Chapter Title: Net Worth Changes and Price Level Changes

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CHAPTER 6

Net Worth Changes and Price Level Changes

Changes in Net Worth

BETWEEN 1900 and 1958 combined national net worth, i.e., the sum of the net worth of the seven main sectors in the national balance sheet, rose from a little over $110 billion to almost $2,250 billion, increasing by twenty times or at an average rate of about 5¼ per cent per year. Net worth in constant prices (calculated using the GNP deflator) multiplied five times in the same period, or 2.8 per cent per year,[1] and national net worth per head in constant prices rose over 120 per cent, or 1.4 per cent per year.[2] (See Tables 26-29 and 32.)

There were, however, great differences among the main sectors in the rate of growth of net worth. The net worth of nonfarm households rose to fully twenty-five times its 1900 level, agriculture to eight and one-half times, nonfarm unincorporated business to fifteen times, nonfinancial corporations to twenty-five times, finance to twenty-four times, and state and local governments to over forty times their net worth at the turn of the century (Chart 10). It is only the federal government which suffered a decrease in net worth, the result primarily of heavy borrowing for war and defense.

To understand these differences, one must adjust for population and general price level changes and calculate the effects of saving. For instance, the fact that the net worth of agriculture increased only nine times during the past sixty years while that of nonfarm house-

[1] From 1900 to 1958 the general price level (represented by the GNP deflator) increased approximately four times, or at an average rate of 2.4 per cent a year; the cost of living rose almost three and one-half times, or 2⅛ per cent a year; stock prices about seven times, or 3½ per cent a year; and the price of real estate probably between four and six times (Table 40).

[2] Throughout this report, military assets are excluded from the net worth of the federal government and the nation. The values of military assets—structures, equipment, and inventories—including those of the Atomic Energy Commission, are sufficiently large in the postwar period to affect very considerably net worth, net worth change, and leverage ratios of the federal government, and to influence visibly the national aggregates. Table 30 shows the relevant figures for benchmark years since 1939—calculated by the perpetual inventory method and hence conceptually comparable with the estimates of civilian assets—thus enabling readers who so desire to include military assets in all calculations that involve net worth or net worth change for the federal government or the nation.

Inclusion of military assets increases the rate of growth of national net worth for the entire period to 5.5 per cent in current prices (instead of 5.3 per cent). The increase is limited to 1939-45 and 1949-58 and affects rates of growth for them substantially.

holds grew by twenty-five times does not mean that price level changes or other factors have been less favorable to farm than to nonfarm households. As the farm population was somewhat smaller in 1958 than it had been in 1900 while the nonfarm population increased three and a half times, the rise in net worth per head actually was larger for farm than for nonfarm households.

One approach to the explanation of net worth changes is to divide the period 1900-58 into subperiods characterized by different types of price level change. As only annual data are available even since 1945 and only a few benchmark years before then, such a classification is difficult, even using the movements of the general price level (as reflected in the gross national product deflator) as our only guide, and disregarding minor and short-term fluctuations. The periods 1900-12, 1912-22, 1939-49, and 1949-58 can, without danger of serious error, be classified as on the whole inflationary (Table 39). The immediate postwar periods of 1918-22 and 1945-49 are thus included with the preceding war periods, the first out of necessity because of the location of the benchmark year and despite the fact that prices were declining from their wartime peak, and the second on the ground that the price rise was a result of wartime developments. There is little question about dating the only deflationary period in the past sixty years, 1929-33. There are then left two periods of relative stability in the general price level, 1922-29 and 1933-39. To these 1951-55 might be added if a finer subdivision of the postwar period were desired. In this case, 1949-51 and 1955-58 would have to be classified as two separate periods of rising prices—the first more specifically a war inflationary period.

The two war inflations (1912-22 and 1939-49) have in common a sharp rise in net worth by all groups except the federal government which in both cases suffered a considerable decrease in its net worth, reflecting debt-financed war expenditures. The increase in national net worth was larger in the decade after 1939 (120 per cent) than in the ten years starting after 1912 (100 per cent). However, as the general price level rose by 80 per cent in the second war period, compared to 60 per cent in the first, the increase in real national net worth was larger in the first period—23 per cent against 20 per cent. The rise in current net worth was similar in both war inflationary periods for all sectors except agriculture. The rise in net worth of the agriculture sector was only 31 per cent between 1912 and 1922 and 194 per cent between 1939 and 1949. The reason for this discrepancy is the sharp deflation in agricultural prices, particularly land prices, which followed World War I but not World War II.[3]

[3] The discrepancy would be less pronounced, though it would not disappear altogether, if we had sectoral balance sheets for 1920 instead of 1922.

TABLE 26

NET WORTH: AMOUNTS, ABSOLUTE CHANGES, AND RELATIVE CHANGES; SELECTED YEARS, 1900-58

(current dollars)

Years	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorp. Business (4)	Nonfinancial Corp. (5)	Finance (6)	State and Local Governments (7)	Federal Government (8)	Total Minus Federal Government (9)
				AMOUNTS (BILLION DOLLARS)					
1900	112.2	57.0	22.1	6.5	20.0	3.0	3.4	.3	111.9
1912	215.1	112.2	44.5	9.5	33.1	6.0	8.9	.8	214.3
1922	428.3	249.3	58.4	20.6	87.9	11.1	18.4	—17.5	445.8
1929	657.7	406.2	55.9	27.3	131.8	21.4	24.9	—9.9	667.6
1933	449.6	281.3	35.9	18.0	90.0	14.3	24.1	—14.0	463.6
1939	517.2	340.8	43.1	27.9	87.4	19.1	31.2	—32.4	549.6
1945A	762.1	605.5	96.7	45.3	148.3	25.7	54.1	—213.5	975.6
1945B	754.6	592.2	96.9	41.4	162.8	21.5	48.0	—208.2	962.8
1949	1,128.4	761.9	126.8	64.6	257.1	29.8	76.1	—188.0	1,316.4
1953	1,538.7	991.3	152.3	81.9	353.6	41.5	101.0	—182.9	1,721.6
1958	2,246.9	1,425.5	186.9	97.3	508.4	71.2	139.7	—182.1	2,429.0
				ABSOLUTE CHANGES (BILLION DOLLARS)					
1900-12	102.9	55.2	22.4	3.0	13.1	3.0	5.5	.5	102.4
1912-22	213.2	137.1	13.9	11.1	54.8	5.1	9.5	—18.3	231.5
1922-29	229.4	156.9	—2.5	6.7	43.9	10.3	6.5	7.6	221.8
1929-33	—208.1	—124.9	—20.0	—9.3	—41.8	—7.1	—.8	—4.1	—204.0
1933-39	67.6	59.5	7.2	9.9	—2.6	4.8	7.1	—18.4	86.0
1939-45	244.9	264.7	53.6	17.4	60.9	6.6	22.9	—181.1	426.0

	1	2	3	4	5	6	7	8	9
1945-49	373.8	169.7	29.9	23.2	94.3	8.3	28.1	20.2	353.6
1949-53	410.3	229.4	25.5	17.3	96.5	11.7	24.9	5.1	405.2
1953-58	708.2	434.2	34.6	15.4	154.8	29.7	38.7	.8	707.4
1900-58ᵃ	2,142.2	1,381.8	164.6	94.7	473.9	72.4	142.4	—187.7	2,329.9
RATIOS									
1912/1900	1.92	1.97	2.01	1.46	1.66	2.00	2.62	2.67	1.92
1922/1912	1.99	2.22	1.31	2.17	2.66	1.85	2.07	—21.88	2.08
1929/1922	1.54	1.63	.96	1.33	1.50	1.93	1.35	.56	1.50
1933/1929	.68	.69	.64	.66	.68	.67	.97	1.41	.69
1939/1933	1.15	1.21	1.20	1.55	.97	1.34	1.29	2.31	1.19
1945/1939	1.47	1.78	2.24	1.62	1.70	1.34	1.73	6.59	1.78
1949/1945	1.50	1.29	1.31	1.56	1.58	1.39	1.59	.90	1.37
1955/1949	1.36	1.30	1.20	1.27	1.38	1.39	1.33	.97	1.31
1958/1953	1.46	1.44	1.23	1.19	1.44	1.72	1.38	1.00	1.41
1958/1900	20.03	25.01	8.46	14.97	25.42	23.73	41.09	ᵇ	21.71

SOURCE

ᵃ Because of the break in the data in 1945, these figures were computed by adding the changes for the nine periods rather than by taking the difference between 1900 and 1958.
ᵇ Not calculated. Denominator is small.

Cols. 1-8, 1900-45A:Vol. II, Table Ia, line IV.
1945B-58: *Ibid.*, Table I, line IV.
Col. 9: Col. 1 minus col. 8.

