one of the most striking social facts of the last century—the greater increase in the population of cities than of smaller places or of farming communities. In 1790, when its first census of population was taken, the United States had but one city with a population of over 30,000. That was New York, N. Y., which at the time had 33,131 inhabitants. The two cities which ranked next to New York in number of inhabitants were Philadelphia, Pa., with 28,522, and Boston, Mass., with 18,320. In 1790 the national population numbered 3,929,214, and the population of New York City constituted only 0.8 per cent of that of the nation. Sixty years later, in 1850, when the population of the country numbered 23,191,876, there were 19 cities each having a population of over 30,000. The largest of these was New York, with a population of 515,547. The 19 cities had an aggregate population of 1,703,302,

which constituted 7.3 per cent of the national population. At the end of a second sixty years, in 1910, the cities of the United States having a population of over 30,000 each numbered 184 and had an aggregate population of 27,316,407. This was 29.7 per cent of the 91,972,266 inhabitants of continental United States. In 1910 the population of the nation was 23.1 times its population in 1790, while the number domiciled in the cities containing over 30,000 inhabitants each was 824.5 times as great as that dwelling in the one city of that size 120 years before. The population of the cities of the size here considered increased from 1790 to 1910 something more than thirty-five times as fast as did the population of the nation exclusive of its outlying possessions. Table I, which follows, exhibits the population of the nation, exclusive of outlying possessions, and the number and population of cities having over 30,000 inhabitants each, as the same is reflected in the enumeration of the Federal Census at each census year beginning with 1790 and ending with 1910. There is included in the same table the number of cities which in 1911 had an estimated population of 30,000 each and the total estimated population of such cities.

YEAR.	UNITED STATES.		CITIES WITH OVER 30,000 INHABITANTS.	
	Population.	Number.	Population.	
			Total.	Per cent of national.
1911.....	93,927,342	193	28,559,140	30.4
1910.....	91,972,266	184	27,316,407	29.7
1900.....	75,994,575	135	19,050,921	25.1
1890.....	62,947,714	103	12,612,389	20.0
1880.....	50,155,783	63	7,677,766	15.3
1870.....	38,558,371	44	5,210,397	13.5
1860.....	31,443,321	26	3,246,736	10.3
1850.....	23,191,876	19	1,703,302	7.3
1840.....	17,069,453	8	784,323	4.6
1830.....	12,866,020	6	501,434	3.9
1820.....	9,638,453	4	293,544	3.0
1810.....	7,239,881	4	230,437	3.2
1800.....	5,308,483	2	101,735	1.9
1790.....	3,929,214	1	33,131	0.8

The number of cities given for each census year is the number of those with separate organizations at the time of enumeration. Of those cities it should be mentioned that Brooklyn, N. Y., which was a separate municipality with over 30,000 inhabitants at each

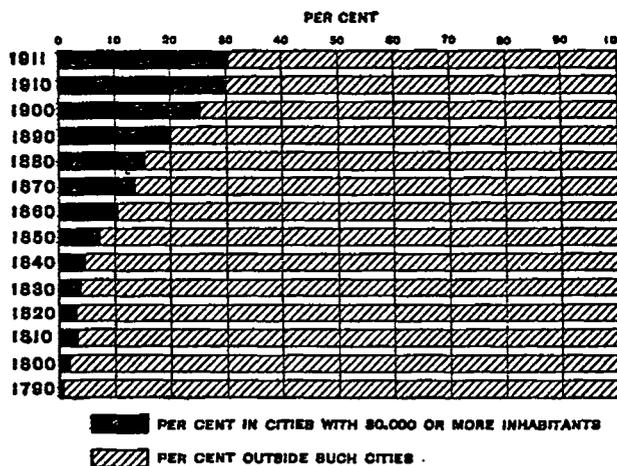
census year from 1840 to 1890, was consolidated with New York, N. Y., prior to 1900; and Allegheny, Pa., which is included in the table as a separate city from 1860 to 1900, was consolidated with Pittsburgh, Pa., prior to 1910.

Of the 193 cities for which statistics are presented in this report, nine, which had an estimated population July 1, 1911, exceeding 30,000, had an enumerated population April 15, 1910, of less than that number, and hence no statistics for them have previously been included in the census statistics for cities having over 30,000 inhabitants. The names of these cities are as follows:

San Jose, Cal.	Lorain, Ohio.
Aurora, Ill.	Muskogee, Okla.
Council Bluffs, Iowa.	Austin, Tex.
New Rochelle, N. Y.	Lynchburg, Va.
Orange, N. J.	

The accompanying diagram shows for each census year the percentage of the total population of the nation that was domiciled in cities having over 30,000 inhabitants and the percentage of such population that resided outside of those cities.

DIAGRAM 1.—PER CENT OF TOTAL POPULATION IN CITIES HAVING OVER 30,000 INHABITANTS, AND PER CENT OUTSIDE OF SUCH CITIES: 1790-1911.



The estimated population of each city June 1, 1911, is given in Table 1, and the number and population of cities in each of the nine geographic groups are shown in Table II, which follows.

GEOGRAPHIC DIVISION.	Cities.	Population.
United States.....	193	28,559,140
New England.....	32	3,057,751
Middle Atlantic.....	47	10,846,499
East North Central.....	39	6,301,601
West North Central.....	19	2,359,330
South Atlantic.....	18	1,591,059
East South Central.....	11	910,047
West South Central.....	11	969,837
Mountain.....	4	406,213
Pacific.....	12	1,816,803

Statistics of cities having a population of over 30,000.—The unprecedented increase in the actual

and relative number and the actual and relative population of cities having over 30,000 inhabitants has given rise to many and grave administrative problems. To assist, so far as the same could be done by the aid of exact statistical information, in the solution of these problems, Congress in 1898 authorized the Department of Labor to compile and publish annually the statistics of cities having a population over 30,000. Later, after the establishment of the Department of Commerce and Labor, the compilation of these statistics was transferred by executive order to the Bureau of the Census, and this governmental office published its first statistics on this subject for the year 1902. Similar statistics have been compiled and published for each year up to and including this report for the year 1911. Of the 193 cities to which this volume relates, statistics have been presented in all of the 10 reports mentioned for only 146 cities. In this statement of numbers the two cities of Pittsburgh and Allegheny, Pa., which were consolidated into the present city of Pittsburgh, are counted as one for all years. The growth in population of the 146 cities for which the Bureau of the Census has now compiled comparable statistics for 10 years is shown in the following statement:

YEAR.	Population.	YEAR.	Population.
1911.....	26,738,017	1906.....	22,530,756
1910.....	25,904,769	1905.....	21,973,431
1909.....	25,108,590	1904.....	21,434,324
1908.....	23,608,853	1903.....	20,869,155
1907.....	23,107,777	1902.....	20,369,308

Governmental costs¹ of cities and of the Nation.—The figures given in Table I showing the greater relative growth of the population of cities having over 30,000 inhabitants than of the population of the United States as a whole are very striking. They do not, however, show the real nature of the administrative problems which have developed in connection with that increase as do the figures in Tables III and IV which follow. Table III gives for each of the 10 years from 1902 to 1911, inclusive, the total and per capita net governmental costs of the 146 larger cities for which the bureau has compiled statistics, and the corresponding costs of the National Government, together with the net total and per capita outlay payments for New York City for its public works, and those of the National Government for the Panama Canal, public buildings, forts and fortifications, and river and harbor improvements.

The net governmental costs of the United States Government for current operation, by which is meant costs exclusive of pensions, for the 10 years covered by the table exceeded those of the 146 cities by \$233,465,269, or only 3.5 per cent. In 1911 the costs of these 146 cities exceeded the current costs of the National Government by \$56,124,828, or 7 per cent. If comparison is made between the total governmental

¹For definition of "governmental costs," see page 36.

costs of the United States, including those for pensions, it is seen that the total for the United States exceeded that for the 146 cities for the 10 years by only \$1,709,336,607, or 25.8 per cent; and that in 1911 it exceeded it by only 11.8 per cent. Comparing these

net governmental costs of the United States with those of the 193 cities having a population of over 30,000, it is found that the total costs of the United States Government for that year exceeded those of the 193 cities by only \$54,235,755, or 6 per cent.

YEAR.	NET GOVERNMENTAL COST ¹ PAYMENTS.											
	United States.											New York City for permanent properties and public improvements.
	146 cities for all purposes.		For all purposes.		For pensions.		For all purposes other than pensions.		For Panama Canal, public buildings, forts and fortifications, and river and harbor improvement. ⁽²⁾			
	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.		
Ten years.....	\$6,614,932,651	\$28.55	\$8,324,269,258	\$9.62	\$1,475,871,338	\$1.71	\$6,848,397,920	\$7.92	\$637,027,544	\$0.74	\$695,197,843	
1911.....	862,229,808	32.19	964,085,555	10.28	157,980,575	1.68	806,104,980	8.59	91,454,237	0.98	88,424,126	17.84
1910.....	807,224,695	31.16	950,795,418	10.32	160,696,416	1.74	790,099,002	8.57	86,997,396	0.94	75,379,758	15.81
1909.....	761,562,037	30.33	1,002,303,040	11.07	161,710,367	1.79	840,592,673	9.28	83,760,608	0.92	69,959,535	15.11
1908.....	761,527,311	32.26	924,566,589	10.40	153,892,467	1.73	770,674,422	8.67	82,161,537	0.92	83,417,149	18.65
1907.....	691,049,439	29.91	818,541,147	9.37	139,309,514	1.60	679,231,633	7.78	62,528,589	0.72	75,481,437	17.86
1906.....	600,383,766	28.65	763,103,908	8.90	141,034,562	1.65	622,069,346	7.26	56,468,527	0.66	64,690,253	15.78
1905.....	583,846,658	28.56	746,565,098	8.88	141,773,965	1.69	604,791,133	7.19	39,948,415	0.48	62,309,540	15.58
1904.....	566,606,115	28.43	776,802,225	9.42	142,359,266	1.73	634,442,959	7.69	84,729,334	1.03	68,591,402	17.64
1903.....	518,225,379	24.83	694,111,489	8.59	136,425,646	1.71	555,685,843	6.87	26,362,054	0.35	64,422,050	17.34
1902.....	482,574,445	22.71	683,391,489	8.63	138,488,560	1.75	544,902,929	6.88	20,622,647	0.26	42,322,573	11.68

¹ For definition of "governmental costs," see page 36.

² The amounts tabulated under this heading are also included under headings "For all purposes" and "For all purposes other than pensions."

The most striking figures of the tables showing the great financial problems with which the cities are forced to deal are those giving the outlay payments of the city of New York as compared with similar payments of the National Government for (1) the Panama Canal, including payments on account of that structure to the French Company in 1904; (2) public buildings; (3) forts and fortifications; and (4) river and harbor improvements. In 10 years the United States Government expended for all these purposes the total of \$637,027,544, while the single city of New York expended for permanent properties and public improvements the aggregate of \$695,197,843, or 9.1 per cent more than the National Government.

The population which bore the burden of national governmental costs was 3.5 times as great as that of the 146 cities, and nearly nineteen times as great as that of the city of New York. The totals of the table, therefore, do not exhibit the relative burden of national and municipal governmental costs. That burden is measured approximately by the per capita figures of the table. The per capita governmental costs of the 146 cities for the 10 years average three times those of the National Government for all purposes and were three and six-tenths times those of the National Government for purposes other than pensions; and the per capita of outlay payments for New York City for the same period was 22.2 times those of the National Government for all public works of which the table makes specific mention.

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The table further shows that the relative burden of governmental costs as measured by per capita payments therefor are increasing much faster for municipalities than for the National Government. Comparing the figures for the total costs in 1902 and 1911, it is found that those of the National Government for all purposes increased from \$8.63 to \$10.28, or 19.1 per cent; while those of the 146 cities increased from \$22.71 to \$32.19, or 41.7 per cent. These figures disclose at once the great relative importance of the proper administration of city affairs and the necessity of such a system of accounting and reporting as will best assist in securing and maintaining economy and efficiency in city government. The necessity for this accounting and reporting is much more pressing in the case of cities than in that of the nation, owing to the greater relative per capita governmental costs of the cities.

The two diagrams on the next page are designed to present graphically the most important facts shown in Table III. They present for each year (1) the total payments for all governmental costs by 146 cities; (2) those by the United States for pensions and for all purposes other than pensions; (3) the total payments of the United States Government for the construction of the Panama Canal, public buildings, forts and fortifications, and river and harbor improvement; and (4) the payments of New York City for the construction of its various public works, buildings, and other public improvements.

FINANCIAL STATISTICS OF CITIES.

DIAGRAM 2.—NET GOVERNMENTAL COST PAYMENTS OF THE UNITED STATES AND OF 146 CITIES: 1902-1911.

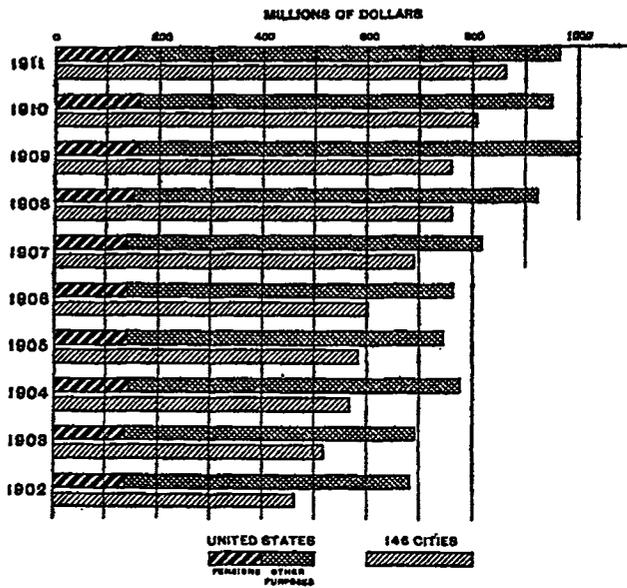
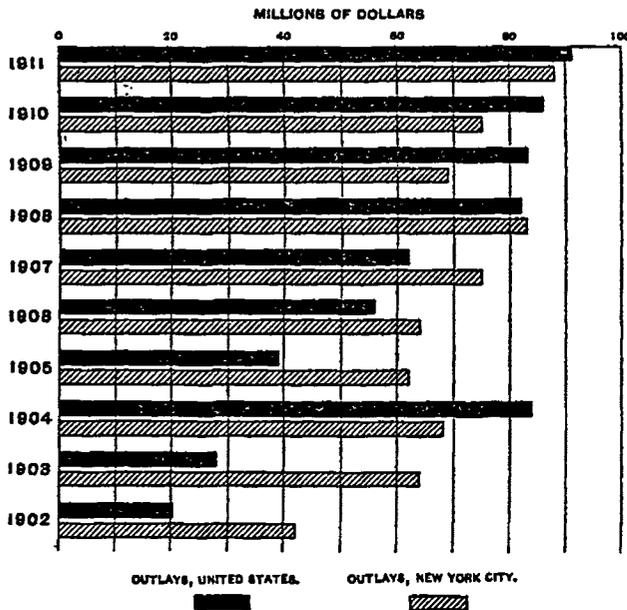


DIAGRAM 3.—NET PAYMENTS FOR OUTLAYS OF THE UNITED STATES AND OF NEW YORK CITY: 1902-1911.



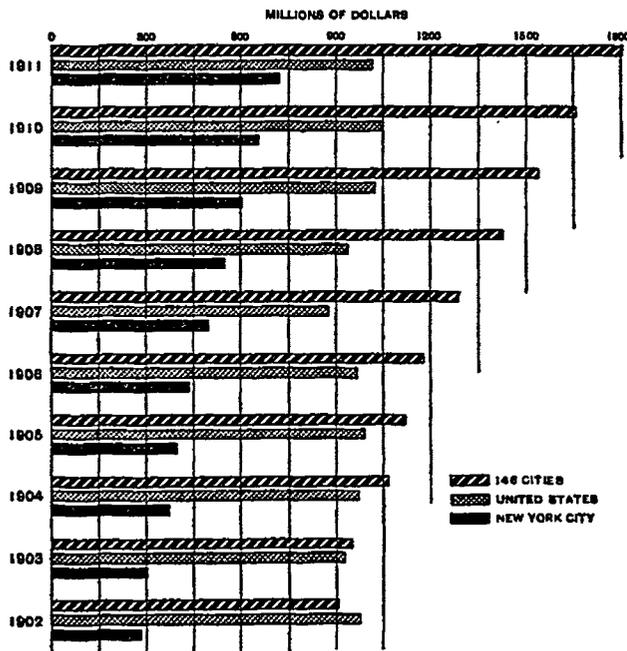
Comparative indebtedness of cities and of the Nation.—Table IV, which is a comparative statement of the total and per capita net indebtedness at the close of the fiscal years 1902 to 1911, inclusive, of the National Government, of the 146 cities covered by the preceding table and of the city of New York, calls attention to one class of financial problems which grow out of the vast expenditures above noted. By net indebtedness is meant the total debt obligations outstanding less the resources available or provided for their immediate or ultimate redemption. In the case of the National Government the amount of indebtedness is computed by subtracting the cash in the treasury from the total debt obligations outstanding; and in the case of the cities it is obtained by deducting the sinking fund

assets from the gross funded and floating debt as those terms are used in this report, the outstanding current debt being approximately balanced in all cases by cash in the general treasury and by special assessments and general property taxes levied but uncollected. So far as the figures fail to be comparable they slightly exaggerate the city debt, owing to the fact that many cities have uncollected taxes and cash on hand in excess of their revenue loans and warrants outstanding; but this excess affects the per capita for the several years by only a very few cents at most.