TABLE 27

DEFLATED NET WORTH: AMOUNTS, ABSOLUTE CHANGES, AND RELATIVE CHANGES, SELECTED YEARS, 1900-58

(1929 dollars, GNP deflator)

Years	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorp. Business (4)	Nonfinancial Corp. (5)	Finance (6)	State and Local Governments (7)	Federal Government (8)	Total Minus Federal Government (9)
				AMOUNTS (BILLION DOLLARS)					
1900	227.1	115.4	44.7	13.2	40.5	6.1	6.9	.6	226.5
1912	346.9	181.0	71.8	15.3	53.4	9.7	14.4	1.3	345.6
1922	427.4	248.8	58.3	20.6	87.7	11.1	18.4	−17.5	444.9
1929	669.1	413.2	56.9	27.8	134.1	21.8	25.3	−10.1	679.1
1933	566.2	354.3	45.2	22.7	113.4	18.0	30.4	−17.6	583.9
1939	612.1	403.3	51.0	33.0	103.4	22.6	36.9	−38.3	650.4
1945A	613.6	487.5	77.9	36.5	119.4	20.7	43.6	−171.9	785.6
1945B	607.6	476.8	78.0	38.3	131.1	17.3	38.6	−167.6	775.2
1949	729.4	492.5	82.0	41.8	166.2	19.3	49.2	−121.5	850.9
1953	886.9	571.4	87.8	47.2	203.8	23.9	58.2	−105.4	992.3
1958	1,155.8	733.3	96.1	50.1	261.5	36.6	71.9	−93.7	1,249.5

ABSOLUTE CHANGES (BILLION DOLLARS)

1900-12	119.8	65.6	27.1	2.1	12.9	8.6	7.5	.7	119.1
1912-22	80.5	67.8	-13.5	5.3	34.3	1.4	4.0	-18.8	99.3
1922-29	241.6	164.4	-1.4	7.2	46.4	10.7	6.9	7.4	234.2
1929-33	-102.8	-58.9	-11.7	-5.1	-20.7	-8.8	5.1	-7.5	-95.2
1933-39	45.9	49.0	5.8	10.3	-10.0	4.6	6.5	-20.7	66.5
1939-45	1.5	84.2	26.9	3.5	16.0	-1.9	6.7	-133.6	135.2
1945-49	121.8	15.7	4.0	8.5	35.1	2.0	10.6	46.1	75.7
1949-53	157.5	78.9	5.8	5.4	37.6	4.6	9.0	16.1	141.4
1953-58	268.9	161.9	8.3	2.9	57.7	12.7	13.7	11.7	257.2
1900-58	934.7	628.6	51.3	40.1	209.3	33.9	70.0	-98.6	1,033.4

RATIOS

1912/1900	1.53	1.57	1.61	1.16	1.32	1.59	2.09	2.17	1.53
1922/1912	1.23	1.37	.81	1.35	1.64	1.14	1.28	-13.46	1.29
1929/1922	1.57	1.66	.98	1.35	1.53	1.96	1.38	.58	1.53
1933/1929	.85	.86	.79	.82	.85	.83	1.20	1.74	.86
1939/1933	1.08	1.14	1.13	1.45	.91	1.26	1.21	2.18	1.11
1945/1939	1.00	1.21	1.53	1.11	1.15	.92	1.18	4.49	1.21
1949/1945	1.20	1.03	1.05	1.26	1.27	1.12	1.27	.72	1.10
1953/1949	1.22	1.16	1.07	1.13	1.23	1.24	1.18	.87	1.17
1958/1953	1.30	1.28	1.09	1.06	1.28	1.53	1.24	.89	1.26
1958/1900	5.09	6.35	2.15	3.80	6.46	6.00	10.42	*	5.52

SOURCE: See source to Table 26. Deflator from Table 39, col. 1.
* Denominator close to zero.

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TABLE 28

NET WORTH PER CAPITA: AMOUNTS, ABSOLUTE CHANGES, AND RELATIVE CHANGES,
SELECTED YEARS, 1900-58
(current dollars)

Years	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorp. Business (4)	Nonfinancial Corp. (5)	Finance (6)	State and Local Governments (7)	Federal Government (8)	Total Minus Federal Government (9)
				AMOUNTS (THOUSAND DOLLARS)					
1900	1.460	.742	.288	.085	.260	.039	.044	.004	1.456
1912	2.234	1.165	.462	.099	.344	.062	.092	.008	2.226
1922	3.858	2.246	.526	.186	.792	.100	.166	—.158	4.016
1929	5.369	3.316	.456	.223	1.076	.175	.203	—.081	5.450
1933	3.566	2.231	.285	.143	.714	.113	.191	—.111	3.677
1939	3.931	2.590	.328	.212	.664	.145	.237	—.246	4.177
1945A	5.418	4.305	.687	.322	1.054	.183	.385	—1.518	6.936
1945B	5.365	4.210	.689	.294	1.157	.153	.341	—1.480	6.845
1949	7.495	5.061	.842	.429	1.708	.198	.505	—1.249	8.744
1953	9.550	6.153	.945	.508	2.195	.258	.627	—1.135	10.686
1958	12.796	8.118	1.064	.554	2.895	.405	.796	—1.037	13.883

ABSOLUTE CHANGES (THOUSAND DOLLARS)

1900-12	.774	.423	.174	.014	.084	.023	.048	.004	.770
1912-22	1.624	1.081	.064	.087	.448	.038	.074	−.166	1.790
1922-29	1.511	1.070	−.070	.037	.284	.075	.037	.077	1.434
1929-33	−1.803	−1.085	−.171	−.080	−.362	−.062	−.012	−.030	−1.773
1933-39	.365	.359	.043	.069	−.050	.032	.046	−.135	.500
1939-45	1.487	1.715	.359	.110	.390	.038	.148	−1.272	2.759
1945-49	2.130	.851	.153	.135	.551	.045	.164	.231	1.899
1949-53	2.055	1.092	.103	.079	.487	.060	.122	.114	1.942
1953-58	3.246	1.965	.119	.046	.700	.147	.169	.098	3.147

RATIOS

1912/1900	1.53	1.57	1.60	1.16	1.32	1.59	2.09	2.00	1.53
1922/1912	1.73	1.93	1.14	1.88	2.30	1.61	1.80	−19.75	1.80
1929/1922	1.39	1.48	.87	1.20	1.36	1.75	1.22	.51	1.36
1933/1929	.66	.67	.62	.64	.66	.65	.94	1.37	.67
1939/1933	1.10	1.16	1.15	1.48	.93	1.28	1.24	2.22	1.14
1945/1939	1.38	1.66	2.09	1.52	1.59	1.26	1.62	6.17	1.66
1949/1945	1.40	1.20	1.22	1.46	1.48	1.29	1.48	.84	1.28
1953/1949	1.27	1.22	1.12	1.18	1.29	1.30	1.24	.91	1.22
1958/1953	1.34	1.32	1.13	1.09	1.32	1.57	1.27	.91	1.29
1958/1900	8.76	10.94	3.69	6.52	11.13	10.38	18.09	•	9.50

SOURCE: See source to Table 26. Population from U. S. Bureau of the Census: for 1900-45, *Statistical Abstract of the U. S., 1957,* p. 5; average of fiscal year figures; for 1949-58, *Current Population Reports,* Series P-25, No. 206 (October 1959).
 ᵃ Denominator close to zero.

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TABLE 29

DEFLATED NET WORTH PER CAPITA: AMOUNTS, ABSOLUTE CHANGES, AND RELATIVE CHANGES,
SELECTED YEARS, 1900-58
(1929 dollars, GNP deflator)

AMOUNTS (THOUSAND DOLLARS)

Years	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorp. Business (4)	Nonfinancial Corp. (5)	Finance (6)	State and Local Governments (7)	Federal Government (8)	Total Minus Federal Government (9)
1900	2.955	1.502	.582	.172	.527	.079	.090	.008	2.948
1912	3.603	1.880	.746	.159	.555	.101	.150	.014	3.590
1922	3.850	2.241	.525	.186	.790	.100	.166	−.158	4.008
1929	5.463	3.373	.465	.227	1.095	.178	.207	−.082	5.544
1933	4.491	2.810	.358	.180	.899	.143	.241	−.140	4.631
1939	4.652	3.065	.388	.251	.786	.172	.280	−.291	4.943
1945A	4.362	3.466	.554	.259	.849	.147	.310	−1.222	5.585
1945B	4.320	3.390	.555	.237	.932	.123	.274	−1.192	5.511
1949	4.845	3.271	.545	.278	1.104	.128	.327	−.807	5.652
1953	5.505	3.547	.545	.293	1.265	.148	.361	−.654	6.159
1958	6.582	4.176	.547	.285	1.489	.208	.409	−.534	7.116

ABSOLUTE CHANGES (THOUSAND DOLLARS)

1900-12	.648	.378	.164	—.013	.028	.022	.060	.006	.642
1912-22	.247	.361	—.221	.027	.235	—.001	.016	—.172	.418
1922-29	1.613	1.132	—.060	.041	.305	.078	.041	.076	1.536
1929-33	—.972	—.563	—.107	—.047	—.196	—.035	.034	—.058	—.913
1933-39	.161	.255	.030	.071	—.113	.029	.039	—.151	.312
1939-45	—.290	.401	.166	.008	.063	—.025	.030	—.931	.642
1945-49	.525	—.119	—.010	.041	.172	.005	.053	.385	.141
1949-53	.660	.276	.000	.015	.161	.020	.034	.153	.507
1953-58	1.077	.629	.002	—.008	.224	.060	.048	.120	.957

RATIOS

1912/1900	1.22	1.25	1.28	.92	1.05	1.28	1.67	1.75	1.22
1922/1912	1.07	1.19	.70	1.17	1.42	.99	1.11	—11.29	1.12
1929/1922	1.42	1.51	.89	1.22	1.39	1.78	1.25	.52	1.38
1933/1929	.82	.83	.77	.79	.82	.80	1.16	1.71	.84
1939/1933	1.04	1.09	1.08	1.39	.87	1.20	1.16	2.08	1.07
1945/1939	.94	1.13	1.43	1.03	1.08	.85	1.11	4.20	1.13
1949/1945	1.12	.96	.98	1.17	1.18	1.04	1.19	.68	1.03
1953/1949	1.14	1.08	1.00	1.05	1.15	1.16	1.10	.81	1.09
1958/1953	1.20	1.18	1.00	.97	1.18	1.41	1.13	.82	1.16
1958/1900	2.23	2.78	.94	1.66	2.83	2.63	4.54	*	2.41

SOURCE: See source to Tables 26-28.
* Denominator close to zero.

TABLE 30

Net Worth and Net Worth Changes, Including Military Assets, 1933-58
(billion dollars, current prices)

	Military Assets (1)	Net Worth		Change in Net Worth[a]		Net Worth Ratio[b]	
		Nation (2)	Federal Govt. (3)	Nation (4)	Federal Govt. (5)	Nation (6)	Federal Govt. (7)
1933		449.6	—14.0				
1939	2.6	519.8	—29.8	70.2	—15.8	1.16	2.13
1945A	52.0	814.1	—161.5	294.3	—131.7	1.57	5.42
1945B	72.7	827.3	—135.5				
1949	54.3	1,182.7	—133.7	355.4	1.8	1.43	0.99
1953	71.3	1,610.0	—111.6	427.3	22.1	1.36	0.83
1958	88.9	2,335.8	—93.2	725.8	18.4	1.45	0.84

Source: 1933-45A, col. 1: *Study of Saving*, Vol. III, p. 6.
cols. 2-7: Col. 1 and Vol. II, Table Ia. Military assets assumed
negligible in 1933.
1945B-58: Vol. II, Tables I, III-7, and III-7a.
[a] Change between given year and preceding year shown.
[b] Ratio of net worth for given year to net worth for preceding benchmark year.

The course of net worth during the two peacetime periods of rising prices may be of more immediate interest. The general price level, measured by the gross national product deflator, advanced on the average by approximately 2-2½ per cent per year and population grew at between 1.75 and 2 per cent per year. Combined national net worth increased by almost 100 per cent from 1949 through 1958 against a rise of over 90 per cent between 1900 and 1912, or 8 against 5.6 per cent per year (Tables 31 and 32). Deflated net worth per head (which allows for price and population changes) grew twice as fast between 1949 and 1958 (3.5 per cent) as between 1900 and 1912 (1.7 per cent).

There were considerable differences among the main sectors in the growth of net worth in the two periods and little consistency between the periods in the relative position of sectors. In both periods, however, unincorporated business exhibited a comparatively low rate of growth (Chart 11). The net worth of agriculture expanded much more rapidly in the earlier interval, while that of nonfinancial corporations and finance grew more in the later period. In the 1950's nonfinancial corporations showed the most rapid rate of growth of net worth of any of the six nonfinancial sectors while their rate of growth had been considerably below that of the national total in 1900-12. It is thus evident that the mere comparison of rates of growth of net worth of different sectors cannot tell much about the typical effect of a rise in the general price level on net worth.

CHART 10

Net Worth, by Sectors, 1900-58
(current prices)
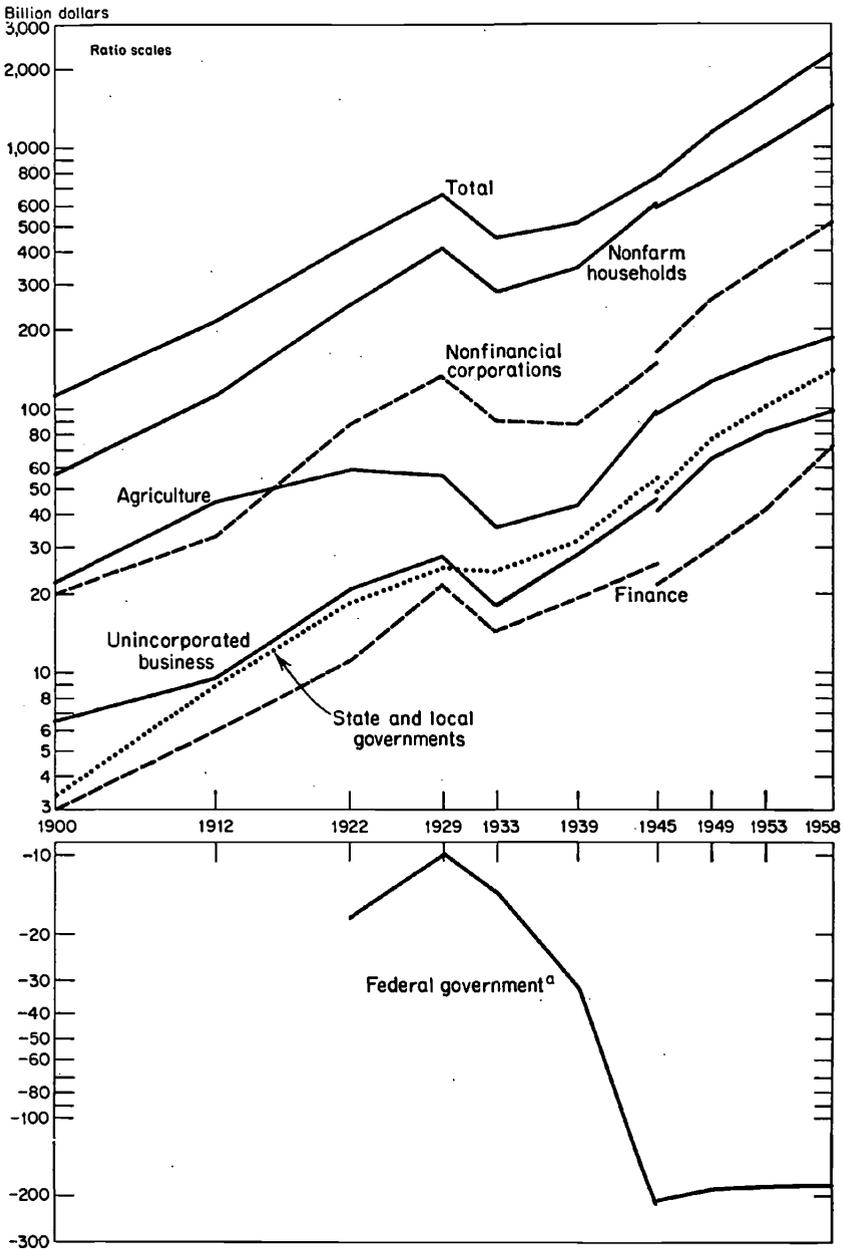
Billion dollars

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TABLE 31

ANNUAL PERCENTAGE RATES OF GROWTH OF NET WORTH, DEFLATED NET WORTH,
AND DEFLATED NET WORTH PER CAPITA, 1900-58

	Total (1)	Nonfarm Households (2)	Agricul- ture (3)	Nonfarm Unincorp. Business (4)	Nonfin- ancial Corp. (5)	Finance (6)	State and Local Govern- ments (7)	Total Excl. Federal Govern- ment (8)
			NET WORTH					
1900-12	5.6	5.8	6.0	3.2	4.3	6.0	8.4	5.6
1912-22	7.1	8.3	2.7	8.1	10.3	6.4	7.5	7.6
1922-29	6.4	7.2	—.6	4.2	6.0	9.8	4.4	6.0
1929-33	—9.2	—8.8	—10.5	—9.9	—9.2	—9.5	—.8	—8.8
1933-39	2.4	3.2	3.1	7.6	—.5	5.0	4.3	2.9
1939-45	6.6	10.1	14.4	8.4	9.2	5.0	9.6	10.1
1945-49	10.7	6.6	7.0	11.8	12.1	8.6	12.3	8.2
1949-53	8.0	6.8	4.7	6.2	8.4	8.6	7.4	7.0
1953-58	7.9	7.6	4.2	3.5	7.6	11.5	6.7	7.1
			DEFLATED NET WORTH					
1900-12	3.6	3.8	4.0	1.2	2.3	3.9	6.3	3.6
1912-22	2.1	3.2	—2.1	3.0	5.1	1.3	2.5	2.6
1922-29	6.7	7.5	—.3	4.4	6.3	10.1	4.7	6.3
1929-33	—4.0	—3.7	—5.7	—4.9	—4.0	—4.6	4.7	—3.7
1933-39	1.3	2.2	2.1	6.4	—1.6	3.9	3.2	1.8
1939-45	0	3.2	7.3	1.8	2.4	—1.4	2.8	3.2
1945-49	4.7	.7	1.2	5.9	6.2	2.9	6.2	2.4
1949-53	5.1	3.8	1.7	3.1	5.3	5.5	4.2	4.0
1953-58	5.4	5.1	1.7	1.2	5.1	8.9	4.4	4.7
			DEFLATED NET WORTH PER CAPITA					
1900-12	1.7	1.9	2.1	—.7	.4	2.1	4.4	1.7
1912-22	.7	1.8	—3.5	1.6	3.6	—.1	1.0	1.1
1922-29	5.1	6.1	—1.7	2.9	4.8	8.6	3.2	4.7
1929-33	—4.8	—4.6	—6.3	—5.7	—4.8	—5.4	3.8	—4.3
1933-39	.7	1.4	1.3	5.6	—2.3	3.1	2.5	1.1
1939-45	—1.0	2.1	6.1	.5	1.3	—2.7	1.8	2.1
1945-49	2.9	—1.0	—.5	4.0	4.2	1.0	4.5	.7
1949-53	3.3	1.9	0	1.2	3.3	3.8	2.4	2.2
1953-58	3.7	3.4	0	—.6	3.4	7.1	2.5	3.0

SOURCE: Tables 26, 27, and 29.

In the only deflationary period among those distinguished here, the four years from the end of 1929 through 1933, all main sectors showed a decline in net worth. The rate of decline was very close to the national aggregate—about one-third—for nonfarm households, agriculture, unincorporated business, nonfinancial corporations, and finance.

CHART 11

Annual Percentage Rates of Change in Net Worth, by Sectors, 1900-58

Rate of change
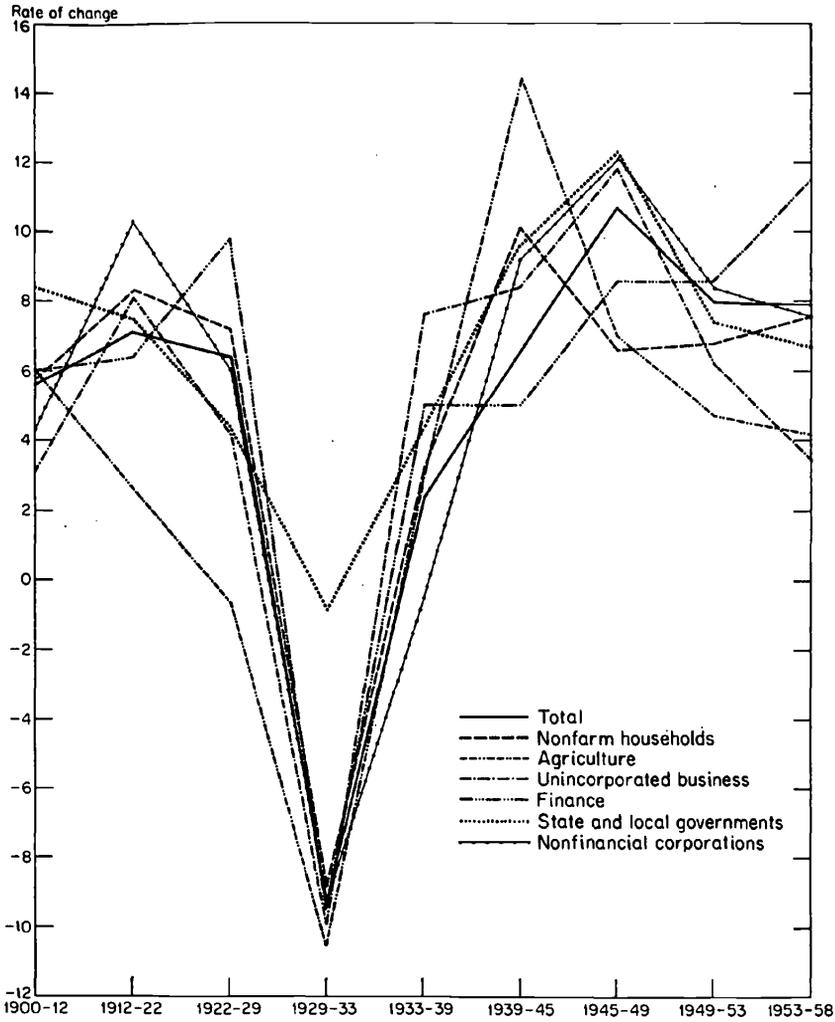
Source: Table 31.