YEAR.	United States.		146 cities.		New York City.	
	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.
1911.....	\$1,015,784,338	\$10.83	\$1,803,129,085	\$67.31	\$723,292,629	\$145.02
1910.....	1,016,449,185	11.35	1,657,861,296	64.00	650,191,394	137.68
1909.....	1,023,861,631	11.31	1,337,029,392	61.22	628,244,820	131.39
1908.....	838,132,409	10.52	1,434,921,649	60.78	650,778,903	123.16
1907.....	878,596,755	10.06	1,283,718,890	55.75	494,799,541	117.09
1906.....	964,435,687	11.25	1,178,970,979	52.11	435,324,772	105.64
1905.....	984,435,772	11.77	1,118,087,784	60.83	395,596,022	98.89
1904.....	967,231,774	11.73	1,062,740,750	49.58	370,503,521	95.29
1903.....	925,011,637	11.44	943,008,632	45.19	305,067,267	82.09
1902.....	969,457,241	12.24	900,178,161	44.19	276,933,472	76.45

From 1902 to 1911 the net indebtedness of the Nation varied slightly from year to year and increased during the 10 years by \$46,327,097, which was 4.8 per cent of the indebtedness in 1902. This increase was wholly due to the expenditures for the acquisition and construction of the Panama Canal. The national population increased, however, during those years by a greater percentage than the national debt, and hence the relative burden of national indebtedness as represented by the per capita indebtedness decreased from \$12.24 to \$10.83, a decrease of 11.5 per cent. In 1902 the net indebtedness of the Nation exceeded the net indebtedness of the 146 cities by \$69,279,080, or 7.7 per cent. The increase of the city debt in the 10 years was so much greater, actually and relatively, than that of the Nation that at the close of the fiscal year 1911 it exceeded the national debt by \$787,344,747, or 77.5 per cent. Another fact of importance to be noted is that while the population of these cities increased in 10 years from 20,369,308 to 26,788,107, a gain of 31.5 per cent, their net indebtedness increased from \$900,178,161 to \$1,803,129,085, an addition of \$902,950,968, or 100.3 per cent, as compared with an increase of only 4.8 per cent in the national indebtedness. The greater burden of municipal indebtedness than of national, as well as the greater relative increase in that burden, is exhibited by the per capita debt of the cities, which increased in the 10 years from \$44.19 in 1902 to \$67.31 in 1911, an added burden of 52.3 per cent. It is to be noted that the per capita indebtedness of these cities, which in 1902 was three and six-tenths times the corresponding per capita indebtedness of the nation, had so increased in 10 years that in 1911 it was six and two-tenths times such indebtedness.

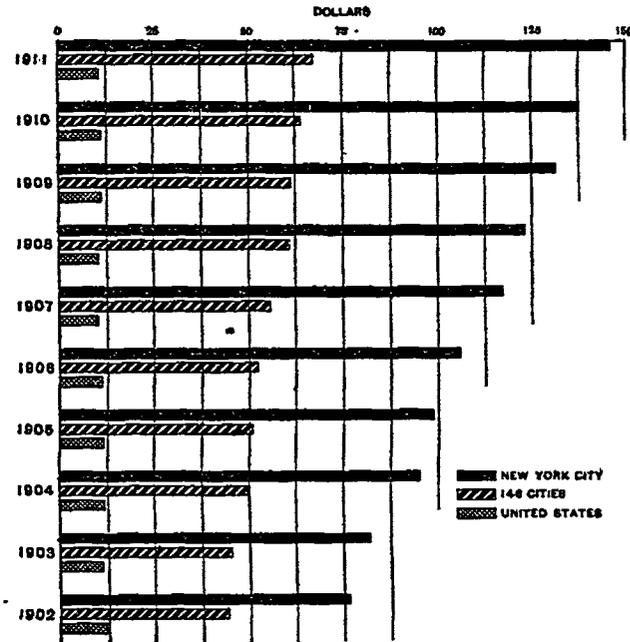
DIAGRAM 4.—NET INDEBTEDNESS OF 146 CITIES, THE UNITED STATES AND NEW YORK CITY: 1902-1911.



The figures for the city of New York are, if anything, more striking than those for the nation or for the 146 cities taken as a whole. In the 10 years covered by the table the population of that city increased from 3,623,160 to 4,956,865, a gain of 36.8 per cent, while the net indebtedness of the city increased from \$276,983,472 to \$723,292,829, a gain of 161.1 per cent. As a result, the per capita indebtedness, which in 1902 was \$76.45, so increased that at the close of 1911 it was \$145.92, or two and two-tenths times that of the 146 cities taken as a whole, and thirteen and five-tenths times that of the United States Government, as com-

pared with twenty-two and two-tenths, the number of times which the per capita outlay payments of the city for 10 years were of the corresponding outlay payments of the General Government, as summarized in Table III.

DIAGRAM 5.—PER CAPITA INDEBTEDNESS OF NEW YORK CITY, 146 CITIES, AND THE UNITED STATES: 1902-1911.



The accompanying diagrams present by the graphic method the facts set forth by Table IV, that the burden of net municipal indebtedness at the present time is much greater, relatively, than is that of the National Government; and the further fact that the debts of cities are rapidly increasing, while that of the nation is remaining practically stationary.

FINANCIAL STATISTICS OF CITIES.

Cities having a population of over 30,000 in 1911.—The cities having an estimated population June 1, 1911, that exceeded 30,000 numbered 193. In the general tables of this report, with one exception, they are arranged in the order of their estimated population and each is given a number corresponding to its

position in the tables. For convenience in finding any particular city the following list has been prepared, the cities being arranged alphabetically by states and the number assigned to each being indicated. The accompanying map of the United States shows the location of these cities.

CITY AND STATE.	City number.	CITY AND STATE.	City number.	CITY AND STATE.	City number.	CITY AND STATE.	City number.
ALABAMA:		KANSAS:		NEBRASKA:		PENNSYLVANIA:	
Birmingham.....	94	Kansas City.....	65	Lincoln.....	126	Allentown.....	103
Mobile.....	107	Topeka.....	129	Omaha.....	41	Altoona.....	106
Montgomery.....	145	Wichita.....	101	NEW HAMPSHIRE:		Chester.....	144
ARKANSAS:		KENTUCKY:		Manchester.....	81	Eric.....	85
Little Rock.....	116	Covington.....	102	NEW JERSEY:		Harrisburg.....	88
CALIFORNIA:		Lexington.....	158	Atlantic City.....	112	Johnstown.....	100
Berkeley.....	127	Louisville.....	24	Bayonne.....	99	Lancaster.....	114
Los Angeles.....	15	Newport.....	189	Camden.....	58	McKeesport.....	130
Oakland.....	32	LOUISIANA:		East Orange.....	155	New Castle.....	150
Pasadena.....	172	New Orleans.....	16	Elizabeth.....	76	Philadelphia.....	3
Sacramento.....	117	MAINE:		Hoboken.....	82	Pittsburgh.....	8
San Diego.....	133	Portland.....	94	Jersey City.....	19	Reading.....	55
San Francisco.....	11	MARYLAND:		Newark.....	14	Scranton.....	38
San Jose.....	176	Baltimore.....	7	Orange.....	190	Wilkes-Barre.....	84
COLORADO:		MASSACHUSETTS:		Passaic.....	98	WilliamSPORT.....	180
Denver.....	26	Boston.....	5	Paterson.....	40	York.....	121
Pueblo.....	118	Brockton.....	97	Perth Amboy.....	170	RHODE ISLAND:	
CONNECTICUT:		Cambridge.....	48	Trenton.....	54	Pawtucket.....	104
Bridgeport.....	49	Chelsea.....	184	West Hoboken.....	151	Providence.....	23
Hartford.....	52	Everett.....	164	NEW YORK:		Woonsocket.....	143
New Britain.....	123	Fall River.....	42	Albany.....	53	SOUTH CAROLINA:	
New Haven.....	36	Fitchburg.....	146	Amsterdam.....	173	Charleston.....	96
Waterbury.....	78	Haverhill.....	124	Auburn.....	161	TENNESSEE:	
DELAWARE:		Holyoke.....	93	Binghamton.....	110	Chattanooga.....	119
Wilmington.....	64	Lawrence.....	61	Buffalo.....	10	Knoxville.....	152
DISTRICT OF COLUMBIA:		Lowell.....	47	Elmira.....	149	Memphis.....	37
Washington.....	17	Lynn.....	60	Jamestown.....	175	Nashville.....	46
FLORIDA:		Malden.....	122	Mount Vernon.....	178	TEXAS:	
Jacksonville.....	90	New Bedford.....	50	New Rochelle.....	186	Austin.....	187
Tampa.....	132	Newton.....	141	New York.....	1	Dallas.....	56
GEORGIA:		Pittsfield.....	166	Niagara Falls.....	181	El Paso.....	134
Atlanta.....	31	Quincy.....	167	Rochester.....	25	Fort Worth.....	71
Augusta.....	139	Salem.....	125	Schenectady.....	77	Galveston.....	148
Macon.....	140	Somerville.....	72	Syracuse.....	35	Houston.....	68
Savannah.....	89	Springfield.....	59	Troy.....	75	San Antonio.....	51
ILLINOIS:		Taunton.....	163	Utica.....	74	UTAH:	
Aurora.....	185	Worcester.....	33	Yonkers.....	66	Salt Lake City.....	57
Chicago.....	2	MICHIGAN:		NORTH CAROLINA:		VIRGINIA:	
Decatur.....	177	Bay City.....	120	Charlotte.....	162	Lynchburg.....	192
East St. Louis.....	91	Detroit.....	9	OHIO:		Norfolk.....	69
Joliet.....	160	Flint.....	131	Akron.....	79	Portsmouth.....	165
Peoria.....	86	Grand Rapids.....	44	Canton.....	108	Richmond.....	39
Quincy.....	156	Jackson.....	174	Cincinnati.....	13	Roanoke.....	157
Rockford.....	113	Kalamazoo.....	137	Cleveland.....	6	WASHINGTON:	
Springfield.....	105	Lansing.....	171	Columbus.....	29	Seattle.....	20
INDIANA:		Saginaw.....	109	Dayton.....	43	Spokane.....	45
Evansville.....	83	MINNESOTA:		Hamilton.....	153	Tacoma.....	62
Fort Wayne.....	87	Duluth.....	70	Lima.....	183	WEST VIRGINIA:	
Indianapolis.....	22	Minneapolis.....	18	Lorain.....	191	Huntington.....	159
South Bend.....	95	St. Paul.....	28	Springfield.....	115	Wheeling.....	135
Terre Haute.....	92	MISSOURI:		Toledo.....	30	WISCONSIN:	
IOWA:		Joplin.....	179	Youngstown.....	67	La Crosse.....	188
Cedar Rapids.....	168	Kansas City.....	21	OKLAHOMA:		Milwaukee.....	12
Council Bluffs.....	192	St. Joseph.....	73	Muskogee.....	182	Oshkosh.....	169
Davenport.....	128	St. Louis.....	4	Oklahoma City.....	80	Racine.....	136
Des Moines.....	63	Springfield.....	164	OREGON:		Superior.....	138
Dubuque.....	147	MONTANA:		Portland.....	27		
Sioux City.....	111	Butte.....	142				

DIFFICULTIES IN COMPILING REPORT.

In the compilation of statistics such as have been described in the opening paragraph of this introduction, and especially in the compilation of those of municipal expenses, many difficulties are met with. Detailed statements of those difficulties, of the factors and circumstances giving rise to them, and of the methods employed and the success realized by the Bureau of the Census in overcoming them are here presented to aid in the proper use of this report, especially in comparing its figures with those of local reports.

Difficulties arising from differences in governmental organization are met with in all parts of the country. In some cities all local municipal powers and activities are administered by a single governmental organization, while in others those powers are distributed among a number of independent governmental bodies. In each case the one or more bodies by which the local governmental activities are administered constitute the government of the city, which is here spoken of as *the city's government*. The term *city corporation* as used in this report is applied to the governmental organization or body in a city which has only one independent division, and also to the municipal organization exercising the principal authority in the government of a city with two or more local governmental bodies. For a city with local governmental powers exercised by two or more bodies, the data required relate to all such bodies, and the Bureau of the Census has collected them from all and has combined them into a single report for the city's government, thereby making the resulting statistics comparable with those of a city in which the governmental powers are concentrated in a single governmental body or corporation from which data are secured.

A special difficulty arising from differences in local governmental organization is met with in those localities where the territory governed by the city corporation is materially less than that governed by another municipal body, as that of the school district. For such a city the Census, instead of including for its combined statement all the receipts and payments, or all the revenues and governmental costs, property, and debts of the civil division with the larger territory, includes only such a percentage of the same as the valuation of the property within the territory of the city corporation assessed for the purposes of taxation constitutes of the valuation of the property within the limits of the larger division.

Difficulties arising from differences relating to the custody and expenditure of money are, if anything, more common than those described in the last paragraph. Not infrequently a city with a single governmental unit receives and expends some revenue or other money for which the corporation is responsible without such money passing through the hands of the treasurer or

chamberlain. These receipts and payments are (1) those of departments which are authorized to collect certain fees and charges and make specified sales and expend the money thus obtained for specified purposes without covering it into the treasury or receiving warrants or orders for its expenditure, and (2) those of sinking, trust, and other funds under the management of special commissions or boards. In a large number of cities with two or more governmental units some money is similarly expended by those units. Further, in some cities referred to each of the persons acting as treasurer or chamberlain may pay out money on the order of two or more different officers with the authority or power of a comptroller or auditor. The difficulties here described are overcome by securing reports from all officials receiving and paying out money from which the city corporation or other governmental body derives benefit, or for which it is responsible, and from every officer issuing warrants or orders, the same as is done in the case of independent governmental units, and combining the data thus obtained with other data into a single statement of the financial transactions of the city's government.

Difficulties arising from differences in accounting for administrative funds are universal. The most important are those met with in the case of so-called trust funds. The character of the resulting difficulties may be illustrated by concrete cases.

Some cities having trust funds whose incomes by the terms of the trusts are expended for school, charity, or other specified purposes, keep accounts with these funds, which show on the one side their annual earnings, and on the other the direct expenditures for the purposes of the trusts. Other cities having similar funds keep trust accounts which show on the one side the earnings of the funds, as in the first instance, and on the other, the transfer of these earnings to other funds, as the general fund, or revenue fund, through which those earnings are expended, and in the accounts of which the expenditures are recorded. Statistics of payments compiled from the general fund accounts of the second class of cities will include with other expenses for the same purpose the amounts paid out for the purposes of the trusts from moneys transferred from the trust funds to the general treasury and will be noncomparable with those based upon the accounts of the same class of funds of the first class of cities. Further, there will be no comparability between the statistics based upon the records of the so-called trust funds of the two classes of cities, since the trust accounts of the cities of the first class contain a record of expenses not included in those of the second class.

The difference above noted is one affecting statistics of municipal expenses. Similar differences are to be met with on the side of municipal revenues, the most common case of noncomparability of this class being

found in the accounts of cities with the receipts from taxes on fire insurance companies that are appropriated by general statutes for the maintenance of firemen's pension funds. Some cities in which such use is made of the given tax collect the tax by their general collecting agencies, and the amounts so collected are shown on the books of the city treasurers and city comptrollers as city revenues, which are transferred to the trust funds for custody and investment or expenditure. In other cities the amounts are collected by officials connected with the administration of the trust funds, and no account of their receipt is shown on the books of the city treasurers and comptrollers, and there is no comparability between the tax statistics of the two classes of cities which are based solely upon the city treasurers' or comptrollers' books.

Many other cases can be cited, all showing how statistics which are based upon the fund accounts of cities are noncomparable as exhibits of governmental costs or of revenue receipts. The two typical cases will suffice. The difficulties arising from the great differences in the organization and accounting for city funds here noted are overcome by the Bureau of the Census by preparing, as has been described on page 21, a schedule for each independent fund in a given city and consolidating the data so obtained into a single report for that city. The individual cities are with few exceptions keeping their fund accounts as required by good accounting usage and as prescribed by the conditions under which they have accepted trusts, or as called for by constitutional or statutory provisions, but the difference in these conditions and provisions necessitate the Census treatment to secure comparable statements of revenues and governmental costs.

Difficulties arising from the use of antiquated and diverse methods of classifying revenues and governmental costs or receipts and payments are overcome by the Bureau of the Census only in part. Many of the smaller and some of the larger American cities have accounts that were installed before the business world generally introduced revenue and expense accounts to measure the results or outcome of financial transactions. Their accounts are what are known in the commercial world as cash accounts, or accounts with cash receipts and payments. They do not classify receipts with reference to revenue; nor do they classify payments with reference to governmental costs, or to the costs of functional or departmental activities. Further, no common classification has been adopted by the majority of cities which have introduced so-called revenue and expense accounts, or have begun to classify receipts and payments with reference to revenues and governmental costs. The Bureau of the Census endeavors to overcome difficulties

which result from these conditions by having its agents reclassify from original vouchers, the revenues and governmental costs, or receipts and payments, of cities. Such a reclassification, even though made by skilled accountants with a large expenditure of clerical labor and money, can not be the basis of as comparable statistics as would result from the classification by intelligent public officials at the time of original audit. It overcomes some, but not all of the difficulties which now exist. These difficulties will diminish as fast as the cities here referred to can be brought to see the wisdom of adopting a common and scientific classification of all revenues and governmental costs, or of receipts and payments, such as is now in use by the Bureau of the Census.

In this connection mention should be made of the fact that, unless cities have introduced classifications of expenditures based upon an intelligent application of the principles of cost accounting, the statistics compiled by the Bureau of the Census can not be made comparable by the methods outlined above except for the more important classes of expenses and outlays, and that comparable data for the several cities can be expressed only in per capita figures. Moreover, the possibilities of comparable municipal statistics will be fully attained only after the cities adopt more detailed classifications of expenses and outlays than have hitherto been employed by the Census, and combine their financial statements with records of work done or services performed or public improvements constructed so as to show the unit costs of services and improvements. Among such unit costs that should be thus shown are those for the services of cleaning streets per thousand square yards of each class of paved highways cleaned; cost per ton of removing each class of city refuse, etc.; and the cost per square yard of constructing each of the various classes of pavements, and the cost per thousand yards of laying sewers of each size and class. It is hoped that with the increasing public appreciation of the value of unit cost accounts and statistics as measures of governmental and private efficiency in business management, the Bureau of the Census may be able at no distant date to broaden the field of its truly comparable statistics, and to present not only per capita statements of the costs of certain public services, but also the unit costs of such services as those mentioned and many others of equal administrative importance.

Difficulties arising from the collection of state and county revenues by different governmental units are closely related to those referred to under the last heading. In some states, the general property tax, taxes on the capital stock of banks and other corporations, taxes on the liquor traffic, and other revenues accruing for the benefit of the state and county, are collected by the city and transmitted to the civil division

for whose primary benefit the revenues are exacted. In other states the same revenues are collected by county governments. In the cities of the states first referred to the receipts and payments by the city on account of these collections must be recorded in the accounts and set forth in the published reports, while the records and reports of the cities of the states last referred to contain no statement of similar receipts and payments. Most of the cities in the states first referred to treat their payments to the state and county as payments for current expenses, and the receipts from taxes and other revenues to meet these expenses as receipts of city revenues. A compilation of revenue receipts and payments for expenses based upon the printed reports of cities, some of which collected state and county taxes and the others did not, give rise to noncomparable statistics, the revenues and expenses of the cities of the first class being exaggerated as compared with those of the second. To secure comparability under the circumstances mentioned, the Bureau of the Census treats receipts and payments of cities on account of the revenue of states and counties as nonrevenue receipts and nongovernmental cost payments, even though the local authorities have included them among the revenue receipts and payments for expenses.

Difficulties arising from the general use of cash accounts by the comptrollers and treasurers are in large part overcome by the Bureau of the Census. The accounts of those officers, or of those exercising their functions under other designations, necessarily constitute the bases of the Census municipal financial statistics; they being the only accounts covering the field of the Census statistics. But the use of these accounts gives rise to many difficulties which must be overcome before the data recorded therein can be embodied in comparable statistics of governmental costs. Those difficulties are patent to every one familiar with the elements of accounting, and result from the use of accounts based upon current payments, rather than upon current expenses. A description of the different accounting records in use at the present time in American cities will assist to an understanding of the methods adopted by the Bureau of the Census for overcoming these difficulties.

In one class of cities the only books of accounts are those of the treasurer or other officer or officers having the custody of municipal funds. In another class, additional books are kept by the comptroller, auditor, or other official exercising the duties of comptroller, or auditor. In a city of the latter class the books of the comptroller are in some respects similar to those of the treasurer and serve as a check upon his accounts and transactions, as well as upon those of the departmental officials who immediately direct the expenditure of moneys appropriated to public uses. The treasurer's accounts record the flow of cash into and out of the treasury. The accounts of the comp-

troller are for most cities records of cash received by the treasurer and of warrants or orders drawn upon him in settlement of bills or claims, though in a limited but growing number of cities they also comprise records of revenues, expenses, interest, outlays, assets, and liabilities. In a city of either class the totals for the treasurer's and comptroller's accounts with cash will agree for a given fiscal period, as a month or a year, if the treasurer makes no payments except upon warrants or orders of the comptroller, and if all warrants or orders of the comptroller are paid within the fiscal period in which they are issued. The total of the cash accounts of these officials for any given city will differ for a given fiscal period if the treasurer makes any payment without the comptroller's warrant or order, or if any warrant or order of the comptroller remains unpaid at the end of the fiscal period.

In a city in which the comptroller keep accounts with revenues, expenses, interest, outlays, assets, and liabilities, as well as with cash, no direct comparison can be made between the comptroller's accounts with revenues, expenses, interest, and outlays, and the treasurer's accounts with receipts and payments. Comparison can be made, however, between the total of the comptroller's accounts with claims accrued or bills audited, or of his account with warrants or orders drawn, and the totals of the treasurer's accounts with warrants or orders paid.

Detailed comparisons between the cash accounts of a comptroller and treasurer can be made in each of the cases mentioned in the preceding paragraphs only to the extent that the two officials classify municipal transactions in the same way. The methods adopted by the Bureau of the Census for overcoming the difficulties arising in the compilation of detailed and comparable statistics of governmental costs from the existing and widely differing accounts of local comptrollers and treasurers are as follows:

For a city in which there is no comptroller, auditor, or other official performing the function usually assigned to a city comptroller, the Bureau of the Census bases its municipal financial statistics upon the accounting records of the treasurer or treasurers of the one or more governmental units and of others having the custody of the city money, and makes such reclassification of receipts according to revenue and of payments according to governmental cost as is practicable. For a city in which there is a comptroller, auditor, or other official performing the duties of a comptroller, the Census statistics, for the reasons which follow, are based upon the accounting records of such officer, with such reclassification according to revenue and governmental cost as may be necessary, and the records of the treasurer or treasurers are used as merely auxiliary thereto:

1. In most cities some of the warrants or audits issued or recorded in or for a given fiscal period are not paid until a subsequent period. For such a city the warrants, orders, or audits recorded in the comp-

troller's or auditor's books for a given fiscal period represent for that period more nearly than do the payments recorded in the books of the treasurer the current costs of government, the presentation of which constitutes the most important object of the Census statistics of financial transactions; and hence are of greater value for statistics showing the total costs of operating individual departments and offices, or of acquiring and constructing the several classes of properties and public improvements, and the unit costs of services rendered or improvements constructed or acquired, such as those of education per pupil in the public schools, or of the construction or care and maintenance of particular classes of paved highways per thousand square yards of surface;

2. The treasurer's books, in a city having a comptroller as well as a treasurer, do not ordinarily show payments classified by division and subdivision of governmental service and by object, as the books of the comptroller or auditor classify the governmental costs or payments, and it is from exhibits of governmental costs or payments so classified that such significant and comparable statistics of financial transactions as the Bureau of the Census endeavors to present can best be compiled:

3. In a city where neither the treasurer nor the comptroller sufficiently classifies revenues or receipts, and governmental costs or payments, and the census agent classifying the same is compelled to depend principally upon the original vouchers of expenditures, as has been described on page 22, he can find such vouchers only in the office of the comptroller or auditor.

Although the accounts and reports of the one or more comptrollers or auditors of a city are used by the Bureau of the Census as the basis of the financial statistics of the city, truly comparable statistics of its governmental costs for a given fiscal period, as well as statistics of its revenue receipts, of its receipts and payments on debt and agency accounts, and of its assets and liabilities at the beginning and close of the fiscal year, are secured by a combination of (1) the comptroller's statement of warrants or orders drawn or bills audited and judgments registered during or for the fiscal year; (2) statements of the warrants or orders drawn or claims audited and judgments registered during or for the fiscal year but remaining unpaid at its close, and of the warrants, orders, or audits and judgments of previous years paid during the year, such statements being compiled by comparing the accounts of the comptroller and treasurer; and (3) the treasurer's statement of cash receipts during the year and of assets on hand at the beginning and close of the year.

By obtaining a statement for each city, as above described, the Bureau of the Census secures as accurate and comparable statistics of governmental costs as is feasible based almost wholly on "cash" accounts. In

addition, the methods above described make possible the compiling of other comparable statistics of which mention was made in the opening paragraph.

Difficulties arising from lack of proper accounts with materials and supplies can not be overcome by the Bureau of the Census. Not infrequently in a city without an organized bureau of supplies and supply accounts, theseveral departments use their unexpended appropriations toward the close of the year in purchasing supplies to be used in the succeeding year. In such a city the materials and supplies thus purchased in one year are seldom the same in quantity or cost as those purchased in the year preceding or succeeding, and hence the costs of the various subdivisions of the service are made to appear to vary much more than they actually do; and the statements of expenses or outlays, whether recorded in cash accounts or expense and outlay accounts, do not represent the actual current costs. A few cities are beginning to appreciate this fact and are establishing bureaus which make all purchases, charging them to an asset supply account, and issuing supplies to departments as required for immediate use. The establishment of such bureaus of supplies and the employment of such methods of accounting for supplies make the local accounts and statements of expenses and outlays more accurate, and to that extent aid in making the Census statistics more accurate and comparable.

Even with accounts as described, a minor adjustment must be made by the Bureau of the Census in compiling statistics of governmental cost payments, if the cost of supplies purchased by the bureau of supplies for a given year is less than that of supplies given out on requisition. The adjustment is made by treating the excess as if it had been sold or disposed of in meeting expenses and outlays and crediting the supply account with receipts from supplies disposed of which balance the excess, the same as the amount of outstanding warrants and audits is balanced by a receipt on account of such warrants and audits.

Difficulties arising from confounding expenses and outlays with contingent liabilities incurred are met with in the case of cities which have installed so-called revenue and expense accounts independent of cash accounts, but have not differentiated their accounts with appropriations from their accounts with expenses and outlays. These cities include in their summary of expenses and outlays for a fiscal year the contingent liabilities properly recorded in appropriation accounts that have been incurred by contract or upon market orders during the year, and which do not mature until a subsequent year. They also omit the actual costs of the year that accrued during that year by reason of contracts or orders of preceding years. Such accounting gives rise to inaccurate statements the exact reverse in character of those which arise when payments are recorded as expenses and outlays without regard to the period in which were incurred the

liabilities that were represented by the bills or claims paid. Such accounting magnifies the inaccuracies to which attention has been called above when cities have no accounts with supplies, and make their expense and outlay account or their payment account record the costs of materials purchased but not consumed or used until a later period. In the collection of its data for cities with accounts such as are here referred to, the Bureau of the Census disregards the local summary of current expenses and outlays, and compiles a new summary of such governmental costs based upon the accrued or the audited claims of the year.

Difficulties arising from different methods of accounting for interdepartmental services or services by one department of the government for another are overcome by the Bureau of the Census in only a limited number of cases. The noncomparability of the local records and the inaccurate statements of governmental costs in the case of many cities, which arise from these different methods, are here illustrated by a number of concrete cases.

Many cities utilize the labor of the inmates of their penal and charitable institutions in caring for and maintaining their highways, or in making highway improvements, or in performing similar work of various kinds in parks or for other departments. A few of these cities, recognizing the value of correct statements of highway and park as well as institutional expenses and outlays, charge the proper highway or other account with the value of the labor of the institutional inmates at amounts equal to what it would cost if their work had been done by city employees or by contract, and credit the institution with the same amounts. The records of such cities, so far as their highway and park accounts are concerned, are strictly comparable with those of cities whose work on highways and in parks is done by city employees or by contractors; and their accounts with institutions, showing on the one side the direct expenditures for the care, clothing, and guarding of the prisoners, and on the other the value of the services secured from them, exhibit accurately by their balance the burden which the institutions force the taxpayers to bear.

The records of such cities stand in marked contrast with those of cities in which no account is taken of the value of the labor of the institutional inmates for other departments. Those records contain no accurate statement of the cost of highway and park maintenance or of the net burdens resting upon the cities by reason of their institutions. To overcome the difficulties in the way of comparable statistics and to provide the basis in the case of such cities for accurate statements of the net costs of highway, park, and institutional maintenance and operation in these cities, the Bureau of the Census secures estimates of the value of the labor of inmates of institutions upon the highways and in parks, and credits the institutions

with this estimated value and charges the proper department or account with the same. This is done by preparing a schedule of the receipts and payments, or of credits and debits for this labor, the same as is done in the case of the receipts and payments mentioned under a preceding heading, for which the treasurer or comptroller of the city has no record.

A city operating a municipal service enterprise, such as an electric light plant employed exclusively for lighting streets, parks, and buildings, if keeping accounts for the enterprise by methods substantially the same as those utilized by private enterprises, makes its primary account with the enterprise a distribution account, and shows separately in its printed report the cost of lighting streets, parks, and buildings as is done by cities obtaining their lighting from private parties. Without such an account the printed report can only show the cost of operating the enterprise as an independent department. For cities having electric light plants the Bureau of the Census prepares special exhibits which show on the one side the expenses and outlays of the plants, and on the other the value of the utilities and services furnished by them to the public and to the various departments, the value of the latter being shown in Table 16 under the title "Offsets to payments for expenses." For a city having accounts of operating expenses and charging the value of the utilities, services, and materials furnished to the proper accounts, departments, and enterprises, the exhibit is a condensed summary of the local account. For a city whose accounts with one of these enterprises show no costs of the services rendered and utilities furnished the various branches of the governmental service, the Bureau of the Census secures estimates of the value of these services, utilities, and materials, and employs these estimates in preparing the second side of the exhibit mentioned. To the extent that the local statements of the expenses of operating electric light systems include all costs for furnishing light, the resulting statistics are true statements of the cost of public light and are comparable with those of other cities; and to the extent that they take account of only a part of the costs of furnishing light or other utilities the statistics are inaccurate and the figures for the several cities are noncomparable. (For a statement of the method of correcting inaccurate statistics resulting from the failure of cities to include interest on the value of the electric light system as a part of their operating expenses, see page 26, under "Difficulties due to faulty accounting for interest chargeable as outlay or expense.")

Incorrect statements of governmental costs are found in the reports of all cities with public service enterprises such as water-supply and gas-supply systems in which no account is taken of the value of the public utility furnished other departments by such systems. These incorrect accounts can not give rise to statistics that are comparable, any more than the accounts of

institutions and parks in the case of cities such as those referred to on a preceding page. The incorrect accounts could be corrected by the Bureau of the Census and the basis laid for comparable statistics in the case of these public service enterprises, if the data were available for correct estimates, as in the case of labor of institutional inmates, or the interest on the value of the plants of municipal lighting systems. But such data are entirely wanting except in the case of a few cities in which the officials in charge of the water-supply or other systems have prepared estimates of the value of the public utilities furnished, and such estimates are included in the printed reports, but not included in the comptrollers' or treasurers' accounts and reports. These estimates, when available, are used by the Bureau of the Census the same as the estimates described in the case of the work of the inmates of penal and charitable institutions.

It should be stated in this connection that neither in the case of these estimates nor in that of the credits which are included in the accounts of a city comptroller of actual payments by the city for water furnished by the water-supply system to other branches of the city government is there any great accuracy or strict comparability, owing to the lack of a well-accepted basis for assigning values to the water furnished by privately owned and municipally owned water-supply systems to the city departments and offices. The same lack of a basis affects the statistics of all other public utility enterprises operated by cities, and this lack will continue to make difficult the preparation of accurate and comparable statements of the cost of water and other utilities furnished by public service enterprises to fire departments and other departments until as a result of general discussion and investigation of the subject, an approximately correct value can be assigned to the utilities furnished.

Other difficulties in the way of comparable statistics of public service enterprises exist by reason of the fact that in the case of many of them the cost of making out bills and collecting revenue is included with the cost of collecting other revenue, and there is no basis in city accounts for comparing the expenses of conducting a municipally owned enterprise with those of one that is privately owned, or for comparing the expenses of a municipally owned enterprise whose employees make out and collect all their bills with those of a similar enterprise whose bills are made out and collected by some one of the general financial officers of the city. The Bureau of the Census has formulated no method by which it is able to overcome the difficulties here mentioned, and to the extent of the inaccuracy of local accounts here described the resulting statistics fail to be strictly comparable as between the several cities.