State and local governments showed the smallest net worth decline (3 per cent) while the federal government increased its negative net worth by over 40 per cent. Since the price level declined by almost one-fourth during this period, one sector (state and local governments) increased its net worth in real terms, while the decline for other sectors (aside from the federal government) was about 15-20 per cent.

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TABLE 32

ANNUAL RATE OF CHANGE IN PRICES AND NATIONAL NET WORTH, 1900-58
(per cent)

Period[a]	General Price Level (1)	National Net Worth			Nonfederal Net Worth		
		Current Prices (2)	Constant Prices[b] (3)	Constant Per Head (4)	Current Prices (5)	Constant Prices[b] (6)	Constant Per Head (7)
War Inflations							
1912-22	4.9	7.1	2.1	0.7	7.6	2.6	1.1
1939-49	6.2	8.1	1.8	0.4	9.1	2.7	1.3
Peacetime Inflations							
1900-12	1.9	5.6	3.6	1.7	5.6	3.6	1.7
1949-58	2.6	8.0	5.2	3.5	7.0	4.4	2.6
Deflation							
1929-33	—5.2	—9.1	—4.1	—4.8	—8.7	—3.7	—4.4
Periods of Price Stability							
1922-29	—0.3	6.3	6.6	5.1	5.9	6.2	4.7
1933-39	1.0	2.4	1.3	0.6	2.9	1.8	1.1
All Periods							
1900-58	2.4	5.3	2.8	1.4	5.5	3.0	1.5

SOURCE

Col. 1: Table 39.   Col. 5: Vol. II, Tables I and Ia.
    2: Vol. II, Tables I and Ia.   6: Table 27.
    3: Table 27.   7: Table 29.
    4: Table 29.

[a] These periods run from the end of the first year to the end of the last. Thus the period 1900-12 includes the years 1901 through 1912.

[b] Gross national product deflator.

While two periods of relative stability can be distinguished on the basis of behavior of the general price level, these periods otherwise have little in common so that not much can be learned from their comparative analysis. Between 1922 and 1929 prices of equities more than doubled and those of nonfarm houses increased, although the general price level remained stable. From the end of 1933 through 1939, on the other hand, the economy recovered only slowly from the deepest depression it had experienced and remained continuously well below full capacity utilization even though the general price level increased at a rate of slightly more than 1 per cent per year. The observed changes in net worth are similarly disparate. In the 1920's combined national net worth rose by more than 50 per cent within seven years, the most rapid growth experienced as far as our records go, when account is taken of changes in the general price level.[4] Financial enterprises led, roughly

[4] The rise would, of course, be less pronounced if asset-specific deflation had been applied.

doubling their net worth. Most other sectors showed an increase of 33 to 63 per cent, but the net worth of agriculture hardly held its own. The period from 1933 through 1939, by contrast, exhibited a very low growth of net worth—for combined national net worth 15 per cent without, and 8 per cent with, allowance for changes in the general price level. Differences among sectors were much less pronounced. The net worth of nonfarm and farm households increased by about 20 per cent, that of state and local governments and finance by roughly 30-35 per cent. There was a contrast between two of the business sectors, unincorporated business growing by over 50 per cent while nonfinancial corporations declined.

In order to see more clearly whether changes in current or deflated national net worth show a clear relation to price level changes, Table 32 shows average annual rates of change for the seven periods distinguished. One feature of the table is the relative regularity in the rate of change of net worth in current prices. In five of the seven periods, the rate of change in national net worth was between 5½ and 9 per cent per year regardless of whether the federal government is included. The exceptions are 1933-39 which had an average increase of 2½ per cent and the Great Depression of 1929-33 which had an average decrease of 9 per cent.

If all estimates of net worth are reduced to the common price level of 1929 (using the gross national product deflator), the 1929-33 period becomes somewhat less different from the others. For the periods outside the 1930's, however, the variability is greater in constant than in current prices—from less than 2 to over 6½ per cent. As will be seen later, the reason for this at first sight unexpected behavior is the difference, particularly in 1922-29 and 1949-58, between the movements of prices in general and price-sensitive assets.

The range becomes even wider in relative terms if the figures are adjusted for population growth in addition to price changes. For the four periods of price rises, it now varies between ½ and 3½ per cent. The rate of growth in 1922-29, when the general price level was stable, is higher (5 per cent) than in any period of inflation; and the increase in 1933-39, which shows the lowest rate of increase in the general price level, is within the range of the four inflationary periods.

Thus while movements in the general price level are clearly reflected in the rate of change of national net worth in current prices, their effect on constant price measures is not clear. There is, however, some evidence of a slight negative relationship between the rate of change of the general price level and the rate of growth of deflated national net worth, a relation which is somewhat improved if the federal government is excluded or if 1933-39 is omitted. Generally, since the turn of

the century, the higher the rate of change in the general price level, the lower is the rate of growth of national net worth in constant prices, i.e., in dollars of constant purchasing power. This relation is due to both changes in the rate of real investment and differences between price movements of current output and price movements of nonmonetary assets, primarily real estate and common stock. Generally the more pronounced the rise in the general price level, the smaller has been the excess in the rise of price-sensitive assets compared to the advances in the general price level; or, in other words, the smaller the rise in deflated sensitive asset prices. These relationships are discussed at some length in the next chapter.

Differences in the rates of growth of net worth in the different sectors have led to considerable changes in its distribution among them. The main changes which appear in Table 33 and Chart 12 are the sharp fluctuations in the share of the federal government which mainly reflect negative net worth due to the war deficits. Thus in 1945 the negative net worth of the federal government offset about one-fifth of the positive net worth of the other six sectors. Even in 1949 and 1953 the negative net worth of the federal government was sufficiently large to nullify over one-tenth of the other sectors' positive net worth.

If the distribution is limited to sectors other than the federal government, the changes are considerably smaller, but not negligible. Over the whole sixty years four sectors increased their share in the total net worth of the six nonfederal sectors: nonfarm households, nonfinancial corporations, finance, and state and local governments. Households accounted for about one-half of nonfederal net worth up to World War I. As a result of the extraordinary rise in stock prices, their share then increased until by the end of the 1920's it had reached three-fifths, which level it has maintained with only minor fluctuations. The rise of the share of state and local governments occurred mainly during the first part of the period with an increase from 3 per cent at the turn of the century to almost 6 per cent in 1939.

The sharpest decline was registered by agriculture; from a level of 20 per cent in 1900 and 1912, the share fell to 8 per cent between 1929 and 1939. A temporary increase during World War II was rapidly lost thereafter, so that the 1958 share was back to the low level of the 1930's. This decline in the share of agriculture in national net worth must not be interpreted as primarily a result of adverse asset price movements. As will be seen later, it reflects the absence of net saving in agriculture for the period as a whole. This in turn is at least partly attributable to the shrinkage of the agricultural sector, evidenced in the declining number of people engaged in it. The price of farm land, as Chapter 7 indicates, rose virtually as much during the period as a whole as the price of the other main types of price-sensitive assets.

TABLE 33

DISTRIBUTION OF NET WORTH AND CHANGES IN NET WORTH AMONG SECTORS, 1900-58
(per cent)

	Total (1)	Nonfarm House-holds (2)	Agricul-ture (3)	Nonfarm Unincorp. Business (4)	Nonfin-ancial Corp. (5)	Finance (6)	State and Local Govern-ments (7)	Federal Govern-ment (8)
			NET WORTH	(CURRENT DOLLARS)				
1900	100.0	50.8	19.7	5.8	17.8	2.7	3.0	.3
1912	100.0	52.2	20.7	4.4	15.4	2.8	4.1	.4
1922	100.0	58.2	13.6	4.8	20.5	2.6	4.3	—4.1
1929	100.0	61.8	8.5	4.2	20.0	3.3	3.8	—1.5
1933	100.0	62.6	8.0	4.0	20.0	3.2	5.4	—3.1
1939	100.0	65.9	8.3	5.4	16.9	3.7	6.0	—6.3
1945A	100.0	79.5	12.7	5.9	19.5	3.4	7.1	—28.0
1945B	100.0	78.5	12.8	5.5	21.6	2.8	6.4	—27.6
1949	100.0	67.5	11.2	5.7	22.8	2.6	6.7	—16.7
1953	100.0	64.4	9.9	5.3	23.0	2.7	6.6	—11.9
1958	100.0	63.4	8.3	4.3	22.6	3.2	6.2	—8.1
			CHANGE IN NET WORTH	(CURRENT DOLLARS)				
1900-12	100.0	53.6	21.8	2.9	12.7	2.9	5.3	.5
1912-22	100.0	64.3	6.5	5.2	25.7	2.4	4.5	—8.6
1922-29	100.0	68.4	—1.1	2.9	19.1	4.5	2.8	3.3
1929-33	100.0	60.0	9.6	4.5	20.1	3.4	.4	2.0
1933-39	100.0[a]	88.0	10.7	14.6	—3.8	7.1	10.5	—27.2
1939-45	100.0	108.1	21.9	7.1	24.9	2.7	9.4	73.9
1945-49	100.0	45.4	8.0	6.2	25.2	2.2	7.5	5.4
1949-53	100.0	55.9	6.2	4.2	23.5	2.9	6.1	1.2
1953-58	100.0	61.3	4.9	2.2	21.9	4.2	5.5	.1
1900-58	100.0	64.1	7.7	4.2	22.9	3.2	6.4	—8.5
			CHANGE IN NET WORTH	(1929 DOLLARS)				
1900-12	100.0	54.8	22.6	1.8	10.8	3.0	6.3	.6
1912-22	100.0	84.2	—16.8	6.6	42.6	1.7	5.0	—23.4
1922-29	100.0	68.0	—.6	3.0	19.2	4.4	2.9	3.1
1929-33	100.0	57.3	11.4	5.0	20.1	3.7	—5.0	7.3
1933-39	100.0	107.7	12.7	22.6	—21.8	10.0	14.3	—45.5
1939-45[b]								
1945-49	100.0	12.9	3.3	7.0	28.8	1.6	8.7	37.8
1949-53	100.0	50.1	3.7	3.4	23.9	2.9	5.7	10.2
1953-58	100.0	60.2	3.1	1.1	21.5	4.7	5.1	4.4
1900-58	100.0	66.5	5.5	4.0	23.8	3.3	7.0	—10.2

SOURCE: Tables 26 and 27.