Difficulties due to lack of accounting for depreciation are everywhere met with. With a few exceptions cities do not include depreciation among their ex-

penses, nor do they make other adequate provision for it in their accounts. As a result, the reports of all cities exaggerate outlays or expenditures for additions to the value of permanent properties and public improvements and understate their current expenses. These exaggerations and understatements make it difficult for the Bureau of the Census to compile accurate statistics of governmental costs. A beginning toward correcting this inaccuracy has, however, been made by the few cities which in the case of their municipal service and public service enterprises prepare statements of depreciation as the basis of showing the costs of the service furnished and the extent to which the enterprises are actually self-supporting. So far as these statements of depreciation have been prepared in any form by cities with reference to these enterprises, they are included by the Bureau of the Census in its statistics of governmental costs. These statements assist in making the Census statistics for the cities concerned more accurate, but they can not materially increase their general comparability until similar statements are available for a considerable number of cities.

The method employed by the Bureau of the Census in reporting the local expenses for depreciation among the operating expenses of municipal or public service enterprises is to deduct the amount so reported from the outlay payments of the city during the year, making all deductions from the outlay payments for the enterprise affected, when possible; otherwise, from the aggregate payments of the city for outlays.

Difficulties arising from faulty accounting for interest chargeable as outlay or expense are more common than the average student of municipal finance appreciates. Many of the public improvements of cities require several years for their completion, and the cities receive no benefit from their use until completed. These improvements are constructed from the proceeds of bond sales and the cities pay interest during the construction period. In commercial accounting interest so paid is always charged to the account of outlay or capital expenditure, and interest is charged as a current cost only after the property constructed comes into service. Only a few cities in the United States recognize this principle of good commercial accounting, and the Bureau of the Census is able to present only for such cities true statements of the costs of public improvements, and also to show the total interest for the use of credit capital.

Cities lighting the streets, parks, and buildings with municipally operated electric lighting plants do not show by their accounts or statements of lighting the true costs of services, unless they take into account the interest on the value of their plant as well as the depreciation of that plant. Only a few cities prepare statements of the costs of their lighting service by these municipally operated enterprises which include interest on the value of the plant and hence, with

the exception of the cities referred to, local reports of the costs of the lighting service are more or less defective. Recognizing this fact, and also the desirability of correct statements of the costs of lighting and similar services by municipal service enterprises, the Bureau of the Census includes interest as an expense of those enterprises, not only for the cities preparing statements on that basis, but for all others. The bureau hopes that the practice of the few cities with reference to this item may become the practice of all; so that the local statements of the cost of municipal lighting may be made more accurate and also more comparable as between cities. In introducing these figures for interest as costs of operating these enterprises or of making outlays for the public improvements mentioned in the preceding paragraph, the Bureau of the Census employs substantially the same methods as those used in the case of omitted statements of interdepartmental services already described. The interest charged as an outlay or as an expense of municipal service enterprises is credited as a revenue in the interest receivable account, and the amount so credited separately tabulated.

Difficulties arising from auditing claims after the close of the year to which they relate readily fall into two distinct classes: (1) Those which arise from holding the accounts of the year open for a limited period of time, as ten days or a month, for receiving or auditing claims, and (2) those which result from the faulty system of transacting municipal business that permits claims to be audited months or even years after the close of the fiscal year during which they mature.

The Bureau of the Census overcomes the difficulties first mentioned and secures comparable statistics by including with the warrant payments and audits for a given year those which represent the bills audited in the succeeding year, and balancing these payments by receipts from outstanding warrants or claims, as is done in accounting for warrants issued during the year but unpaid at its close. Warrants drawn during the year on account of the governmental costs of the preceding year and paid in cash are treated as payments on account of the indebtedness of prior years, and not as payments on account of current costs of government.

The greatest difficulties of the second class mentioned above are met with in cities where the final approval of bills, or, in other words, their audit, is made by the city council. This method of audit involves the exercise of a purely executive or administrative function by a legislative body. It arises from a faulty commingling of administrative and legislative functions, and is at once bad governmental practice, poor administration, and vicious accounting,

which it is to be hoped will ultimately be discarded by all cities, as it has been by those best administered. The difficulties arising from faulty systems of transacting business can not be overcome by the Bureau of the Census, and the statistics of municipalities with such business methods will be comparable one year with another, and those of different cities with such methods will be comparable with one another to the extent to which the deferred costs of different years or different cities are in like total amounts and in like amounts for particular functions. The Bureau of the Census notes with satisfaction, however, that the last few years have witnessed great improvement in the business methods of cities, and that the relative amount of expenses now audited in a fiscal year succeeding the one to which they relate is much less than it formerly was, and it hopes that the introduction of better business methods will in a few years eliminate the factor of noncomparability to which attention is here called.

State supervision of municipal accounts decreasing the difficulties of compilation.—Many factors and agencies have contributed and are at present operating to lessen the difficulties mentioned above. The act of Congress in 1899 authorizing the annual collection and publication of the financial statistics of cities having a population of over 30,000 was a recognition of the need and value of comparable statements of the financial transactions and financial condition of cities. This act was the outcome of an agitation by those interested in municipal affairs for securing standard or uniform city reports and standard or uniform accounts as the basis for such reports. The same agitation led the legislature of Ohio to pass an act in 1901 requiring the use of uniform methods of accounting and uniform reports by the municipalities of that state, and to create a state office with power to enforce such uniformity and secure the use of good business methods. Since 1901 New York, Massachusetts, Indiana, Iowa, Wisconsin, Minnesota, California, Washington, Oregon, and some other states have enacted laws which provide for the compilation and publication of uniform municipal reports, either with or without the establishment of uniform accounts and the supervisory control established in Ohio.

The extent to which state supervision of municipal and county accounts and reports has been extended by legislation prior to 1913 is shown by the following statement taken from the June number of the National Municipal Review for 1913. The statement was compiled by the Hon. F. H. Irwin, director of municipal statistics of the Indiana state board of accounts.

FINANCIAL STATISTICS OF CITIES.

STATE SUPERVISION OF MUNICIPAL ACCOUNTS, UNDER EXISTING LEGISLATIVE ENACTMENTS PRIOR TO 1913.¹

1	2	3	4	5	6	7	8	9	10
STATE.	Supervisory control.	Official title of examining officer.	State offices.	State institutions.	Counties.	Townships.	Other municipalities.	Installation of uniform system of accounts.	Remarks.
Alabama.....	Governor.....	Chief examiner of public acts.	(*)	(*)	(*)		Including legislative appropriations for any person, institution, or organization. All precinct offices.	No provision.....	
Arizona.....	Governor.....	State examiner.....	(*)	(*)	(*)			State offices, institutions, and counties.	Supervision of state offices and institutions under direction of department of accounting and banking.
Arkansas.....									No law in effect.
California.....	State board of control.	Superintendent of accounts.	(*)	(*)	(*)	(*)	Including all disbursing officials.	All offices and municipalities.	
Colorado.....	Auditor of state.....	Public examiner.....	(*)	(*)	(*)			State offices, institutions, and counties.	
Connecticut.....	Comptroller.....		(*)	(*)			Courts and commissions.	Courts, state offices, and commissions.	
Delaware.....									No law in effect.
Florida.....									No law in effect.
Georgia.....									No law in effect.
Idaho.....	State insurance commissioner.	State examiner.....	(*)	(*)	(*)			State and county offices.	
Illinois.....	Auditor of state.....	Auditor of public accounts.	(*)	(*)				No provision.....	
Indiana.....	State board of accounts.	State examiner.....	(*)	(*)	(*)	(*)	Civil and school cities and towns.	All offices.....	
Iowa.....	Auditor of state.....						Cities and towns.	Cities and towns.....	Examination of cities and towns less than 5,000 population on application or petition.
Kansas.....	Governor.....	State accountant.....	(*)	(*)	(*)			State institutions.....	Examination of counties on written order of governor.
Kentucky.....	Governor.....	State inspector and examiner.	(*)	(*)	(*)			No provision.....	
Louisiana.....	Governor.....	Supervisor of public accounts.	(*)	(*)	(*)	(*)	Municipal corporations, police, and road district juries.	All offices.....	
Maine.....	Governor.....	State auditor.....	(*)	(*)				No provision.....	
Maryland.....	Governor.....	State auditor.....	(*)	(*)	(*)		City of Baltimore.....	All offices.....	
Massachusetts.....	Auditor of the commonwealth.	Director bureau of statistics.	(*)	(*)			Cities and towns (on petition).	State offices, institutions, cities, and towns.	
Michigan.....	Auditor general.....		(*)	(*)				State offices and institutions.	
Minnesota.....	Department of public examiner.	Public examiner.....	(*)	(*)	(*)		Cities (over 50,000 population), towns, and villages (on request).	All offices.....	
Mississippi.....	State revenue department.	State revenue agent.....	(*)	(*)	(*)	(*)	All municipalities and levy boards.	No provision.....	
Missouri.....									No law in effect.
Montana.....	State board of examiners.	State accountant.....		(*)			City fire department relief associations.	State institutions.....	
Nebraska.....	Auditor of public accounts.	State accountant.....		(*)		County treasurer.		County treasurer's office.	
Nevada.....	Governor.....	State auditor.....						State offices, institutions, and counties.	Examination of counties, cities, and towns effected through local examination boards.
New Hampshire.....									No law in effect.
New Jersey.....	Department of accounts.	Auditor of accounts.....	(*)	(*)				State offices and institutions.	
New Mexico.....	Traveling auditor and bank examiner.	Traveling auditor and bank examiner.	(*)	(*)	(*)			State offices, institutions, and counties.	
New York.....	State comptroller.....	Chief accountant.....			(*)		Cities (second and third class), villages (population of 3,000 or more).	Counties, cities, and towns.	Cities of first class excluded, also the 4 counties comprising the city of Greater New York.
North Carolina.....									No law in effect.
North Dakota.....	Board of control.							State institutions.....	
Ohio.....	Bureau of inspection and supervision of public offices.	Chief inspector and supervisor.	(*)	(*)	(*)	(*)	All taxing districts.....	All offices.....	
Oklahoma.....	Governor.....	State examiner and inspector.	(*)	(*)	(*)		Counties are examined on request or petition.	State offices, institutions, and counties.	
Oregon.....									No law in effect.
Pennsylvania.....	Auditor general.....		(*)	(*)				No provision.....	Supervision of state expenditures only.
Rhode Island.....									No law in effect.
South Carolina.....	Joint legislative commission.		(*)	(*)				No provision.....	
South Dakota.....	Governor.....	Executive accountant.	(*)	(*)	(*)			No provision.....	Law amended 1913 session. Examination of counties on request.
Tennessee.....	Comptroller.....	Revenue agent.....	(*)	(*)	(*)			No provision.....	
Texas.....									No law in effect.
Utah.....	State auditor.....	Examiner of public accounts.	(*)	(*)		County treasurer.		County treasurer's office.	
Vermont.....									No law in effect.
Virginia.....	Governor.....	State accountant.....	(*)	(*)				State offices and institutions.	
Washington.....	Bureau of inspection and supervision of public offices.	Chief inspector and supervisor.	(*)	(*)	(*)	(*)	All taxing districts, including civil and school cities and towns.	All offices.....	

¹ Compiled by F. H. Irwin, director municipal statistics, Indiana State Board of Accounts, Indianapolis, Ind., for the National Municipal Review, July, 1913.
² Office is subject to supervision.

INTRODUCTION.

STATE SUPERVISION OF MUNICIPAL ACCOUNTS, UNDER EXISTING LEGISLATIVE ENACTMENTS PRIOR TO 1913—
Continued.

1	2	3	4	5	6	7	8	9	10
STATE.	Supervisory control.	Official title of examining officer.	State offices.	State institutions.	Counties.	Townships.	Other municipalities.	Installation of uniform system of accounts.	Remarks.
West Virginia.....	State tax commissioner.	Chief inspector and supervisor.	(1)	(1)	(1)	(1)	All taxing districts, including civil and school cities and towns.	All offices.....	
Wisconsin.....	State tax commissioner.	Accounting director..	(1)	(1)	(1)	Cities, towns, and villages.	All offices (on request).	
Wyoming.....	Governor.....	State examiner.....	(1)	(1)	(1)	(1)	School districts, cities, and towns (on request).	All offices.....	Supervision also of all financial institutions.

¹ Office is subject to supervision.

Cooperation between the accounting offices or bureaus of the states having bureaus or officers for securing uniform accounts and the Bureau of the Census and popular discussion have given great impetus in all parts of the United States and Canada to the movement for uniform municipal accounting. City officials, private accountants, and others have also been making earnest efforts to improve the methods of municipal administration. Each year the officials of the Bureau of the Census meet the accounting and other officers of cities in conference, at which improvement in accounting methods, in systems of accounts and forms for reports, as well as a proper accounting terminology, are discussed; and as a result, the Bureau of the Census is able to improve its schedules, its classification of receipts and payments, its methods of presenting statistical data, and many of the cities are induced to bring their accounts and reports more into harmony with the Census schedules and forms, and thus into approximation to a scheme of uniform accounts and a standard form of reporting. To the extent that this has been done, the difficulties in the way of comparable municipal statistics have been lessened.

Introduction of improved accounts as factors decreasing the difficulties of compilation.—Since the Bureau of the Census began the collection of data for its municipal financial statistics for the year 1902, many cities having a population of over 30,000 have installed new systems of accounts which have been designed to afford greater assistance to the executive officers and to provide the legislative branches of the government and the general public with the data required for forming an intelligent opinion concerning the economy and efficiency of the various departments and enterprises of the city. The great majority of these cities in installing their new systems of accounts have striven to bring their classification into harmony with that employed by other cities, so far, at least, as to enable them to compare revenues and governmental costs. In addition to the foregoing, many cities which still retain their earlier systems of accounts have introduced classifications of revenues and expenses which approximate those of other cities. To the extent that such a uniform classification has been introduced, the difficulties in the way of compiling comparable financial statistics of cities have decreased, and the utility

of the Census reports and of other similar reports has increased.

The difficulties will not, however, be entirely removed until the remaining cities have adopted similar systems of accounting. Realizing that with such a variety of systems to choose from the average conscientious city official, even though desirous of bringing his accounts into conformity with those of other cities, must be at a loss in determining by what system of accounts he can secure the greatest assistance in his own duties and responsibilities, the Bureau of the Census recommends that each city installing a new system of accounts should include in its report a statement of the administrative gains obtained by the system adopted. The publication of such concise and concrete statements relating to accounts, set forth by those friendly to each new system, and the later discussion of the same, will help to clarify the situation by disclosing the actual helpfulness of the various schemes adopted and of the various accounting forms introduced.

The value of uniform accounting terminology in lessening difficulties.—The establishment of state bureaus or offices with power to enforce the use of uniform accounting and correct business methods has been the most important single agency at work in recent years for securing better municipal administration and increasing the efficiency of local government. The Bureau of the Census can never become such an agent for the improvement of governmental administration as these state bureaus and offices are, but by cooperating with them it can aid in the development of accounting principles and terminology and in the standardization of municipal accounts and reports.

Realizing the value of a standard and uniform accounting and financial terminology as a basis for standard or uniform municipal accounts and comparable statistics of finance, the Bureau of the Census some years ago made a study of the more important accounting terms used in governmental business. The results of that study have been published in earlier volumes of reports on the financial statistics of cities having a population of over 30,000. The definitions which were presented in those volumes have been discussed by accountants and city officials and have been revised from time to time. Some of those presented previously, with a few additional ones, are here given under the heading "Accounting terminology."

FINANCIAL STATISTICS OF CITIES HAVING A POPULATION OF OVER 30,000: 1912.

INTRODUCTION.

CHARACTER AND IMPORTANCE OF MUNICIPAL STATISTICS.

Scope of report.—The present report of the Bureau of the Census is practically limited to a presentation of statistics of the financial transactions during the fiscal year 1912 of the 195 cities each of which had a population of over 30,000 on July 1, 1912, and of the financial condition of those cities at the close of the fiscal year mentioned. The report presents statistics as accurate and as comparable as it has been feasible to compile from the records of the cities, relating to a number of subjects, the principal of which are (1) the total and per capita receipts from revenues, and from the principal classes thereof; (2) the total and per capita payments for expenses, interest, and outlays, and for each of the principal classes of expenses and outlays; (3) the total and per capita value of municipal properties and public improvements; (4) the total and per capita municipal indebtedness; (5) the total and per capita assessed valuation of property subject to taxation; and (6) the average daily school attendance and number of school buildings, rooms, sittings, and employees.

Increase in the number and population of cities having over 30,000 inhabitants.—The growing importance of a report such as that described above is shown by one of the most striking social facts of the last century—the greater increase in the population of cities than of smaller places or of farming communities. In 1790, when its first census of population was taken, the United States had but one city with a population of over 30,000. That was New York, N. Y., which at that time had 33,131 inhabitants. The two cities which ranked next to New York in number of inhabitants were Philadelphia, Pa., with 28,522, and Boston, Mass., with 18,320. In 1790 the national population numbered 3,929,214, and the population of New York City constituted only 0.8 per cent of that of the Nation. Sixty years later, in 1850, when the population of the country numbered 23,191,876, there were 19 cities each having a population of over 30,000. The largest of these was New York, with a population of 515,547. The 19 cities had an aggregate population of 1,703,302, which constituted 7.3 per cent of the national population. At the end of a second 60 years, in 1910, the cities of the United States, each having a population of over 30,000, numbered 184 and had an aggregate population of 27,316,407. This was 29.7 per cent of the 91,972,266 inhabitants of continental United States. In 1910 the population of the Nation was twenty-three

and four-tenths times its population in 1790, while the number domiciled in the cities, each containing over 30,000 inhabitants, was eight hundred and twenty-four and five-tenths times as great as the number of those dwelling in the one city of that size 120 years before. The population of the cities of the size here considered increased from 1790 to 1910 more than thirty-five times as fast as did the population of the Nation, exclusive of its outlying possessions. Table I, which follows, exhibits the population of the Nation, exclusive of outlying possessions, and the number and population of cities, each having over 30,000 inhabitants, as the same is reflected in the enumeration of the Federal census at each census year beginning with 1790 and ending with 1910. There is included in the same table the number of cities, each of which in 1911 and 1912 had an estimated population of 30,000, and the total estimated population of such cities.

YEAR.	UNITED STATES.	CITIES WITH OVER 30,000 INHABITANTS.		
	Population.	Number.	Population.	
			Total.	Per cent of national.
1912.....	95,545,336	195	29,320,579	30.7
1911.....	93,927,342	193	28,559,140	30.4
1910.....	91,972,266	184	27,316,407	29.7
1900.....	75,994,575	135	19,050,921	25.1
1890.....	62,947,714	103	12,612,389	20.0
1880.....	50,155,783	63	7,677,766	15.3
1870.....	38,558,371	44	5,210,397	13.5
1860.....	31,443,321	26	3,246,736	10.3
1850.....	23,191,876	19	1,703,302	7.3
1840.....	17,069,453	8	784,323	4.6
1830.....	12,866,020	6	501,434	3.9
1820.....	9,638,453	4	293,544	3.0
1810.....	7,239,881	4	230,437	3.2
1800.....	5,308,453	2	101,735	1.9
1790.....	3,929,214	1	33,131	0.8

The number of cities given for each census year is the number of those with separate organizations at the time of enumeration. Of those cities it should be mentioned that Brooklyn, N. Y., which was a separate municipality of over 30,000 inhabitants for each census year from 1840 to 1890, was consolidated with New York, N. Y., prior to 1900; and Allegheny, Pa., which is included in the table as a separate city from 1860 to 1900, was consolidated with Pittsburgh, Pa., prior to 1910.

The estimated population of cities, each of which had over 30,000 inhabitants July 1, 1912, is given in Table I, and the number and population of such cities in each of the nine geographic divisions are shown in Table II, which follows.

GEOGRAPHIC DIVISION.	Cities.	Population.
United States.....	195	29,320,579
New England.....	32	3,118,758
Middle Atlantic.....	47	11,060,593
East North Central.....	39	6,444,195
West North Central.....	19	2,420,274
South Atlantic.....	18	1,928,173
East South Central.....	11	930,474
West South Central.....	12	1,040,075
Mountain.....	5	450,434
Pacific.....	12	1,927,603

Increase in the number and population of places having over 8,000 inhabitants.—The Tenth Census report, that for 1880, contained a list of places, including the New England towns, each of which had a population of 8,000 and over June 1, 1880. Similar lists have been compiled for each of the subsequent census years. The increase in the number of inhabitants in places of the population stated can therefore be traced since 1880 with approximately the same accuracy as that in cities having a population of 30,000 and over. The census report for 1880 also contained a comparative statement, compiled from the imperfect data at the command of the office, of the population living in places of 8,000 inhabitants or more at each census year from 1790 to 1870. The bureau in its report for the Thirteenth Census reproduced this statement and combined it with similar and more exact records of the population of places having over 8,000 inhabitants for the years of 1880, 1890, 1900, and 1910. The comparative statement thus prepared, combined with estimates of the population July 1, 1912, of the places which in 1910 had 8,000 inhabitants or over, is presented in Table III, which follows.

YEAR.	UNITED STATES.		PLACES WITH 8,000 INHABITANTS OR MORE.	
	Population.	Number.	Population.	
			Total.	Per cent of national.
1912.....	95,845,336	1 778	137,781,998	139.5
1910.....	91,972,266	778	35,726,720	38.8
1900.....	75,994,575	556	25,142,978	33.1
1880.....	62,947,714	449	18,327,987	29.1
1880.....	50,153,783	291	11,450,894	22.8
1870.....	38,558,371	226	8,071,875	20.9
1860.....	31,443,321	141	5,072,256	16.1
1850.....	25,191,876	85	2,897,586	12.5
1840.....	17,039,453	44	1,453,994	8.5
1830.....	12,856,020	26	864,509	6.7
1820.....	9,636,453	13	475,135	4.9
1810.....	7,239,881	11	356,920	4.9
1800.....	5,308,433	6	210,873	4.0
1790.....	3,929,214	6	131,472	3.3

¹ Of places which in 1910 had 8,000 inhabitants or more.

In this table all New England towns containing 8,000 inhabitants or over are included for each census year. No estimates have been made of the number or population of places which had less than 8,000 inhabitants April 15, 1910, but had more than that number July 1, 1912. The figures with reference to places having over 8,000 inhabitants in 1912 as given in Table III are therefore not strictly comparable with those of cities having a population of over 30,000 as given in Tables I and II. The extent of noncomparability, however, is small, and does not greatly affect the value of the table as indi-

cating the relative growth of the total population residing in places having over 8,000 inhabitants.

In 1790 about one-thirtieth (3.3 per cent) of the population of the country was living in places of 8,000 inhabitants or more, in 1820 about one-twentieth (4.9 per cent), in 1850 about one-eighth (12.5 per cent), in 1900 about one-third (33.1 per cent), and in 1910 a little less than two-fifths (38.8 per cent).

In Diagram 1 are presented for each census year the relative population of continental United States, that of places each of which had over 8,000 inhabitants, and that of cities each of which had over 30,000 inhabitants. In Diagram 2 are shown the percentages of the national population at each of the census years residing in the places and cities here referred to, and the percentage of national population residing outside these places. Diagram 1 shows the steady increase in the total population and that of the two classes of places, while Diagram 2 exhibits graphically the greater relative increase in the population of cities having over 30,000 and of places having over 8,000.

DIAGRAM 1.—POPULATION OF CONTINENTAL UNITED STATES IN MUNICIPALITIES HAVING OVER 30,000 INHABITANTS, IN THOSE HAVING FROM 8,000 TO 30,000 INHABITANTS, AND OUTSIDE SUCH MUNICIPALITIES: 1790-1912.

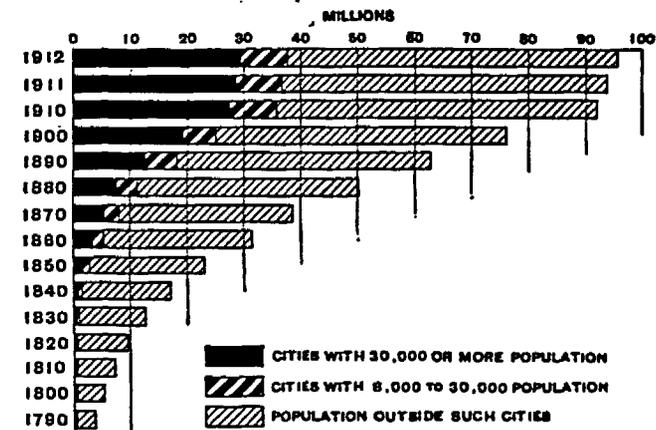
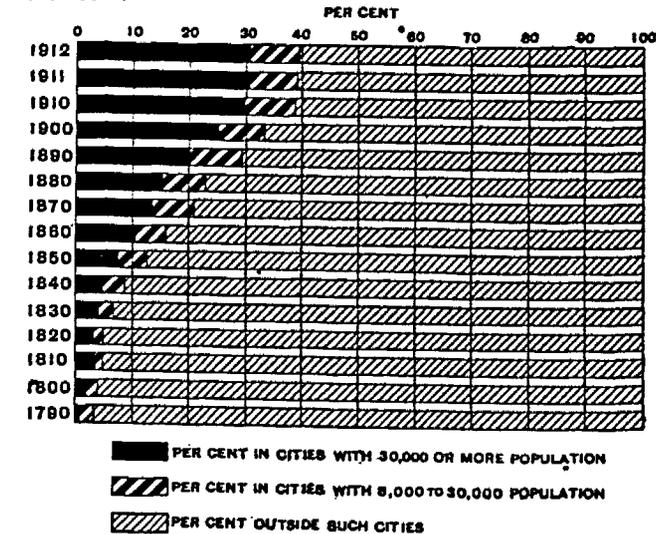


DIAGRAM 2.—PER CENT OF TOTAL POPULATION IN MUNICIPALITIES HAVING OVER 30,000 INHABITANTS, IN THOSE HAVING FROM 8,000 TO 30,000 INHABITANTS, AND OUTSIDE SUCH MUNICIPALITIES: 1790-1912.



Statistics of cities having over 30,000 inhabitants.—The unprecedented increase in the number and the actual and relative population of places having over 8,000 inhabitants, as well as of cities having over 30,000, has given rise to many and grave governmental problems. To assist, so far as the same could be done by the aid of exact statistical information, in the solution of these problems, Congress in 1898 authorized the Department of Labor to compile and publish annually the statistics of cities having a population of over 30,000. Later, after the establishment of the Department of Commerce and Labor, the compilation of these statistics was transferred by executive order to the Bureau of the Census, and this office published its first statistics on this subject for the year 1902. Similar statistics have been compiled and published for each year up to and including this report.

Comparative statistics of 146 cities for 11 years.—Of the 195 cities to which this volume relates, statistics have been presented in all of the 11 reports mentioned for only 146 cities. In this statement of numbers the two cities of Pittsburgh and Allegheny, Pa., which were consolidated into the present city of Pittsburgh, are counted as one for all years. The growth in population of the 146 cities for which the Bureau of the Census has now compiled comparable statistics for 11 years is shown in the following statement:

YEAR.	Population.	YEAR.	Population.
1912.....	27,422,994	1906.....	22,530,736
1911.....	26,738,017	1905.....	21,973,431
1910.....	25,904,769	1904.....	21,434,324
1909.....	25,108,590	1903.....	20,869,155
1908.....	23,608,858	1902.....	20,369,308
1907.....	23,107,777		

The 146 cities whose population is given above and for which comparative statistics are given in this report include all cities to which this report relates, with the exception of the cities of Fort Worth, Tex., Oklahoma City, Okla., and Wichita, Kans., of Group IV, and the following cities of Group V: Pueblo, Colo., New Britain, Conn., Berkeley, Cal., Bay City, Mich., El Paso, Tex., San Diego, Cal., Tampa, Fla., Flint and Kalamazoo, Mich., Macon, Ga., West Hoboken, N. J., Roanoke, Va., Huntington, W. Va., East Orange, N. J., Hamilton, Ohio, Lexington, Ky., Springfield, Mo., Charlotte, N. C., Pasadena, Cal., Everett, Mass., Decatur, Ill., Portsmouth, Va., Perth Amboy, N. J., Quincy, Mass., Lansing, Mich., Pittsfield, Mass., Cedar Rapids, Iowa, San Jose, Cal., Amsterdam, Jamestown, Mount Vernon, and Niagara Falls, N. Y., Jackson, Mich., Williamsport, Pa., Lima, Ohio, Muskogee, Okla., New Rochelle, N. Y., Aurora, Ill., Lorain, Ohio, Austin, Tex., Newport, Ky., Orange, N. J., Lynchburg, Va., Shreveport, La., Colorado Springs, Colo., and Council Bluffs, Iowa.

Governmental costs¹ of cities and of the Nation.—The figures given in Tables I and II showing the greater relative growth of the population of cities

than of the United States as a whole are very striking. They do not, however, show the magnitude of the financial problems which have developed in connection with that increase as do the figures in Tables IV and V which follow.

Table IV gives for each of the 11 years from 1902 to 1912, inclusive, the total and per capita net governmental costs of the 146 cities for which the bureau has compiled statistics, and the corresponding costs of the National Government, together with the net total and per capita outlay payments for New York City for its public works, and those for the National Government for the Panama Canal, public buildings, forts and fortifications, and river and harbor improvements. The net governmental costs of the United States Government for current operation, by which is meant costs exclusive of pensions, for the 11 years covered by the table exceeded those of the 146 cities by \$138,151,164, or only 1.8 per cent. In 1912 the costs of these 146 cities exceeded the above mentioned costs of the National Government by \$95,314,105, or 11.7 per cent. If comparison is made between the total governmental costs of the United States, including those for pensions, it is seen that the total of the United States exceeds that for the 146 cities for the 11 years by only \$1,767,612,958, or 23.5 per cent; and that in 1912 it exceeds it by only 6.4 per cent. In 1912 the net governmental costs of the 195 cities covered by this report were \$954,635,839. Comparing these costs with those of the United States it is found that the total costs of the United States Government for that year exceeded those of the 195 cities by only \$10,637,839, or 1.1 per cent.

The most striking figures of the table are the outlay payments of the city of New York for permanent properties and public improvements, as compared with similar payments of the National Government for (1) the Panama Canal, including payments on account of that structure to the French Company in 1904, (2) public buildings, (3) forts and fortifications, and (4) river and harbor improvements. In 11 years the United States Government expended for all these purposes the total of \$730,186,603, while the single city of New York expended for permanent properties and public improvements the aggregate of \$778,029,771, or 6.6 per cent more than the National Government.

The population which bore the burden of national governmental costs was nearly three and five-tenths times as great as that of the 146 cities, and nearly nineteen times as great as that of the city of New York. The totals of the table, therefore, do not exhibit the relative burden of national and municipal governmental costs. That burden is measured approximately by the per capita figures of the table. The per capita governmental costs of the 146 cities for the 11 years average three times those of the National Government for all purposes and were three and six-tenths times those of the National Government for all purposes other than pensions; and the per capita outlay

¹ For definition of "governmental costs," see p. 30.

FINANCIAL STATISTICS OF CITIES.

payments for New York City for the same period | National Government for all public works of which the were twenty-one and nine-tenths times those of the | table makes specific mention.

Table IV

YEAR.	NET GOVERNMENTAL COST PAYMENTS.											
	United States.											
	146 cities for all purposes.		For all purposes.		For pensions.		For all purposes other than pensions.		For Panama Canal, public buildings, forts and fortifications, and river and harbor improvements.		New York City for permanent properties and public improvements.	
	Total.	Per capita. ¹	Total.	Per capita. ¹	Total.	Per capita. ¹	Total.	Per capita. ¹	Total.	Per capita. ¹	Total.	Per capita. ¹
Eleven years.....	\$7,521,929,978	29.03	\$9,289,542,936	9.66	\$1,629,461,794	1.69	\$7,660,061,142	7.97	\$730,186,603	0.73	\$778,029,771	16.39
1912.....	906,997,327	33.08	965,273,678	10.10	153,560,456	1.61	811,683,222	8.50	93,159,059	0.98	82,631,928	16.35
1911.....	862,229,808	32.19	964,085,555	10.28	157,980,575	1.68	806,104,980	8.59	91,454,237	0.96	88,424,126	17.84
1910.....	807,224,695	31.16	950,795,418	10.32	160,696,416	1.74	790,099,002	8.57	86,997,306	0.94	75,379,758	15.81
1909.....	761,562,037	30.33	1,002,303,040	11.07	181,710,367	1.79	840,592,673	9.28	83,760,808	0.92	69,959,653	15.11
1908.....	761,527,311	32.26	924,566,889	10.40	153,892,467	1.73	770,674,422	8.67	82,161,537	0.92	81,417,149	18.63
1907.....	691,049,439	29.91	818,541,147	9.37	139,309,514	1.60	679,231,633	7.78	62,528,589	0.72	75,481,437	17.66
1906.....	600,383,766	26.65	763,103,908	8.90	141,034,562	1.65	622,069,346	7.26	56,468,527	0.66	64,800,253	15.78
1905.....	583,646,656	28.56	746,568,098	8.88	141,773,965	1.69	604,794,133	7.19	39,948,415	0.48	62,300,540	15.58
1904.....	566,509,115	28.43	776,802,225	9.42	142,559,266	1.73	634,242,959	7.69	64,723,534	1.03	68,501,402	17.64
1903.....	518,225,879	24.53	694,111,489	8.59	138,425,646	1.71	555,685,843	6.87	28,362,054	0.35	61,422,050	17.34
1902.....	462,674,445	22.71	683,391,489	8.63	138,488,560	1.75	544,902,929	6.68	20,622,647	0.26	42,322,373	11.68

¹ Average annual per capita.