[a] 45.5 is used as the base in computing these percentages. It is the sum of the changes of the individual sectors (Table 27) rather than the change from 1933 to 1939 for all sectors combined.

[b] Omitted because the denominator is small.

CHART 12

Distribution of Net Worth by Sectors, 1900-58

Per cent
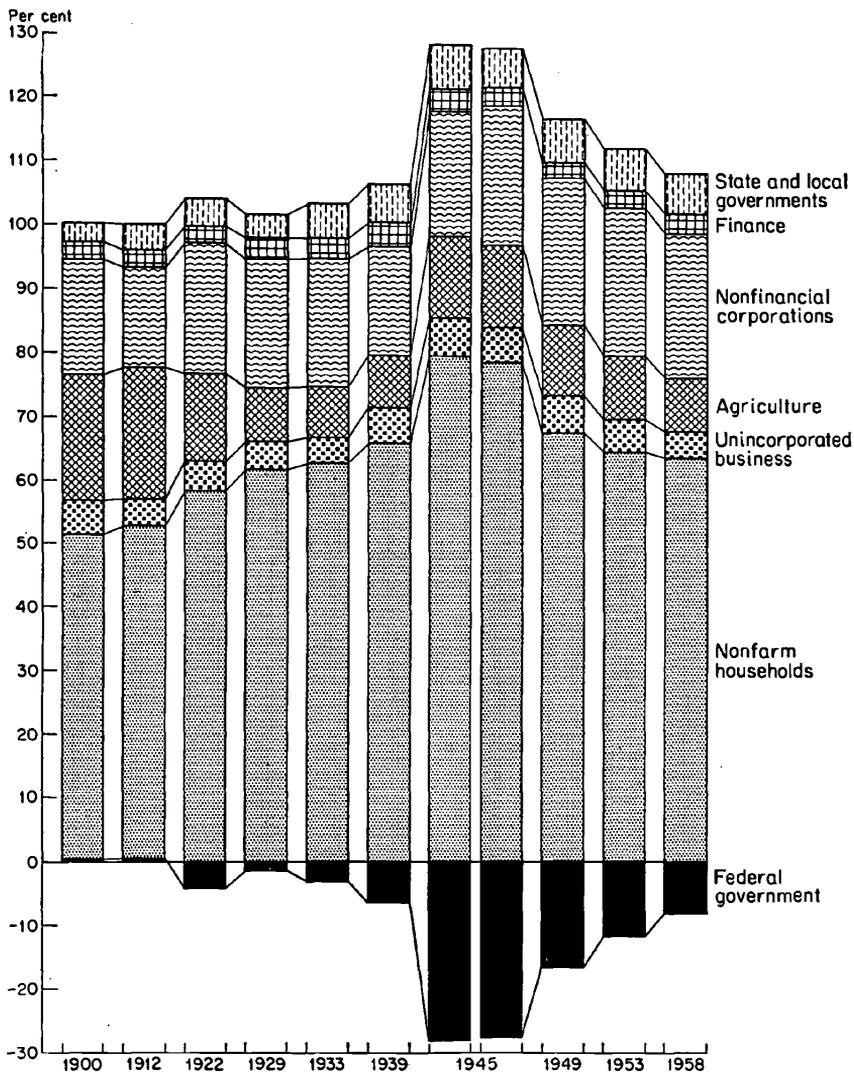
Source: Table 33.

The second sector for which the figures indicate a declining share in national worth is unincorporated business. However, the decline was irregular and not very pronounced, and, because of the particularly poor quality of the estimates for this sector, must be regarded as of doubtful significance.

The changes in the distribution of national net worth show a two-fold connection to price level changes. During war inflation the share of the federal government declined, and indeed became heavily negative, while that of most other sectors increased. The share of nonfarm households increased in 1922-29, a period of stability in the general price level accompanied by large increases in stock prices.

Variations in the sectoral distribution of changes in net worth (Chart 13) are, of course, much wider than those in the distribution of the absolute values which were discussed in the preceding pages. They are more sensitive to changes in trend but also to ephemeral developments and they are, therefore, of particular interest for short-term analysis.

Components of Current Value Net Worth Change

As was pointed out in Chapter 5, changes in net worth are the result not only of price changes but of saving, offering of equity securities, and transfers. For the six main sectors distinguished here (nonfinancial corporations are combined with finance in this discussion because the 1900-45 saving figures do not distinguish financial from nonfinancial corporations), estimates of saving and corporate stock issues for the years since 1945 appear in Volume II.[5] By eliminating these two items, we can estimate more precisely that part of net worth change which is due to price movements.

Transfers remain in the residual, but the great majority of private transfers that affect net worth (consisting of gifts, bequests, inheritances, dowries, etc.) occur within the same sector, namely, nonfarm households.[6] So long as the analysis is limited to these six sectors, or to similarly broad sectors, the neglect of intersector transfers is not too serious, except possibly for the federal government, unincorporated business, and farm sectors.[7] The smaller the groups become, however, the more important net transfers are. This is the case particularly for groups that are likely to receive gifts and bequests or to give on a scale which is large compared to their other assets. This situation is not likely to arise for the commonly distinguished subgroups of households such as

[5] Information for the period through 1945 can be found in Raymond W. Goldsmith, *A Study of Saving in the United States,* Princeton, 1955, Volume I, and in Goldsmith, *Financial Intermediaries in the American Economy Since 1900,* Princeton for NBER, 1958, Chapter VII.

[6] Since private nonprofit organizations are included in the nonfarm household sector, gifts to and by them are intrasectoral.

[7] These reservations are made because no account is taken of two movements that probably are of substantial size and tend to work in the same direction year after year, viz., the net sale of farm land to nonfarm buyers and the transformation of unincorporated business enterprises into corporations.

CHART 13

Distribution of Changes in Net Worth Among Sectors, 1900-58
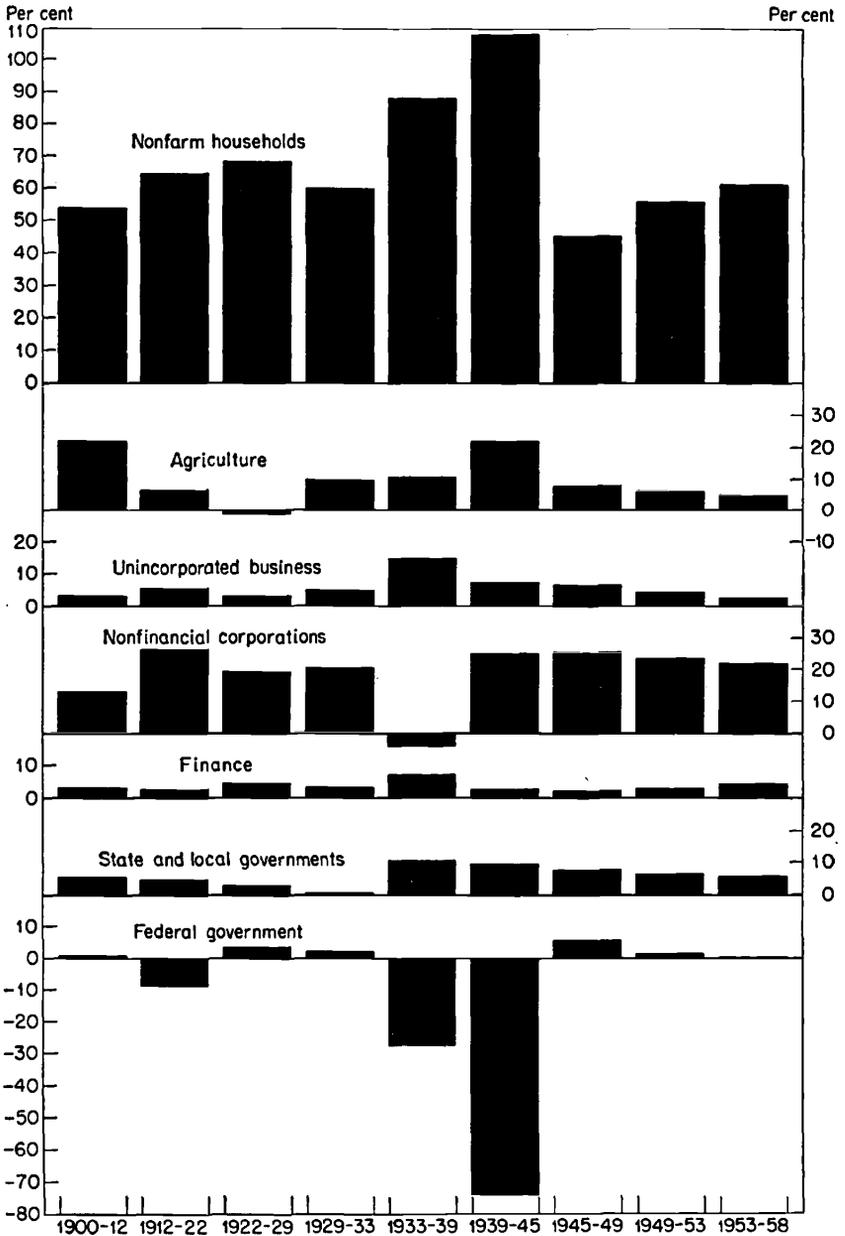
Source: Table 33.

groups classified by size of income (except possibly for the very highest and lowest brackets), by occupation, and by age (except possibly for the highest age groups). On the other hand, when the calculations are made for the nation as a whole, net transfers are limited to international gifts and similar transactions which usually are very small compared to changes in national net worth. For the United States, net transfers, mostly in the form of foreign aid, have amounted to less than 5 per cent of the change in national net worth during the postwar period and the ratio was smaller during earlier periods.