The table further shows that the relative burden of governmental costs as measured by per capita payments therefor is increasing much faster for municipalities than for the National Government. Comparing the figures for the total costs in 1902 and 1912 it is found that those of the National Government for all purposes increased from \$8.63 to \$10.10, or 17 per cent; while those of the 146 cities increased from \$22.71 to \$33.08, or 45.7 per cent. These figures disclose at once the greater relative importance of the proper administration of city affairs and the necessity of such a system of accounting and reporting as will best assist in securing and maintaining economy and efficiency in city government. The necessity of such accounting and reporting is much more pressing in

the case of cities than in that of the Nation, owing to the greater relative per capita governmental costs of the cities. The two diagrams which follow are designed to present graphically the most important facts shown in Table IV. They present for each year (1) the total payments for all governmental costs by 146 cities; (2) those by the United States for pensions and for all purposes other than pensions; (3) the total payments of the United States Government for the construction of the Panama Canal, public buildings, forts and fortifications, and river and harbor improvements; and (4) the payments of New York City for the construction of its various public works, buildings, and other public improvements.

DIAGRAM 3.—NET GOVERNMENTAL COST PAYMENTS OF THE UNITED STATES AND 146 CITIES: 1902-1912.

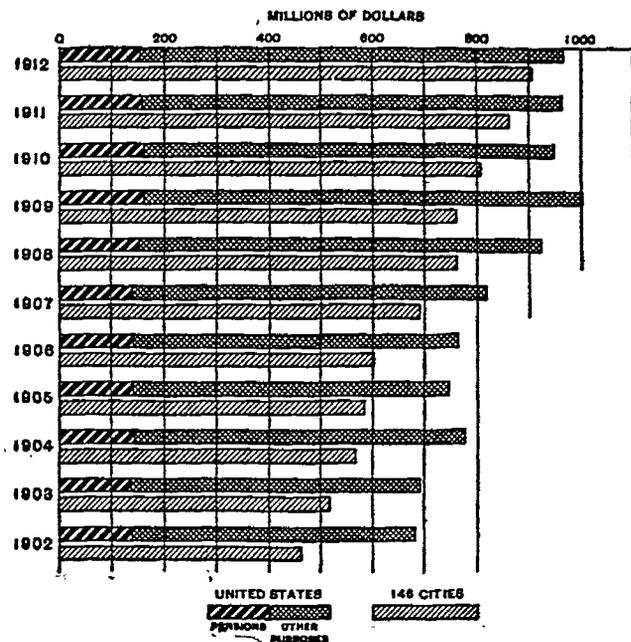
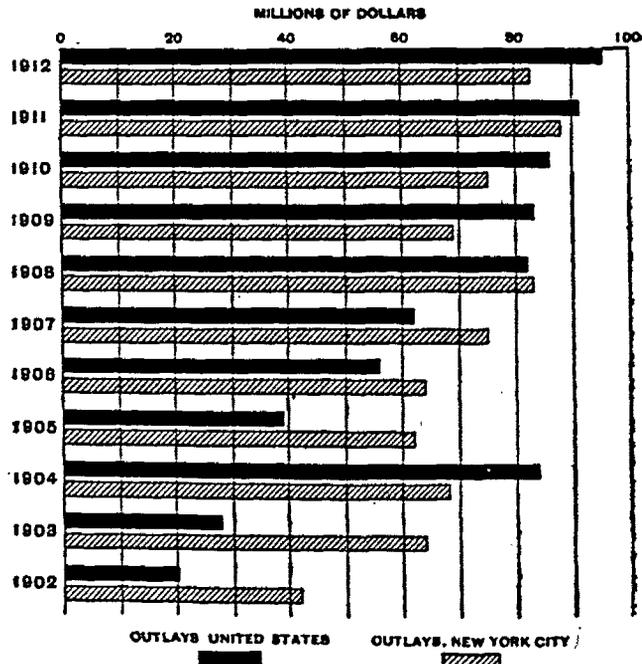


DIAGRAM 4.—NET PAYMENTS FOR OUTLAYS FOR THE UNITED STATES AND NEW YORK CITY: 1902-1912.



Comparative indebtedness of cities and of the Nation.—Table V is a comparative statement which calls attention to one class of financial problems which grow out of the vast expenditures above noted.

YEAR.	INDEBTEDNESS.					
	United States.		146 cities.		New York City.	
	Total.	Per capita.	Total.	Per capita.	Total.	Per capita.
1912.....	\$1,027,574,697	\$10.77	\$1,932,547,533	\$70.47	\$792,927,021	\$156.67
1911.....	1,015,784,338	10.53	1,893,129,085	67.31	723,292,829	145.92
1910.....	1,046,449,185	11.35	1,857,861,296	64.00	656,194,384	137.66
1909.....	1,023,861,531	11.31	1,537,099,399	61.22	608,244,820	131.39
1908.....	938,132,409	10.55	1,434,991,649	60.78	550,778,903	123.16
1907.....	878,596,755	10.06	1,288,318,890	55.75	494,799,541	117.09
1906.....	964,435,687	11.25	1,175,970,979	52.11	435,324,772	105.84
1905.....	989,866,772	11.77	1,118,087,784	50.88	395,596,022	98.89
1904.....	967,231,774	11.73	1,062,746,760	49.58	370,503,521	95.29
1903.....	925,011,637	11.44	943,006,632	45.19	305,067,267	82.09
1902.....	969,457,241	12.24	900,178,161	44.19	276,983,472	76.45

By net indebtedness is meant the total debt obligations outstanding less the resources available or provided for their immediate or ultimate redemption. In the case of the National Government the amount of indebtedness is computed by subtracting the cash in the Treasury from the total debt obligations outstanding; and in the case of the cities it is obtained by deducting the sinking fund assets from the sum of the funded and floating debts, as those terms are used in this report, the outstanding current debt being approximately balanced in all cases by cash in the general treasury and by special assessments and general property taxes levied but uncollected. So far as the figures fail to be comparable they slightly exaggerate the city debt, owing to the fact that many cities have uncollected taxes and cash on hand in excess of their revenue loans and warrants outstanding; but this excess affects the per capita for the several years by only a very few cents, at most.

From 1902 to 1912 the net indebtedness of the Nation varied somewhat from year to year, increasing during the 11 years by \$58,117,456, or 6 per cent of the indebtedness in 1902. This increase was wholly due to the expenditures for the acquisition and construction of the Panama Canal. The national population increased, however, during those years by a greater percentage than the national debt, and hence the relative burden of national indebtedness as represented by the per capita indebtedness decreased from \$12.24 to \$10.77, or 12 per cent. In 1902 the net indebtedness of the Nation exceeded the net indebtedness of the 146 cities by \$69,279,080, or 7.7 per cent. The increase of the city debt in the 11 years was so much greater, actually and relatively, than that of the Nation that at the close of the fiscal year 1912 it exceeded the national debt by \$904,972,836, or 88.1 per cent. Another fact of importance to be noted is that while the population of these cities increased in 11 years from 20,369,308 to 27,422,994, or 34.6 per cent, their net indebtedness increased from \$900,178,161 to \$1,932,547,533, an addition of \$1,032,369,372, or 114.6 per cent, as compared with an increase of only 6 per cent in the national indebtedness. The greater burden of municipal than of national indebtedness, as well as the greater relative increase in that burden, is exhibited by the per capita debt of the cities, which increased in the 11 years from \$44.19 in 1902 to \$70.47 in 1912, an added burden of 59.5 per cent. It is to be noted that the per capita indebtedness of these cities, which in 1902 was three and six-tenths times the corresponding per capita indebtedness of the Nation, had so increased in 11 years that in 1912 it was nearly seven times such indebtedness.

DIAGRAM 5.—NET INDEBTEDNESS OF 146 CITIES, THE UNITED STATES, AND NEW YORK CITY: 1902-1912.

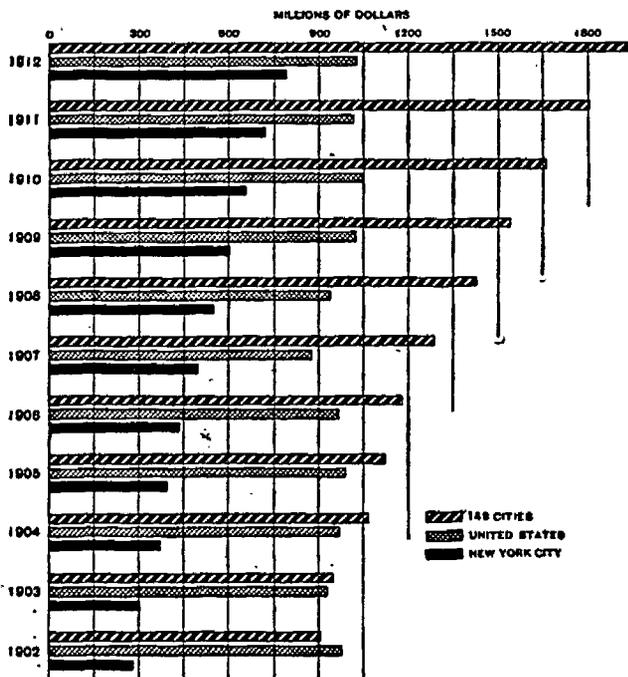
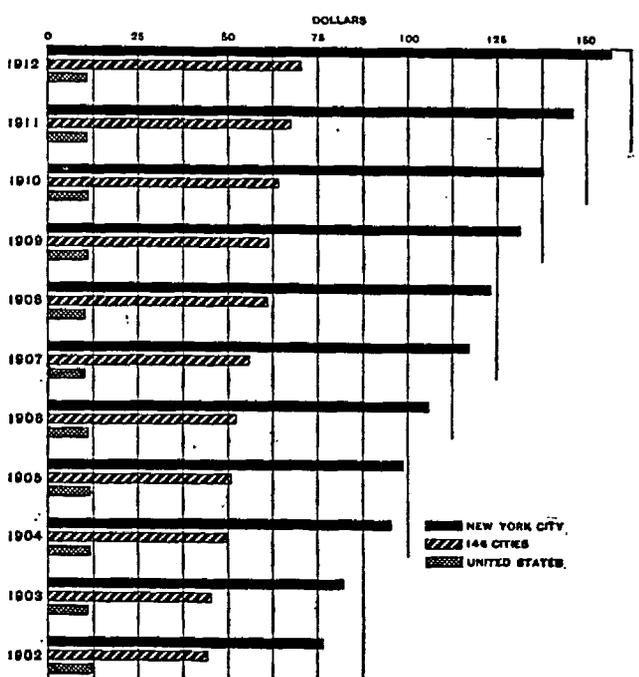


DIAGRAM 6.—PER CAPITA NET INDEBTEDNESS OF NEW YORK CITY, 146 CITIES, AND THE UNITED STATES: 1902-1912.



FINANCIAL STATISTICS OF CITIES.

The figures for the city of New York are more striking than those for the Nation, or for the 146 cities taken as a whole. In the 11 years covered by the table the population of that city increased from 3,623,160 to 5,064,237, a gain of 39.8 per cent, while the net indebtedness of the city increased from \$276,983,472 to \$792,927,021, a gain of 186.3 per cent. As a result the per capita indebtedness, which in 1902 was \$76.45, so increased that at the close of 1912 it was \$156.57, or two and two-tenths times that of the 146 cities taken as a whole and fourteen and five-tenths times that of the United States Government, as compared with twenty-one and nine-tenths, the number of times

which the per capita outlay payments of the city for the 11 years were of the corresponding outlay payments of the General Government, as summarized in Table IV.

The accompanying diagrams present by the graphic method the facts set forth by Table V, that the burden of net municipal indebtedness at the present time is much greater, relatively, than is that of the National Government; and the further fact that the debts of cities are rapidly increasing, while that of the Nation is remaining practically stationary.

Cities having a population of over 30,000 in 1912.—The cities having an estimated population July 1, 1912, that exceeded 30,000 numbered 195.

CITY AND STATE.	City number.	CITY AND STATE.	City number.	CITY AND STATE.	City number.	CITY AND STATE.	City number.
ALABAMA:		KANSAS:		NEBRASKA:		PENNSYLVANIA:	
· Birmingham.....	34	· Kansas City.....	65	· Lincoln.....	129	· Allentown.....	102
· Mobile.....	108	· Topeka.....	127	· Omaha.....	41	· Altoona.....	105
· Montgomery.....	144	· Wichita.....	101	NEW HAMPSHIRE:		· Chester.....	145
ARKANSAS:		KENTUCKY:		· Manchester.....	81	· Erie.....	84
· Little Rock.....	115	· Covington.....	104	NEW JERSEY:		· Harrisburg.....	88
CALIFORNIA:		· Lexington.....	157	· Atlantic City.....	113	· Johnstown.....	95
· Berkeley.....	124	· Louisville.....	27	· Bayonne.....	96	· Lancaster.....	118
· Los Angeles.....	14	· Newport.....	189	· Camden.....	58	· McKeesport.....	134
· Oakland.....	31	LOUISIANA:		· East Orange.....	154	· New Castle.....	150
· Pasadena.....	162	· New Orleans.....	16	· Elizabeth.....	77	· Philadelphia.....	3
· Sacramento.....	109	· Shreveport.....	193	· Hoboken.....	82	· Pittsburgh.....	8
· San Diego.....	132	MAINE:		· Jersey City.....	19	· Reading.....	57
· San Francisco.....	11	· Portland.....	98	· Newark.....	15	· Scranton.....	38
· San Jose.....	174	MARYLAND:		· Orange.....	190	· Wilkes-Barre.....	83
COLORADO:		· Baltimore.....	7	· Passaic.....	94	· Williamsport.....	180
· Colorado Springs.....	194	MASSACHUSETTS:		· Paterson.....	40	· York.....	122
· Denver.....	26	· Boston.....	5	· Perth Amboy.....	167	RHODE ISLAND:	
· Pueblo.....	119	· Brockton.....	97	· Trenton.....	54	· Pawtucket.....	106
CONNECTICUT:		· Cambridge.....	49	· West Hoboken.....	140	· Providence.....	23
· Bridgeport.....	47	· Chelsea.....	184	NEW YORK:		· Woonsocket.....	143
· Hartford.....	52	· Everett.....	164	· Albany.....	55	SOUTH CAROLINA:	
· New Britain.....	120	· Fall River.....	42	· Amsterdam.....	175	· Charleston.....	100
· New Haven.....	36	· Fitchburg.....	146	· Auburn.....	163	TENNESSEE:	
· Waterbury.....	78	· Haverhill.....	128	· Binghamton.....	112	· Chattanooga.....	121
DELAWARE:		· Holyoke.....	99	· Buffalo.....	10	· Knoxville.....	155
· Wilmington.....	64	· Lawrence.....	63	· Elmira.....	152	· Memphis.....	37
DISTRICT OF COLUMBIA:		· Lowell.....	48	· Jamestown.....	170	· Nashville.....	46
· Washington.....	17	· Lynn.....	61	· Mount Vernon.....	177	TEXAS:	
FLORIDA:		· Malden.....	123	· New Rochelle.....	185	· Austin.....	188
· Jacksonville.....	91	· New Bedford.....	51	· New York.....	1	· Dallas.....	53
· Tampa.....	133	· Newton.....	141	· Niagara Falls.....	178	· El Paso.....	131
GEORGIA:		· Pittsfield.....	171	· Rochester.....	25	· Fort Worth.....	69
· Atlanta.....	32	· Quincy.....	169	· Schenectady.....	73	· Galveston.....	148
· Augusta.....	116	· Salem.....	123	· Syracuse.....	35	· Houston.....	68
· Macon.....	140	· Somerville.....	74	· Troy.....	79	· San Antonio.....	50
· Savannah.....	89	· Springfield.....	59	· Utica.....	76	UTAH:	
ILLINOIS:		· Taunton.....	168	· Yonkers.....	66	· Salt Lake City.....	56
· Aurora.....	186	· Worcester.....	33	NORTH CAROLINA:		VIRGINIA:	
· Chicago.....	2	MICHIGAN:		· Charlotte.....	160	· Lynchburg.....	192
· Decatur.....	165	· Bay City.....	125	OHIO:		· Norfolk.....	71
· East St. Louis.....	90	· Detroit.....	9	· Akron.....	80	· Portsmouth.....	166
· Joliet.....	161	· Flint.....	135	· Canton.....	107	· Richmond.....	39
· Peoria.....	86	· Grand Rapids.....	45	· Cincinnati.....	13	· Roanoke.....	151
· Quincy.....	159	· Jackson.....	179	· Cleveland.....	6	WASHINGTON:	
· Rockford.....	114	· Kalamazoo.....	138	· Columbus.....	29	· Seattle.....	20
· Springfield.....	103	· Lansing.....	170	· Dayton.....	44	· Spokane.....	43
INDIANA:		· Saginaw.....	110	· Hamilton.....	156	· Tacoma.....	60
· Evansville.....	85	MINNESOTA:		· Lima.....	182	WEST VIRGINIA:	
· Fort Wayne.....	87	· Duluth.....	70	· Lorain.....	187	· Huntington.....	153
· Indianapolis.....	22	· Minneapolis.....	18	· Springfield.....	117	· Wheeling.....	139
· South Bend.....	92	· St. Paul.....	28	· Toledo.....	30	WISCONSIN:	
· Terre Haute.....	93	MISSOURI:		· Youngstown.....	67	· La Crosse.....	191
IOWA:		· Joplin.....	181	OKLAHOMA:		· Milwaukee.....	12
· Cedar Rapids.....	172	· Kansas City.....	21	· Muskogee.....	183	· Oshkosh.....	173
· Council Bluffs.....	195	· St. Joseph.....	75	· Oklahoma City.....	72	· Racine.....	137
· Davenport.....	130	· St. Louis.....	4	OREGON:		· Superior.....	138
· Des Moines.....	62	· Springfield.....	158	· Portland.....	24		
· Dubuque.....	147	MONTANA:					
· Sioux City.....	111	· Butte.....	142				

In the general tables of this report, with one exception, the cities are arranged in the order of their estimated population and each is given a number corresponding to its position in the tables. For convenience in finding any particular city the preceding list has been prepared, the cities being arranged alphabetically by states and the number assigned to each being indicated. The location of these cities is shown on the accompanying map of the United States.