NATIONAL NET WORTH

For the entire period from 1900 to 1958, the change in net worth in current prices was more than $2,140 billion. Saving and equity financing by corporations accounted for $760 billion (Table 34). The residual (i.e., the sum of net transfers and net realized and unrealized capital gains) contributed almost $1,400 billion.[8] Thus nearly two-thirds of the change in national net worth (fully two-thirds if net transfers are allowed for) that has occurred during the past two generations reflects asset price changes—realized or unrealized capital gains and losses. Saving accounted for over 30 per cent, while the offerings of equity securities contributed about 4 per cent.

There are considerable differences among periods in the share of the components in net worth change, and even greater differences among sectors, as can be observed in Table 35.

In most periods the share of the "residual" (total net worth change less saving and equity financing) in total national net worth change was between one-half and four-fifths without showing an evident trend. The share stood at 56 per cent for the period 1900-29 as a whole and 66 per cent for the postwar period 1945-58. In two periods (1929-33 and 1939-45) price changes accounted for almost the total calculated change in national net worth, but for different reasons. During the Great Depression national saving was very small, positive saving of some groups in some years about offsetting dissaving by other groups or in other years. Hence the large decline in national net worth was almost matched by a large negative residual. During World War II, national saving was again very small, this time because the dissaving by the federal government alone almost offset a large volume of saving by other sectors. As a result, a large increase in national net worth was almost entirely matched by capital gains. If the federal government is eliminated from the calculation, the residual accounts for a little over one-half of the wartime change in net worth.

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[8] If allowance is made for net transfers abroad, mostly during the postwar period, the residual rises to approximately $1,500 billion.

TABLE 34

Net Saving and Stock Issues, by Sector, Current Prices, 1900-58

(billion dollars)

	Net Saving								Net Saving Plus New Stock Issues	
	Total	Nonfarm Households	Agriculture	Nonfarm Unincorporated Business	Nonfinancial Corporations and Finance	State and Local Governments	Federal Government	Net New Stock Issues, All Corporations	Total	Nonfinancial Corporations and Finance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1900-12	41.5	30.8	−0.3	0.4	8.1	1.7	0.9	7.2	48.7	15.3
1912-22	61.8	66.5	−3.9	1.6	18.0	−0.3	−20.2	9.6	71.4	27.7
1922-29	97.6	67.2	1.1	−0.1	16.2	6.2	7.1	20.7	118.3	36.8
1929-33	−16.8	2.3	0	−1.2	−15.1	1.2	−4.0	3.0	−13.9	−12.2
1933-39	11.5	19.4	2.1	4.8	−7.7	6.2	−13.4	1.8	13.4	−5.8
1939-45	11.6	148.3	15.7	7.3	17.2	13.0	−189.8	2.4	14.0	19.6
1945-49	111.9	70.1	6.7	2.6	21.5	0.9	10.2	7.8	119.7	29.3
1949-53	148.2	100.9	8.2	5.1	27.9	9.2	−3.0	12.1	160.3	40.0
1953-58	209.6	164.0	−0.7	−1.3	35.4	18.6	−6.4	21.7	231.3	57.1
1900-58	676.9	669.4	29.0	19.1	121.5	56.7	−218.6	86.4	763.2	207.9

Source

1900-45:

Cols. 1, 3 (1900-33), and 8: *Study of Saving*, Vol. I, Tables T-1 (p. 345), V-17 (1901-18, p. 493), V-18 (1919-45, p. 494), and V-19 (pp. 496-497).

Col. 2: Col. 1 minus the sum of cols. 3-7.

Col. 3 (1933-45): *Study of Saving*, Vol. I, Table A-3 (p. 756), col. 2, plus, for financial saving, Vol. II of this book, Table III-3b, change in intangible assets minus change in liabilities.

Col. 4: Saving through tangible assets, from *Study of Saving*, Vol. I, Table P-19 (p. 903), col. 12, Table P-1 (p. 871), col. 11, Table R-12 (p. 597), col. 7, Table R-13 (p. 599), col. 10, Table R-14 (p. 600), col. 11, and Table R-9 (p. 593), col. 1 minus col. 2. Financial saving from Vol. II of this book, Table III-2a, change in intangible assets minus change in liabilities.

Col. 5: *Study of Saving*, Vol. I, Table T-1 (p. 345), col. 6, plus saving through Treasury Monetary Funds (Tables

SOURCE TO TABLE 34 (concluded)

> F-3, p. 977, and F-13, p. 997, cols. 1 and 6 minus Tables F-5, p. 981, and F-18, p. 1015, cols. 1, 2, 4, and 5, plus *Study of Saving*, Vol. III, Table W-37 (p. 91), line IV.

Col. 6:   *Study of Saving*, Vol. I, Table T-1 (p. 345), col. 7, minus tax accruals of state and local governments, Table G-20 (p. 1075), col. 1.

Col. 7:   *Study of Saving*, Vol. I, Table T-1 (p. 345), col. 8, minus personal income, estate, and gift tax accruals, Table F-26 (p. 1035), cols. 2 and 4, and minus saving through Treasury Monetary Funds (see note to col. 5).

Col. 9:   Col. 1 plus col. 8.

Col. 10:   Col. 5 plus col. 8.

  1945-58:

Col. 1-7:   Vol. II, Table VIII-d-3e.

Col. 8:   Vol. II, Tables VIII-d-1 and VIII-d-2.

Col. 9:   Col. 1 plus col. 8.

Col. 10:   Col. 5 plus col. 8.

The influence of price changes can be measured in another way which is less affected by the rate of saving. The residuals, adjusted for length of period, can be compared with the initial net worth for each period, to show the rate of change in net worth due to price movements (bottom panel of Table 35). The residual rate of change corresponds well with the GNP deflator, being at its highest in the war and postwar periods, 1912-22 and 1939-49. It is, of course, the movement of asset prices that is reflected in the residual rate of change.

SECTOR NET WORTH

The residual reflecting price effects was relatively most important in agriculture and unincorporated business—approximately four-fifths of the total change in net worth from 1900 to 1958 (Table 35). In agriculture, this was the result of two different situations, before and after the Great Depression. The residual exceeded the change in net worth until 1929, as increases in land prices were transformed into debt. As land changed hands, debt was incurred without any accompanying saving. Since the 1930's, agriculture has generated substantial saving and the residual has accounted for about four-fifths of the change in net worth.

Nonfarm households have shown the smallest fluctuations in the distribution of total net worth change between saving and price effects. In eight out of the nine periods, the share of the residual in total net worth change was between 44 and 68 per cent, saving contributing between one-third and somewhat more than one-half of total net worth changes. A very slight upward trend in the share of the residual in net worth change is hardly significant in view of the roughness of the estimates.

TABLE 35

RESIDUAL NET WORTH CHANGES: TOTAL MINUS SAVING AND NET STOCK ISSUES,
BY SECTOR, CURRENT PRICES, 1900-58

	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorporated Business (4)	Nonfinancial Corporations and Finance (5)	State and Local Governments (6)	Federal Government (7)	Total Excluding Federal Government (8)
	RESIDUAL CHANGE IN NET WORTH (BILLION DOLLARS)							
1900-12	54.2	24.4	22.7	2.6	0.8	3.8	-0.4	54.6
1912-22	141.8	70.6	17.8	9.5	32.2	9.8	1.9	139.9
1922-29	111.1	89.7	-3.6	6.8	17.4	0.3	0.5	110.6
1929-33	-194.2	-127.2	-20.0	-8.0	-36.8	-2.0	-0.1	-194.1
1933-39	54.2	40.1	5.1	5.1	8.0	0.9	-5.0	59.2
1939-45	230.9	116.4	37.9	10.1	47.9	10.0	8.7	222.2
1945-49	254.1	99.6	23.2	20.6	73.3	27.2	10.0	244.1
1949-53	250.0	128.5	17.3	12.2	68.2	15.7	8.1	241.9
1953-58	476.9	270.2	35.3	16.7	127.4	20.1	7.2	469.7
1900-58	1,379.0	712.3	135.7	75.6	338.4	85.8	30.9	1,348.1
	SHARE OF RESIDUAL IN TOTAL NET WORTH CHANGES (PER CENT)							
1900-12	52.7	44.2	101.3	86.7	5.0	69.1	-80.0	53.3
1912-22	66.5	51.5	128.1	85.6	53.8	103.2	-10.4	60.4
1922-29	48.4	57.2	144.0	101.5	32.1	4.6	6.6	49.9
1929-33	93.3	101.8	100.0	86.0	75.3	a	2.4	95.1
1933-39	80.2	67.4	70.8	51.5	a	12.7	27.2	68.8
1939-45	94.3	44.0	70.7	58.0	71.0	43.7	-4.8	52.2
1945-49	68.0	58.7	77.6	88.8	71.4	96.8	49.5	69.0
1949-53	60.9	56.0	67.8	70.5	63.0	63.1	158.8	59.7
1953-58	67.3	62.2	102.0	108.4	69.1	51.9	a	66.4
1900-58	64.4	51.5	82.4	79.8	61.9	60.3	-16.5	57.9

RESIDUAL CHANGE PER YEAR[b] AS PERCENTAGE OF INITIAL NET WORTH

1900-12	4.0	3.6	8.6	3.3	0.3	9.3	-11.1	4.1
1912-22	6.6	6.3	4.0	10.0	8.2	11.0	23.8	6.5
1922-29	3.7	5.1	-0.9	4.7	2.5	0.2	-0.4	3.5
1929-33	-7.4	-7.8	-8.9	-0.7	-6.0	-2.0	0.3	-7.3
1933-39	2.0	2.4	2.4	4.7	1.3	0.6	6.0	2.1
1939-45	7.4	5.7	14.7	6.0	7.5	5.3	-4.5	6.7
1945-49	8.4	4.2	6.0	12.4	9.9	14.2	-1.2	6.3
1949-53	5.5	4.2	3.4	4.7	5.9	5.2	-1.1	4.6
1953-58	6.2	5.5	4.6	4.1	6.4	4.0	-0.8	5.5

SOURCE: Change in net worth from Table 26; saving and net stock issues from Table 34.

a Denominator is close to zero.

b Residual divided by number of years in period.