DIFFICULTIES IN COMPILING REPORT.

In the compilation of statistics such as have been described in the opening paragraph of this introduction, especially in the compilation of those of municipal expenses, many difficulties are met with. Detailed statements of those difficulties, of the factors and circumstances giving rise to them, and of the methods employed and the success realized by the Bureau of the Census in overcoming them are here presented to aid in the proper use of this report, especially in comparing its figures with those of local reports.

Difficulties arising from differences in governmental organization are met with in all parts of the country. In some cities all local municipal powers and activities are administered by a single governmental organization, while in others those powers are distributed among a number of independent governmental bodies. In each case the one or more bodies by which the local governmental activities are administered constitute the government of the city, which is here spoken of as *the city government*. The term *city corporation* as used in this report is applied to the governmental organization or body in a city which has only one independent division, and also to the municipal organization exercising the principal authority in the government of a city with two or more local governmental bodies. For a city with local governmental powers exercised by two or more bodies the data required relate to all such bodies, and the Bureau of the Census has collected them from all and has combined them into a single report for the city government, thereby making the resulting statistics comparable with those of a city in which the governmental powers are concentrated in a single governmental body or corporation.

A special difficulty arising from differences in local governmental organizations is met with in those localities where the territory governed by the city corporation is materially less than that governed by another municipal body, as that of the school district. For such a city the census, instead of including for its combined statement all the receipts and payments, or all the revenues and governmental costs, property, and debts of the civil division with the larger territory, includes only such a percentage of the same as the valuation of the property within the territory of the city corporation assessed for the purpose of taxation con-

stitutes of the valuation of the property within the limits of the larger division.

Difficulties arising from differences relating to the custody and expenditure of money are, if anything, more common than those described in the last paragraph. Not infrequently a city with a single governmental unit receives and expends some revenue or other money for which the corporation is responsible without such money passing through the hands of the treasurer or chamberlain. These receipts and payments are (1) those of departments which are authorized to collect certain fees and charges and make specified sales, and expend the money thus obtained for specified purposes without covering it into the treasury or receiving warrants or orders for its expenditure, and (2) those of sinking, trust, and all other funds under the management of special commissions or boards. In a large number of cities with two or more governmental units some money is similarly expended by those units. Further, in some cities referred to, each of the persons acting as treasurer or chamberlain may pay out money on the order of two or more different officers with the authority or power of a comptroller or auditor. The difficulties here described are overcome by securing reports from all officials receiving and paying out money from which the city corporation or other governmental body derives benefit, or for which it is responsible, and from every officer issuing warrants or orders, the same as is done in the case of independent governmental units, and combining the data thus obtained with other data into a single statement of the financial transactions of the city government.

Difficulties arising from differences in accounting for administrative funds are universal. The most important are those met with in the case of so-called trust funds. The character of the resulting difficulties may be illustrated by concrete cases.

Some cities having trust funds whose incomes by the terms of the trust are expended for educational, charitable, or other purposes, keep accounts with these funds, which show on the one side their annual earnings, and on the other their direct expenditures for the purposes of the trusts. Other cities having similar funds keep trust accounts which show on the one side the earnings of the funds, as in the first instance, and on the other the transfer of these earnings to other funds, as the general fund, or revenue fund, through which those earnings are expended, and in the accounts of which the expenditures are recorded. Statistics of payments compiled from the general fund accounts of the second class of cities will include with other payments for expenses the amounts expended for the purposes of the trusts from moneys transferred from the trust funds to the general treasury, and will be noncomparable with those based upon the accounts of the same kind of funds of the first class of cities. Further, there will be no comparability between the statistics based upon the records of the so-called trust

funds of the two classes of cities, since the trust accounts of the cities of the first class contain a record of expenses not included in those of the second class.

The differences above noted affect statistics of municipal expenses. Similar differences are to be met with on the side of municipal revenues, the most common case of noncomparability of this class being found in the accounts of cities with the receipts from taxes on fire insurance companies that are appropriated by general statutes for the maintenance of firemen's pension funds. Some cities in which such use is made of the given tax collect the tax by their general collecting agencies, and the amounts so collected are shown in the accounts of the city treasurers and city comptrollers with the general or revenue funds, from which the amounts collected are transferred to the trust funds for custody and investment or expenditure. In other cities the amounts are collected by officials connected with the administration of the trust funds, and no account of their receipt is shown in the accounts of the city treasurers and comptrollers with the general or revenue funds, and there is no comparability between the tax statistics of the two classes of cities if these are based solely upon the record of either the general or revenue funds, or of the trust funds.

Many other cases can be cited, all showing how statistics which are based upon the fund accounts of cities are noncomparable as exhibits of governmental costs or of revenue receipts. The two typical cases will suffice. The difficulties arising from the great differences in the organization and accounting for city funds here noted are overcome by the Bureau of the Census by preparing a schedule for each independent fund in a given city and consolidating the data so obtained into a single report for that city. The individual cities are with few exceptions keeping their fund accounts as required by good accounting usage and as prescribed by conditions under which they have accepted trusts, or as called for by constitutional or statutory provisions, but the differences in these conditions and provisions necessitate the census treatment to secure comparable statements of revenues and governmental costs.

Difficulties arising from the use of antiquated and diverse methods of classifying revenues and governmental costs or receipts and payments are overcome by the Bureau of the Census only in part. Many of the smaller and some of the larger American cities have accounts that were installed before the business world generally introduced revenue and expense accounts to measure the results or outcome of financial transactions. These accounts are what are known in the commercial world as cash accounts, or accounts with cash receipts and payments. They do not classify receipts with reference to revenue; nor do they classify payments with reference to governmental costs, or to the costs of functional or departmental

activities. Further, no common classification has been adopted by the majority of cities which have introduced so-called revenue and expense accounts, or have begun to classify receipts and payments with reference to revenue and governmental costs. The Bureau of the Census endeavors to overcome difficulties which result from these conditions by having its agents reclassify, from original vouchers, the revenues and governmental costs, or receipts and payments of cities. Such a reclassification, even though made by skilled accountants with a large expenditure of clerical labor and money, can not be the basis of as comparable statistics as would result from the classification by intelligent public officials at the time of the original audit. It overcomes some, but not all, of the difficulties which now exist. These difficulties will diminish as fast as the cities here referred to can be brought to see the wisdom of adopting a common and scientific classification of all revenues and governmental costs, or of receipts and payments, such as is now in use by the Bureau of the Census.

In this connection mention should be made of the fact that, unless cities have introduced classifications of expenditures based upon an intelligent application of the principles of cost accounting, the statistics compiled by the Bureau of the Census can not be made comparable by the methods outlined above except for the most important classes of expenses and outlays, and that comparable data for the several cities can be expressed only in per capita figures. Moreover, the compilation of comparable cost statistics will be possible only after the cities adopt more detailed classifications of expenses and outlays than have hitherto been employed by the census, and combine their financial statements with records of work done or services performed or public improvements constructed so as to show the unit costs of services and improvements. Among such unit costs that should be thus shown are those for the services of cleaning streets per thousand square yards of each class of paved highways cleaned; the cost per ton of removing each class of city refuse; the cost per square yard of constructing each of the various classes of pavements, and the cost per thousand yards of laying sewers of each size and class. It is hoped that, with the increased public appreciation of the value of unit cost accounts and statistics as measures of governmental and private efficiency in business management, the Bureau of the Census may be able at no distant date to broaden the field of its truly comparable statistics, and to present not only per capita statements of the costs of certain principal public services, but also the unit costs of such services as those mentioned and many others of equal administrative importance.

Difficulties arising from the collection of state and county revenues by different governmental units are closely related to those referred to under the last head-

ing. In some states the general property tax, taxes on the capital stock of banks and other corporations, taxes on the liquor traffic, and other revenues accruing for the benefit of the state and county, are collected by the city and transmitted to the civil divisions for whose primary benefit the revenues are exacted. In other states the same revenues are collected by county governments. In the cities of the states first referred to the receipts and payments to the city on account of these collections must be recorded in the accounts and set forth in the published reports, while the records and reports of the cities of the states last referred to contain no statement of similar receipts and payments. Most of the cities in the states first referred to treat their payments to the state and county as payments for current expenses, and the receipts from taxes and other revenues to meet these expenses, as receipts from city revenues. A compilation of revenue receipts and payments for expenses based upon the printed reports of cities, some of which collected state and county taxes while others did not, gives rise to noncomparable statistics, the revenues and expenses of the cities of the first class being exaggerated as compared with those of the second. To secure comparability under the circumstances mentioned the Bureau of the Census treats receipts and payments of cities on account of the revenues of states and counties as nonrevenue receipts and nongovernmental cost payments, even though the local authorities have included them among revenue receipts and payments for expenses.

Difficulties arising from the exclusive use of cash accounts by city comptrollers and treasurers are in a large part overcome by the Bureau of the Census. The accounts of those officers, or of those exercising their functions under other designations, necessarily constitute the bases of the census municipal financial statistics, they being the only accounts covering the field of those statistics. But the use of these accounts gives rise to many difficulties which must be overcome before the data therein can be embodied in comparable statistics of governmental costs. Those difficulties are patent to every one familiar with the elements of accounting, and result from the use of accounts based upon current payments, rather than upon current expenses. A description of the different accounting records in use at the present time in American cities will assist to an understanding of the methods adopted by the Bureau of the Census for overcoming these difficulties.

In one class of cities the only books of account are those of the treasurer or other officer having the custody of municipal funds. In another class additional books are kept by the comptroller, auditor, or other official exercising the duties of comptroller or auditor. In a city of the latter class the books of the comptroller are in some respects similar to those of the treasurer and serve as a check upon his accounts and transactions, as well as upon those of the departmental officials who immediately direct the expenditure of moneys appropriated to public uses. The treas-

urer's accounts record the flow of cash into and out of the treasury. The accounts of the comptroller are for most cities records of cash received by the treasurer and of warrants or orders drawn upon him in settlement of bills or claims, though in a limited but growing number of cities they also comprise records of revenues, expenses, interest, outlays, assets, and liabilities. In a city of either class the totals for the treasurer's and comptroller's accounts with cash will agree for a given fiscal period, as a month or a year, if the treasurer makes no payments except upon warrants or orders of the comptroller, and if all warrants or orders of the comptroller are paid within the fiscal period in which they are issued. The total of the cash accounts of these officials for any given city will differ for a given fiscal period if the treasurer makes any payment without the comptroller's warrant or order, or if any warrant or order of the comptroller remains unpaid at the end of the fiscal period.

In a city in which the comptroller keeps accounts with revenues, expenses, interest, outlays, assets, and liabilities, as well as with cash, no direct comparison can be made between the comptroller's accounts with revenues, expenses, interest, and outlays, and the treasurer's accounts with receipts and payments. Comparison can be made, however, between the total of the comptroller's accounts with claims accrued or bills audited, or of his accounts with warrants or orders drawn, and the total of the treasurer's accounts with warrants or orders paid.

Detailed comparisons between the cash accounts of a comptroller and treasurer can be made in each of the cases mentioned in the preceding paragraphs only to the extent that the two officials classify municipal transactions in the same way. The methods adopted by the Bureau of the Census for overcoming the difficulties arising in the compilation of detailed and comparable statistics of governmental costs from the existing and widely differing accounts of local comptrollers and treasurers are as follows:

For a city in which there is no comptroller, auditor, or other official performing the functions usually assigned to the city comptroller, the Bureau of the Census bases its municipal financial statistics upon the accounting records of the treasurer or treasurers of the one or more governmental units and of others having the custody of the city money, and makes such reclassification of the receipts according to revenue and of payments according to governmental costs as may be necessary.

For a city in which there is a comptroller or other official performing the duties of a comptroller, the census statistics, for the reasons which follow, are based upon the accounting records of such officer with such reclassification according to revenue and governmental costs as may be necessary, and the records of the treasurer are used as merely auxiliary thereto:

1. In most cities some of the warrants or audits issued or recorded in or for a given fiscal period are

not paid until a subsequent period. For such a city the warrants, orders, or audits recorded in the comptroller's or auditor's books for a given fiscal period represent for that period more nearly than do the payments recorded in the books of the treasurer the current costs of government, the presentation of which constitutes the most important object of the census statistics of financial transactions, and hence are of greater value for statistics showing the total costs of operating individual departments and offices, or of acquiring and constructing the several classes of property and public improvements, and the unit costs of services rendered or improvements constructed or acquired, such as those of education per pupil in the public schools, or of the construction or care and maintenance of particular classes of paved highways per thousand square yards of surface.

2. The treasurer's books, in a city having a comptroller as well as a treasurer, do not ordinarily show payments classified by division and subdivision of governmental service and by object, as the books of the comptroller or auditor classify the governmental costs or payments, and it is from exhibits of governmental costs or payments so classified that such significant and comparable statistics of financial transactions as the Bureau of the Census endeavors to present can best be compiled.

3. In a city where neither the treasurer nor the comptroller sufficiently classifies revenues or receipts, and governmental costs or payments, and the census agent classifying the same is compelled to depend principally upon the original vouchers of expenditures, as has been described on page 22, he can find such vouchers only in the office of the comptroller or auditor.

Although the accounts of the one or more comptrollers or auditors of a city are used by the Bureau of the Census as the basis of the financial statistics of the city, truly comparable statistics of its governmental costs for a given fiscal period, as well as statistics of its revenue receipts, of its receipts and payments on debt and agency accounts, and of its assets and liabilities at the beginning and close of the fiscal year, are secured by a combination of (1) the comptroller's statement of warrants or orders drawn or bills audited and judgments registered during or for the fiscal year; (2) statements of the warrants or orders drawn or claims audited and judgments registered during or for the fiscal year but remaining unpaid at its close, and of the warrants, orders, or audits and judgments of previous years paid during the year, such statements being compiled by comparing the accounts of the comptroller and treasurer; and (3) the treasurer's statement of cash receipts and payments during the year and of assets on hand at the beginning and close of the year.

By obtaining a statement for each city, as above described, the Bureau of the Census secures as accurate and comparable statistics of governmental costs as is feasible based almost wholly on "cash" accounts.

In addition, the methods above described make possible the compiling of other comparable statistics, of which mention was made in the opening paragraph.

Difficulties arising from lack of proper accounts with materials and supplies can not be overcome by the Bureau of the Census. Not infrequently in a city without an organized bureau of supplies and supply accounts, the several departments use their unexpended appropriations toward the close of the year in purchasing supplies to be used in the succeeding year. In such a city the materials and supplies thus purchased in one year are seldom the same in quantity or cost as those purchased in the year preceding or succeeding, and hence the costs of the various subdivisions of the service are made to appear to vary much more than they actually do; and the statements of expenses or outlays, whether recorded in cash accounts or expense and outlay accounts, do not represent the actual current costs. A few cities are beginning to appreciate this fact and are establishing bureaus which make all purchases, charging them to an asset supply account, and issue supplies to departments as required for immediate use. The establishment of such bureaus of supplies and the employment of such methods of accounting for supplies make the local accounts or statements of expenses and outlays more accurate, and to that extent aid in making the census statistics more comparable.

Even with accounts as described, a minor adjustment must be made by the Bureau of the Census in compiling statistics of governmental cost payments, if the cost of supplies purchased by the bureau of supplies for a given year is less than that of supplies given out on requisition. The adjustment is made by treating the excess as if it had been sold or disposed of in meeting expenses and outlays and crediting the supply account with receipts from supplies disposed of which balance the excess, the same as the amount of outstanding warrants and audits is balanced by a receipt on account of such warrants and audits.

Difficulties arising from confounding expenses and outlays with contingent liabilities incurred are met with in the case of cities which have installed so-called revenue and expense accounts independent of cash accounts, but have not differentiated their accounts with appropriations from their accounts with expenses and outlays. These cities include in their expenses and outlays for a given fiscal year the contingent liabilities that have been incurred by contract or upon market orders during the year, and which do not mature until a subsequent year. They also omit the actual costs of the year that accrued during that year by reason of contracts or orders of preceding years. Such accounting gives rise to inaccurate statements the exact reverse in character of those which arise when payments are recorded as expenses and outlays without regard to the period in which were performed the services represented by the bills or claims paid. Such accounting magnifies the inaccuracies to which

attention has been called above when cities have no accounts with supplies, and makes their expense and outlay accounts or their payment accounts record the cost of materials purchased but not consumed or used until a later period. In the collection of its data in cities having accounts such as are here referred to, the Bureau of the Census disregards the local record of current expenses and outlays, and compiles new statements of such governmental costs based upon the accrued or audited claims of the year.

Difficulties arising from the different methods of accounting for interdepartmental services or services by one department of the government for another are overcome by the Bureau of the Census in only a limited number of cases. The noncomparability of the local records and the inaccurate statements of governmental costs in the case of many cities, which arise from these different methods, are here illustrated by a number of concrete cases.

Many cities utilize the labor of the inmates of their penal and charitable institutions in caring for and maintaining their highways, or in making highway improvements, or in performing similar work of various kinds in parks or other departments. A few of these cities, recognizing the value of correct statements of highway and park as well as institutional expenses and outlays, charge the proper highway or other account with the value of the labor of the institutional inmates at amounts equal to what it would cost if their work had been done by city employees or by contract, and credit the institution with the same amounts. The records of such cities, so far as the highway and park accounts are concerned, are strictly comparable with those of cities in which work is done by city employees or by contractors; and their accounts with institutions, showing on the one side the direct expenditures for the care, clothing, and guarding of the prisoners, and on the other the value of the services secured from them, exhibit accurately, by their balances, the burdens which the institutions force the taxpayers to bear.

The records of such cities stand in marked contrast with those of others in which no account is taken of the value of the labor of the inmates of institutions for other departments. Those records contain no accurate statements of the costs of highway and park maintenance or of the net burdens resting upon the cities by reason of their institutions. To overcome the difficulties in the way of comparable statistics and to provide the basis in the case of such cities for accurate statements of the net costs of highway, park, and institutional maintenance and operation in these cities, the Bureau of the Census secures estimates of the value of the labor of the inmates of institutions upon the highways and in parks, and credits the institutions with the value and charges the proper department or account with the same. This is done by preparing a schedule of the receipts and payments, or of credits and debits on account of this labor, the

same as is done in the case of the receipts and payments mentioned under a preceding heading, for which the treasurer or comptroller has no record.

A city operating a municipal service enterprise, such as an electric light plant employed exclusively for lighting streets, parks, and public buildings, if keeping accounts for the enterprise by methods substantially the same as those employed by private enterprises, makes its primary account with the enterprise a distribution account, and shows separately in its printed report the cost of lighting streets, parks, and buildings as is done by cities obtaining their lighting from private parties. Without such an account the printed report can only show the cost of operating the enterprise as an independent department. For cities having municipal service enterprises the Bureau of the Census prepares special exhibits which show on the one side the expenses and outlays of the plants, and on the other the value of the utilities and services furnished by them to the public and to the various departments, the value of the latter being shown in Table 16 under the title "Offsets to payments for expenses." For a city having accounts of operating expenses and charging the value of the utilities, services, and materials furnished to the proper accounts, departments, and enterprises, the exhibit is a condensed summary of the local account. For a city whose accounts with one of these enterprises show no cost of the services rendered and utilities furnished the various branches of the governmental service, the Bureau of the Census secures estimates of the value of these services, utilities, and materials, and employs these estimates in preparing the second side of the exhibit mentioned. To the extent that the local statement of expenses of operating the electric light system includes all costs for furnishing light, the resulting statistics are true statements of the cost of public light and are comparable with those of other cities; and to the extent that the local statement takes account of only a part of the costs of furnishing light the statistics are inaccurate and the figures of the several cities are noncomparable. (For a statement of the method of correcting inaccurate statistics resulting from the failure of cities to include interest on the value of the electric light system as a part of their operating expenses, see page 26, under "Difficulties due to faulty accounting for interest chargeable as outlay or expense.")

Inaccurate statements of governmental costs are found in the reports of all cities with public service enterprises, such as water-supply and gas-supply systems, in which no account is taken of the value of the public utilities furnished other departments by such systems. These inaccurate statements can not give rise to statistics that are comparable, any more than accounts of institutions and parks in the case of cities such as those referred to on a preceding page. The inaccurate statements could be corrected by the Bureau of the Census and the basis laid for comparable statistics in the case of

these public service enterprises if the data were available for correct estimates, as in the case of the labor of inmates of institutions, and in the case of the interest on the value of the plants of municipal lighting systems, as described on page 25. But such data are entirely wanting except in the case of a few cities in which the officials in charge of the water-supply systems have prepared estimates of the value of the public utilities furnished, and such estimates are included in the departmental reports, though not in the comptrollers' or treasurers' accounts and reports. These estimates, when available, are used by the Bureau of the Census the same as the estimates described in the case of the work of the inmates of penal and charitable institutions.

It should be stated in this connection that neither in the case of these estimates nor in that of the credits which are included in the accounts of a city comptroller of actual payments by the city for water furnished by the water-supply system to other branches of the city government is there any great accuracy or comparability, owing to the lack of a well-accepted basis for assigning values to the water furnished by privately owned and municipally owned water-supply systems to the city departments and offices. The same lack of a basis affects the statistics of all other public utility enterprises operated by cities, and this lack will continue to make difficult the preparation of accurate and comparable statements of the cost of water and other utilities furnished by public service enterprises to fire departments and other departments until, as a result of general discussion and investigation of the subject, an approximately correct value can be assigned to the utilities furnished.

Other difficulties in the way of comparable statistics of public service enterprises exist by reason of the fact that in the case of many of them the cost of making out bills and collecting revenue is included with the cost of collecting revenue other than of these enterprises, and there is no basis in city accounts for comparing the expenses of conducting a municipally owned enterprise, whose employees make out and collect all their bills, with those of a similar enterprise whose bills are made out and collected by some one of the general financial officers of the city. The Bureau of the Census has formulated no method by which it is able to overcome the difficulties here mentioned, and to the extent of the inaccuracy of local accounts here described the resulting statistics fail to be strictly comparable as between the several cities.

Difficulties due to lack of accounting for depreciation are everywhere met with. With a few exceptions cities do not include depreciation among their expenses, nor do they make other adequate provision for it in their accounts. As a result, the reports of all cities exaggerate their outlays or expenditures for additions to their permanent properties and public improvements and understate their current expenses. These exaggerations and understatements make it difficult for

the Bureau of the Census to compile accurate statistics of governmental costs. A beginning toward correcting this inaccuracy has, however, been made by the few cities which in the case of their municipal service enterprises prepare statements of depreciation as the basis of showing the costs of the services furnished and the extent to which the enterprises are actually self-supporting. So far as these statements of depreciation have been prepared in any form by cities with reference to these enterprises, they are included by the Bureau of the Census in its statistics of governmental costs. These statements assist in making the census statistics for the cities concerned more accurate, but they can not materially increase their general comparability until similar statements are available for a considerable number of cities.

The methods employed by the Bureau of the Census in reporting the local expenses for depreciation among the operating expenses of a municipal or public service enterprise is to deduct the amount so reported from the outlay payments for the enterprise affected, when possible; otherwise, from the aggregate payments of the city for outlays.

Difficulties arising from faulty accounting for interest chargeable as outlay or expense are more common than the average student of municipal finance appreciates. Many of the public improvements of cities require several years for their completion, and the cities receive no benefit from their use until completed. These improvements are constructed from the proceeds of bond sales and the cities pay interest during the construction period. In commercial accounting, interest so paid is always charged to the account of outlay or capital expenditure, and interest is charged as a current cost only after the property constructed comes into service. Only a few cities in the United States recognize this principle of good commercial accounting, and the Bureau of the Census is able to present only for such cities true statements of the costs of public improvements, and also to show the total interest for the use of credit capital.

Cities lighting the streets, parks, and buildings with municipally operated electric light plants do not show by their accounts or statements of lighting the true costs of that service, unless they take into account the interest on the value of their plants as well as the depreciation of those plants. Only a few cities prepare statements of the costs of their lighting service by the municipally operated enterprises which include the interest charge mentioned, and hence, with the exception of the cities referred to, local reports of the costs of the lighting service are more or less defective. The bureau hopes that the practice of the few cities with reference to this item may become the practice of all, so that the local statements of the cost of municipal lighting may be made more accurate and also more comparable as between cities. In its statistics, the Bureau of the Census includes the interest charged by cities as an outlay or as an expense of a municipal

service enterprise as a revenue receipt from interest, and the amount so included is tabulated as an interest transfer.

Difficulties arising from auditing claims after the close of the year to which they relate readily fall into two distinct classes: (1) Those which arise from holding the accounts of the year open for a limited period of time, as ten days or a month, for receiving or auditing claims, and (2) those which result from the faulty system of transacting municipal business that permits claims to be audited months or even years after the close of the fiscal year during which they mature.

The Bureau of the Census overcomes the difficulties first mentioned and secures comparable statistics by including with the warrant payments and audits for a given year those which represent the bills audited in the succeeding year and balancing these payments by receipts from outstanding warrants or claims issued during the year but unpaid at its close. Warrants drawn during the year on account of the governmental costs of the preceding year and paid in cash are treated as payments on account of the indebtedness of prior years and not as payments on account of current costs of government.

The great difficulties of the second class mentioned above are met with in cities where the final approval of bills, or, in other words, their audit, is made by the city council. This method of audit involves the exercise of a purely executive or administrative function by a legislative body. It arises from a faulty commingling of administrative and legislative functions and is at once bad government practice, poor administration, and vicious accounting, which it is hoped will ultimately be discarded by all cities, as it has been by those best administered. The difficulties arising from faulty systems of transacting business can not be overcome by the Bureau of the Census, and the statistics of municipalities with such business methods will be comparable one year with another, and those of the different cities will be comparable with one another to the extent to which the deferred costs of different years or different cities are in like total amounts and in like amounts for particular functions. The Bureau of the Census notes with satisfaction, however, that the last few years have witnessed great improvement in the business methods of cities, and that the relative amount of expenses now audited in a fiscal year succeeding the one to which they relate is much less than it formerly was, and it hopes that the introduction of better business methods will in a few years eliminate the factor of noncomparability to which attention is here called.

State supervision of municipal accounts decreasing the difficulties of compilation.—Many factors and agencies have contributed and are at present operating to lessen the difficulties mentioned above. The act of Congress in 1899 authorizing the annual collection and publication of financial statistics of cities having a population of 30,000 was a recognition of the need

and value of comparable statements of the financial transactions and financial conditions of cities. This act was the outcome of an agitation by those interested in municipal affairs for securing standard or uniform city reports and standard or uniform accounts as the basis for such reports. The same agitation led the legislature of Ohio to pass an act in 1901 requiring the use of uniform methods of accounting and uniform reports by the municipalities of that state and to create a state office with power to enforce such uniformity and secure the use of good business methods. Since 1901 New York, Massachusetts, Indiana, Iowa, Wisconsin, Minnesota, California, Washington, Oregon, and some other states have enacted laws which provide for the compilation and publication of uniform municipal reports, either with or without the establishment of uniform accounts and the supervisory control established in Ohio.

Cooperation between the accounting offices or bureaus of the states having bureaus or offices for securing uniform accounts and the Bureau of the Census, and popular discussion, have given great impetus in all parts of the United States and Canada to the movement for uniform municipal accounting. City officials, private accountants, and others have also been making earnest efforts to improve the methods of municipal administration. Each year the officials of the Bureau of the Census meet the accounting and other officers of cities in conference, at which improvement in accounting methods, in systems of accounts and forms for reports, as well as a proper accounting terminology are discussed; and as a result, the Bureau of the Census is able to improve its schedules, its classification of receipts and payments, and its methods of presenting statistical data, and many of the cities are induced to bring their accounts and reports more into harmony with the census schedules and forms, and thus into approximation to a scheme of uniform accounts and a standard form of reporting. To the extent that this has been done the difficulties in the way of comparable municipal statistics have been lessened.

Introduction of improved accounts as a factor decreasing the difficulties of compilation.—Since the Bureau of the Census began the collection of data for its municipal financial statistics for the year 1902, many cities having a population of over 30,000 have installed new systems of accounts which have been designed to afford greater assistance to the executive officers and to provide the legislative branches of the government and the general public with the data required for forming an intelligent opinion concerning the economy and efficiency of the various departments and enterprises of the city. The great majority of these cities in installing their new systems of accounts have striven to bring their classification into harmony with that employed by other cities, so far, at least, as to enable them to compare revenues and governmental costs. In addition to the foregoing, many cities

which still retain their earlier systems of accounts have introduced classifications of revenues and expenses which approximate those of other cities. To the extent that such a uniform classification has been introduced the difficulties in the way of compiling comparable financial statistics of cities have decreased, and the utility of the census reports and of other similar reports has increased.

The difficulties will not, however, be entirely removed until the remaining cities have adopted similar systems of accounting. Realizing that with such a variety of systems to choose from the average conscientious city official, even though desirous of bringing his accounts into conformity with those of other cities, must experience difficulty in determining by what system of accounts he can secure the greatest assistance in his own duties and responsibilities, the Bureau of the Census recommends that each city installing a new system of accounts should include in its report a concise and complete statement of the administrative gains obtained by the system adopted. The publication of such statements relating to accounts, set forth by those friendly to each new system, and the later discussion of the same, will help to clarify the situation by disclosing the actual helpfulness of the various schemes adopted and of the various accounting forms introduced.

The value of uniform accounting terminology in lessening difficulties.—The establishment of state bureaus or offices with power to enforce the use of uniform accounting and correct business methods has been the most important single agency at work in recent years for securing better municipal administration and increasing the efficiency of local government. The Bureau of the Census can never become such an agent for the improvement of governmental administration as these state bureaus and offices are, but by cooperation with them it can aid in the development of accounting principles and terminology and in the standardization of municipal accounts and reports.

Realizing the value of a standard and uniform accounting and financial terminology as a basis for standard or uniform municipal accounts and comparable statistics of finance, the Bureau of the Census, some years ago, made a study of the more important terms used in governmental business. The results of that study have been published in earlier volumes of reports on the financial statistics of cities having a population of over 30,000. The definitions which were presented in those volumes have been discussed by accountants and city officials and have been revised from time to time. Some of those presented previously, with a few additional ones, are here given under the heading "Accounting terminology."

ACCOUNTING TERMINOLOGY.

ACCOUNTS AND ACCOUNTING.

Accounts.—Accounts are systematic statements of financial facts of identical or opposite character, so arranged as readily to provide summaries or balances of the same.

Accounting.—Accounting is the art of analyzing, classifying, recording, summarizing, and interpreting facts relating to the acquisition, production, transfer, and ownership of articles of wealth or value. Its function or purpose is readily to provide, from the accounts of a business, accurate and complete statements of the financial results of its operation for any given period and of its financial state or condition at any given time, and to furnish all other information which accounts can supply for its systematic and successful administration.

Municipal accounting.—Municipal accounting is the application or adaptation of the general principles and methods of accounting to the administrative requirements of cities and other municipalities. Municipal accounting differs from private accounting with reference to the subjects concerning which it provides detailed information, the chief differences being (1) those which are caused by the special limitations placed upon the administrative action of municipal executive officers by the terms of appropriation acts and other legislation, and (2) those which are caused by the

different purposes for which municipalities are maintained and private enterprises are operated.

By reason of the limitations referred to in (1) municipal accounting must provide detailed information, not necessary in the case of private accounting, showing that the expenditures have been and are being made in accordance with the limitations imposed by legislative authority. Again, municipalities being *maintained* to provide their proprietors, or the urban communities to which they relate, at community expense with certain services and with public facilities, conveniences, and funds required for rendering those services, while private enterprises are *operated* to earn for their proprietors and stockholders income or profit, municipal accounting must show how municipalities have expended money for municipal purposes, and how they have obtained the same, and private accounting must demonstrate how much income or profit has been earned, and what disposition of it has been made.

The differences above noted in the subjects with reference to which municipal and private accounting must provide information should not, however, conceal or obscure the fact stated in the definition of municipal accounting that the principles and methods of municipal and private accounting are identical, and that there is as much necessity for applying these principles and making use of these methods in the one case as in the other, since municipal business may be adminis-