Corporate business, on the other hand, shows a definite upward movement in the share of the residual from about two-fifths in 1900-29 to about two-thirds since World War II. This reflects the smaller contribution of equity financing and the more rapid increase in the price of plant and equipment in the more recent period.

The movements of the share of the residual in total net worth change are erratic for both government sectors, particularly for the federal government. For state and local governments the residual accounted for about three-fifths of net worth changes for the period as a whole. In some periods, during which the general price level changed little, such as 1922-29 and 1933-39, almost the entire net worth change is accounted for by saving. In others, characterized by sharply rising or declining prices, such as 1912-22, 1929-33, and 1945-49, most of the change in net worth is reflected in the residual.

In the case of the federal government, the share of the residual was under 3 per cent for the entire period before World War II, since the government did not have large amounts of price-sensitive assets. It is only since the war that the price effect has had considerable influence on the change in the federal government's net worth. This is due to the increasing importance of the stock of reproducible and price-sensitive assets and to the smallness of changes in debt and net worth during the postwar period.

Two methods of evaluating corporate net worth are used in the national and sectoral balance sheets. In the corporate sector, corporate net worth is calculated as the difference between assets and liabilities, in the same way as for other sectors. In other sectors, however, particularly the household sector, corporate net worth as an asset is measured by the market value of corporate stock. The effects of alternative valuations on balance sheets were illustrated in Table 25, and it is of some interest here to examine these effects on the decomposition of net worth changes.

Instead of asking how much of the change in adjusted corporate book value is accounted for by saving, stock issues, and other factors, one could ask the same question about changes in market value. The residual would then contain not only the usual effect of price changes but also the influence of factors, such as expectations of future stock prices and earnings, which determine the relationship between adjusted book and market valuations. One could also ask how much the analysis of household net worth would be affected by the substitution of adjusted book value for market value of corporate stock in household portfolios.

For the whole period from 1900 to 1958, the answer to the second question is that the effect is very small (Table 36). In seven of the nine

TABLE 36

RESIDUAL NET WORTH CHANGES UNDER ALTERNATIVE DEFINITIONS OF NET WORTH:
CORPORATIONS AND NONFARM HOUSEHOLDS, 1900-58
(current prices)

	Nonfarm Households		*Nonfinancial Corporations and Finance*	
	Corp. Securities at Market Value (1)	Corp. Securities at Adjusted Book Value (2)	Equity, with Corporate Securities at Adjusted Book Value (3)	Equity, with Corporate Securities at Market Value (4)
RESIDUAL CHANGE IN NET WORTH^a (BILLION DOLLARS)				
1900-12	24.4	17.7	0.8	9.3
1912-22	70.6	85.7	32.2	9.1
1922-29	89.7	45.8	17.4	74.6
1929-33	—127.2	—98.3	—36.8	—73.6
1933-39	40.1	39.6	8.0	5.6
1939-45	116.4	128.2	47.9	30.2
1945-49	99.6	173.7	73.3	—29.0
1949-53	128.5	152.5	68.2	32.2
1953-58	270.2	219.7	127.4	192.6
1900-58	712.3	764.6	338.4	251.0
SHARE OF RESIDUAL IN TOTAL NET WORTH CHANGES (PER CENT)				
1900-12	44.2	36.5	5.0	37.8
1912-22	51.5	56.3	53.8	24.7
1922-29	57.2	40.5	32.1	67.0
1929-33	101.8	102.4	75.3	85.8
1933-39	67.4	67.1	b	b
1939-45	44.0	46.4	71.0	60.6
1945-49	58.7	71.2	71.4	b
1949-53	56.0	60.2	63.0	44.6
1953-58	62.2	57.3	69.1	77.1
1900-58	52.0	53.3	60.8	55.1

SOURCE: Tables 25, 34, and 35.
^a Absolute values of alternative net worth measures are shown in Table 25.
^b Denominator close to zero.

subperiods, the difference in the share of the residual in net worth change was less than 10 per cent. The substitution of adjusted book for market value had the greatest impact in 1922-29, when the stock price rise far outdistanced the growth of adjusted book equity per share, and in 1945-49 when market values failed to reflect the growth of corporate net worth.

In the corporate sector itself, the method of valuation is more signifi-
cant. Substitution of market for adjusted book values of net worth re-
duces the residual's share in net worth changes by more than 5 per
cent over the whole sixty years but raises it greatly during several
periods of rapid stock price movements—1900-12, 1922-29, 1929-33, and
1953-58.

This decomposition of changes in net worth has proceeded without
regard to the capital gains tax which might have to be paid by the
owner if he sold an asset on which he had made an unrealized capital
gain. This gain would be measured under present U.S. income tax
laws by, broadly speaking, the difference between the sales proceeds
and the original cost to the owner, rather than by the excess over
national original cost which is used in social accounting and in our
calculations. Disregard of the potential capital gains tax seems to be
justified in a study like the present one for two main reasons: the
purpose for which national and sectoral balance sheets are drawn up,
and the uncertainty and indefiniteness of the potential capital gains
tax liability.[9]

National and sectoral balance sheets, like business balance sheets,
are drawn up on the assumption of continuous operation. They are not
liquidation balance sheets of the type which are prepared when a
business is being wound up.[10]

More important as a practical matter is the uncertainty about the
date and amount of capital gains tax liability. No capital gains tax
is payable if an asset is held until the owner's death, and there is no
liability, or a smaller one, if the asset is given away during the owner's
life. There is also no capital gains tax liability if the gain is offset by a
capital loss realized during the same fiscal year. Since the rate at which
the capital gain is taxed depends on the taxable income of the owner
in the year of realization, no estimate can be made of capital gains tax
liability for a group of holders without knowing their income and
other factors relevant to the determination of the owners' tax bracket.
A still more important obstacle to an actual estimation of capital gains

[9] The capital gains tax liability does not, of course, have any effect on the national
balance sheet. Here any amount that might be entered among the liabilities of the
different groups of owners would be offset by a claim among the assets of the
federal government. It is only assets and liabilities, and hence net worth, of dif-
ferent sectors that would be affected by specific recognition of potential capital
gains tax liability.

[10] Balance sheets prepared in accordance with business accounting generally make
no allowance for potential capital gains tax liability. This may be explained by the
usual valuation at cost rather than at market. Where assets are valued at market, e.g.,
the balance sheets of investment companies, mention of capital gains liability is
not unusual, although it is commonly made in a note to the balance sheet rather
than in the form of a specific reserve for capital gains tax liability on the right
hand side of the balance sheet.

tax liability is the dependence of the tax on the holder's cost of acqui-sition. Often, particularly during periods of rising prices, the cost to the owner is higher than the national original cost because of previous changes of hands. Hence the capital gain taxable under income tax laws is lower than the gains calculated in our national and sectoral balance sheets, which are based on the difference between the market value and the national original cost of the asset.[11]

It is thus evident that the "residual" shown in our calculations is in excess, and probably far in excess, of capital gains potentially liable to tax. This would be true even if the unrealistic assumption were made that all assets on which unrealized capital gains exist were to be sold immediately. Since the maximum tax rate on realized long-term capital gains is 25 per cent or one half of the rate for current income, which-ever is less; since the tax basis is higher for most holders than national original cost; since a substantial fraction of potential capital gains would accrue to people with relatively low income and low or zero tax rates, particularly in the case of capital gains on homes; and since a substantial fraction of assets with unrealized appreciation are never sold during the owner's lifetime, the average effective tax rate on the potential capital gains must be quite low. The rate probably is not above 10 per cent of unrealized appreciation as calculated on the national and sectoral balance sheets in the case of stock, and even less for real estate. It therefore does not appear necessary to venture an estimate of the amount of potential capital gains tax liabilities, an esti-mate which would have to be very indefinite because of the nature of the situation. It would clearly be small compared to the calculated "residual." It is unlikely that allowance for potential capital gains tax liability would change the picture for large sectors, although it might, to a minor degree, affect the situation for smaller groups of economic units.

Net Worth in Constant Prices

Current value data on net worth changes cannot answer several impor-tant questions. In particular, they do not reveal whether net worth changes kept pace with price level changes, i.e., whether they repre-

[11] In the case of a common stock, or a piece of real estate, originally offered (or constructed) for $100 twenty years ago and now worth $300, which has changed hands several times and was acquired by the present owner five years ago for $250, the effective potential taxable capital gain is only $50 compared to $200 of un-realized capital gain and net worth increase in our calculations, which are based on the cost to the first unit within the country. This difference between realized capital gains based on national original cost and capital gains taxable under present income tax laws is another effect of aggregration. In the absence of changes of hands and international transactions, the sum of capital gains calculated in accordance with income tax laws and that estimated in national and sectoral balance sheets would be identical.

sented gains or losses in the power to buy goods and services in general. This is especially important when different time periods are being compared.

For these questions data on net worth in constant prices are required. The deflation is carried through here by using a measure of the general price level rather than specific-asset deflation.[12] The GNP deflator is used to express all net worth figures in 1929 dollars and changes in deflated net worth are then derived from these figures.

Saving and net stock issues (Table 37) are deflated annually by the GNP deflator and then cumulated by periods. The resulting "real saving" series is not real investment in the sense of a physical quantity of tangible assets purchased, as it would be if a specific-asset deflation had been performed.

As in the previous section, the change in net worth is decomposed into saving and net stock issues and a residual. The interpretation of this residual, however, is somewhat more complicated than that of the current value residual which represented the influence of price changes on price-sensitive assets—specifically, tangible assets and common stocks. Asset price changes can be interpreted as being composed of changes in the general price level (GNP deflator) and the differential price movement of assets. The deflated residual for the country as a whole is affected only by the differential price movement. The deflated residuals for sectors, however, contain, in addition, the effect of price level changes on the real value of monetary assets and liabilities. This effect cancels out when all sectors are combined, because monetary assets are roughly equal to monetary liabilities.

For all sectors together, the change in net worth between 1900 and 1958 was slightly more than $930 billion in 1929 prices (in 1960 prices, over $1,850 billion). Of this total, the deflated residual accounted for only about one-third, against a share of about two-thirds in current prices. The residual reflects the fact that since the turn of the century sensitive asset prices have on the average increased more rapidly than the general price level. The residual was roughly half or more of the change in net worth in periods of particularly rapid rises or declines in stock prices, such as 1922-29, 1929-33, and 1953-58 (Table 38).

[12] This disregards the further question whether the percentage yield on net worth has changed or is expected to change. The yield ratio will be the same whether yield and net worth are expressed in current or constant prices, but since the yield may be influenced by actual or prospective price changes the question is pertinent in a comprehensive discussion of the effects of inflation and deflation on owners' economic welfare. That question, however, would necessitate going well beyond deflated values of net worth and of property income, and would have to include the differential effect of price level changes on real income of different forms and different groups of economic units. These broader questions are beyond the scope of this study.

The deflated residual for the entire period 1900-58, over $300 billion, was divided in the following proportions among the main sectors, if the effect of net external transfers is disregarded:

Federal government	27%
Nonfarm households	25%
Nonfinancial corporations and finance	24%
Agriculture and unincorporated business	15%
State and local governments	8%

As can be inferred from its timing (World War II and the immediate postwar period) and as will be shown more explicitly in Chapter 8, the large share of the federal government reflects the extent to which inflation reduced the real value of war debts. The household share, on the other hand, is traceable mainly to residuals in 1922-29 and 1953-58, a concentration which suggests the influence of stock prices. In fact, those same two periods account for most of the residual of all sectors other than the federal government. The World War II inflation adversely affected the net worth of all the sectors except the federal government and agriculture, the latter aided by large rises in land prices.

If the residuals are compared with initial net worth, it is clear that price changes have been of most importance for the federal government. In no other sector did the residuals approach the 9 per cent per annum at which price changes increased the real net worth of the federal government during 1912-22, or the 10 per cent rate at which they reduced its negative net worth during World War II.

Households made the greatest relative gains in 1922-29 and 1953-58. The earlier rise, however, had a much greater impact on the group's net worth. Since World War II the residual for corporations has been greater, relative to net worth, than for any other private sector.

Many of the residuals are not as easily accounted for as those for households and the federal government, and even these two sectors contain fluctuations that cannot be explained by the references to stock prices and war debts that have been relied on here. Two types of information are needed: data on asset prices and their relation to the general price level, and data on the balance sheet structure of the various sectors, particularly on the relationship between their holdings of price-sensitive assets and their monetary assets and liabilities. These are the subjects of the next two chapters.

TABLE 37

NET SAVING AND STOCK ISSUES, BY SECTOR, 1929 PRICES, 1900-58

(billion dollars)

| | Net Saving | | | | | | | | Net Saving Plus New Stock Issues | |
	Total	Nonfarm House-holds	Agri-culture	Nonfarm Un-incorporated Business	Non-financial Corpo-rations and Finance	State and Local Gov-ernments	Federal Govern-ment	Net New Stock Issues, All Cor-porations	Total	Nonfinancial Corporations and Finance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1900-12	74.5	55.1	-0.4	0.6	14.8	3.0	1.5	12.9	87.4	27.7
1912-22	72.1	73.7	-3.5	1.7	20.4	-0.4	-20.0	10.4	82.5	30.8
1922-29	96.4	66.4	1.0	-0.1	16.0	6.1	7.0	20.5	116.9	36.5
1929-33	-23.0	2.3	0.1	-1.5	-19.0	1.0	-4.9	3.3	-19.7	-15.8
1933-39	18.4	23.2	2.5	6.2	-9.5	7.6	-16.3	2.2	15.6	-7.3
1939-45	18.4	128.0	18.9	6.3	15.1	11.7	-156.5	2.2	20.6	17.3
1945-49	76.8	48.8	4.5	1.7	14.3	0.6	6.8	5.4	82.2	19.7
1949-53	89.3	60.4	5.0	3.1	16.8	5.4	-1.3	7.2	96.5	24.0
1953-58	114.9	89.6	-0.4	0.8	19.7	10.2	-3.4	11.8	126.7	31.5
1900-58	532.8	547.5	22.7	18.8	88.6	45.2	-187.1	75.9	608.7	164.4

SOURCE TO TABLE 37

1900-45: The saving estimates in Table 34, which are adjusted to match the revised benchmark balance sheets in Vol. II, Table Ia, are not available annually, and therefore could not be deflated by an annual price index. For this reason, the revised constant dollar figures in this table were estimated from those in Table 34 by applying to them ratios of deflated to current value saving, by sector and period, from the unrevised Goldsmith data in *Study of Saving*, Vol. I, calculated as follows:

In 1929 prices:

Cols. 1-7: Table T-12, p. 370.

Col. 8: Preferred stock, 1900-18, Table V-17, col. 1, p. 493; 1919-45, Table V-18, col. 8, p. 494. Common stock, Table V-19, col. 1 minus col. 20, pp. 496-497. Stock prices deflated by Table T-16, col. 1, p. 377.

Col. 9: Col. 1 plus col. 8.
Col. 10: Col. 5 plus col. 8.

In current prices:

Cols. 1-7: Table T-1, p. 345.

Col. 8: Preferred stock, 1901-18, Table V-17, p. 493; 1919-45, Table V-18, p. 494. Common stock, Table V-19, pp. 496-497.

Col. 9: Col. 1 plus col. 8.
Col. 10: Col. 5 plus col. 8.

1945-58: Vol. II of this book.

Cols. 1-7: Table VIII-d-3e.

Col. 8: Tables VIII-d-1 and VIII-d-2.

Deflators from *Survey of Current Business*, July 1962, p. 8, and *U.S. Income and Output*, 1958, Table VII-2, p. 221.

TABLE 38

RESIDUAL NET WORTH CHANGES: TOTAL MINUS SAVING AND NET STOCK ISSUES,
BY SECTOR, 1929 PRICES, 1900-58

	Total (1)	Nonfarm Households (2)	Agriculture (3)	Nonfarm Unincorporated Business (4)	Nonfinancial Corporations and Finance (5)	State and Local Governments (6)	Federal Government (7)	Total Excluding Federal Government (8)
				RESIDUAL CHANGE IN NET WORTH (BILLION DOLLARS)				
1900-12	32.4	10.5	27.5	1.5	−11.2	4.5	−0.8	33.2
1912-22	−2.0	−5.9	−10.0	3.6	4.9	4.4	1.2	−3.2
1922-29	124.7	98.0	−2.4	7.3	20.6	0.8	0.4	124.3
1929-33	−83.1	−61.2	−11.8	−3.6	−8.7	4.1	−2.6	−80.5
1933-39	30.3	25.8	3.3	4.1	1.9	−1.1	−4.4	34.7
1939-45	−19.1	−43.8	13.0	−2.8	−3.2	−5.0	22.9	−42.0
1945-49	39.6	−33.1	−0.5	6.8	17.4	10.0	39.3	0.3
1949-53	61.0	18.5	0.8	2.3	18.2	3.6	17.4	43.6
1953-58	142.2	72.3	8.7	2.1	38.9	3.5	15.1	127.1
1900-58	326.0	81.1	28.6	21.3	78.8	24.8	88.5	237.5
			SHARE OF RESIDUAL IN TOTAL NET WORTH CHANGES (PER CENT)					
1900-12	27.0	16.0	101.5	71.4	−67.9	60.0	−114.3	27.9
1912-22	−2.5	−8.7	74.1	67.9	13.7	110.0	−6.4	−3.2
1922-29	51.6	59.6	171.4	101.4	36.1	11.6	5.4	53.1
1929-33	80.8	103.9	100.9	70.6	35.5	80.4	34.7	84.6
1933-39	66.0	52.7	56.9	39.8	−35.2	−16.9	21.3	52.0
1939-45	*	−52.0	48.3	80.0	−22.7	−74.6	−17.1	−31.1
1945-49	32.5	−210.8	−12.5	80.0	46.9	94.3	85.2	4.0
1949-53	38.7	23.4	13.8	42.6	43.1	40.0	108.1	30.8
1953-58	52.9	44.7	104.8	72.4	55.3	25.5	129.1	49.4
1900-58	34.9	12.9	55.8	53.1	32.4	35.4	−89.8	23.0

RESIDUAL CHANGE PER YEAR AS PERCENTAGE OF INITIAL NET WORTH

1900-12	1.2	0.8	5.1	0.9	-2.0	5.4	-11.1	1.2
1912-22	-0.1	-0.3	-1.4	2.4	0.8	3.1	9.2	-0.9
1922-29	4.2	5.6	-0.6	5.1	3.0	0.6	-0.3	4.0
1929-33	-3.1	-3.7	-5.2	3.2	-1.4	4.1	6.4	-3.0
1933-39	0.9	1.2	1.2	3.0	0.2	-0.6	4.2	1.0
1939-45	-0.5	-1.8	4.2	-1.4	-0.4	-2.3	-10.0	-1.1
1945-49	1.6	-1.7	-0.2	5.1	2.9	6.5	-5.9	0.1
1949-53	2.1	0.9	0.2	1.4	2.5	1.8	-3.6	1.3
1953-58	3.2	2.5	2.0	0.9	3.4	1.2	-2.9	2.6

SOURCE: Change in net worth from Table 27; saving and net stock issues from Table 37.