7. The two-months' average of 4.81% for the 16 issues in Schedule 7 which are also included in Schedule 7–A reflects a continuation in 1941 of a downward tendency in electric operating utility preferred stock yields.

Schedule 8.—This schedule reflects annual earnings-price
25 ratios, that is, the percent of net earnings per share to market price, on a group of electric operating utility common stocks during the period of twelve years from 1929 to 1940, inclusive, based on averages of yearly high and low market quotations and published annual earnings per share of common stock. The issues included in the exhibit comprise all electric operating utility common stocks shown in Schedule 26 of the previously mentioned publication of the Federal Communications Commission issued June 15, 1938. The stocks listed from such publication include only those common stocks which are held by the public to the extent of at least 5 percent of the number of shares outstanding.

Schedule 8 reveals that, on the average, from 1929 through 1932 there was an upward trend in common stock earnings-price ratios on these common stocks. In other words, during this period, investors demanded that increasing earnings be available for common stock per dollar of market price. In terms of an unweighted arithmetic average, the average earnings-price ratio for the group of 14 common stocks was 4.06% in 1929, and increased in the three succeeding years, rising to 4.59% in 1930, to 5.95% in 1931, and to 7.74% in 1932, the latter ratio being the highest reflected in any year during the twelve-year period.

In 1933, investors' demands abated somewhat, the average earnings-price ratio declining to 7.02%. In 1934 the ratio rose to 7.57%, but declined to 7.32% in 1935 and to 5.89% in 1936. In 1937 and 1938 the ratio advanced to 6.77% and 7.42%, respectively, but declined to 7.04% in 1939. The ratio rose 0.26% to 7.30% in 1940.

It will be observed that during the twelve-year period
26 the average did not exceed eight percent in any year. Aside from the two years 1929 and 1930 in which the average was less than five percent, there were two years in which the average was less than six percent; one year, 1937, in which it was 6.77%; and seven years in which the average was above seven percent. The highest average, as above stated, was 7.74% in 1932.

Schedule 8–A.—This schedule reflects earnings-price ratios of 14 electric operating utility common stocks and the percent of gross income available for common stock based on averages of

high and low market quotations for the first two months of 1941, and on earnings per share for the twelve months ended December 31, 1940. The common stocks listed in Schedule 8–A are the same issues for which earnings-price ratios for the period 1929–1940 are presented in Schedule 8.

Inspection of data contained in this schedule will show that the earnings-price ratios of the 14 common stocks listed were as follows: one at 5.34%; three from 6.00% to 7.00%; five from 7.00% to 8.00%; two at slightly over 8.50%; one at 9.69%; one at 9.83%; and one at 10.14%. Nine of the fourteen issues reflected earnings-price ratios of 8.00% or less on the basis indicated. It will be noted that for three of the five issues selling on a basis in excess of 8.00% the proportion of gross income available for common stock falls below 50%.

The unweighted arithmetic average of the earnings-price ratios of the fourteen common stock issues shown in Schedule 8–A is 7.88%, as compared with the 1939 average of 7.04% and the 1940 average of 7.30% for the same issues shown in Schedule 8. It will be noted that the 1941 average of 7.88% is 0.14% higher than the highest average (7.74% in 1932) reflected for the period 1929–1940.

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Schedule 9.—Schedule 9 presents annual information on the volume of all corporate financing in the United States since 1934, and the portion thereof representing financing by public utilities, as compiled by The Commercial & Financial Chronicle. The total volume of financing in each year is segregated to show the portions representing new capital and refunding issues, and subdivisions of the amounts representing new capital, refunding and total corporate financing disclose the proportionate amounts of long-term bonds and notes, short-term bonds and notes, preferred stock and common stock issues comprising the total, both for all corporate issues in the United States and for the portion thereof representing security issues of public utilities.

The total amount of new corporate issues in the United States in 1934 was 491 million dollars, in 1935—2,267 millions, in 1936—4,632 millions, in 1937—2,434 millions, in 1938—2,140 millions, in 1939—2,196 millions, in 1940—2,721 millions, and in the first two months of 1941—587 millions, the total for the entire period being 17,468 millions. Of this total, 8,539 millions, or 48.9%, represented financing by public utilities. By years the proportions of all public utility security issues to all corporate issues

in the United States were as follows: 1934—32.3%, 1935—56.6%, 1936—45.9%, 1937—34.0%, 1938—57.1%, 1939—60.4%, 1940—46.4%, and 1941 through February—56.4%.

In this connection, attention is directed to Note 3 on Page 4 of Schedule 9 which indicates that The Commercial and Financial Chronicle, which is the source of the above data on corporate financing, does not classify nonretailing producers of natural gas and natural gas pipe-line companies as public utilities. Securities issued by such natural gas companies are reported by that publication under the heading "Miscellaneous." However, it is noted that the common stock issue of Southern Natural Gas Company offered to stockholders in January 1941 was classified by the above publication as a public utility issue, although that company is not engaged in the retail distribution of natural gas. The amount of the offering, exclusive of shares subscribed by Federal Water Service Corporation, parent company, was $2,310,070 (reflected under "New Capital" on Page 6 of Schedule 9).

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The proportion of the total amount of all corporate financing during the period from 1934 through February 1941 represented by new capital was 29.1% New Capital accounted for 12.0% of all public utility financing and 45.5% of all nonutility financing during the same period. By new capital, in this connection, is meant capital obtained for the purpose of additions to plant and property or to increase working capital. By refunding is meant the issuance of new securities for the purpose of retiring existing obligations at or before maturity, or of affecting reductions in dividend rates on preferred stocks.

New capital raised by corporations in the United States during the period from 1934 through February 1941 aggregated 5,087 million dollars of which public utility issues accounted for 1,028 millions, or 20.2%. of the 1,028 millions of new capital raised by public utilities, 94.7% was represented by bonds and notes, 4.2% by preferred stocks, and 1.1% by common stocks, whereas the corresponding percentages of new capital raised by all nonutility corporations in the United States were as follows: for bonds and notes—72.1%; for preferred stocks—11.4%; and for common stocks—16.5%.

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The total amount of all corporate issues for refunding purposes during the same period was 12,381 million dollars, of which public utility issues accounted for 7,511 millions, or 60.7%. This clearly demonstrates that public utilities have taken advantage of

the favorable market in recent years to conduct large-scale refunding operations.

Public utility financing during the period since 1934 accounted for the following proportions of all corporate issues: long-term bonds and notes, maturing later than five years from date of issue—7,869 millions, or 53.3% of all long-term corporate issues; short-term bonds and notes—160 millions, or 31.5% of all short-term corporate issues; preferred stocks—487 millions, or 35.0% of all preferred stock issues; and common stocks—23 millions, or 2.9% of all common stock issues. As previously stated, public utility issues of all kinds accounted for 48.9% of all corporate issues over the entire period under discussion. However, during the years 1938 and 1939 public utility financing accounted for very nearly 60% of all corporate financing in the United States and, although the proportion dropped to 46.4% in 1940, it rose to 56.4% in the first two months of 1941.

Analysis of the various types of securities issued by public utilities during the period covered by Schedule 9 reveals that there were no capital stock issues sold in 1934. Small amounts of preferred and common stock representing new capital were sold in 1935, approximately $4,500,000 of preferred stock issues representing new capital were sold in 1936, and approximately $5,700,000 of preferred stock issues and $700,000 of common stock issues representing new capital were sold in 1937. No common stock issues were sold in 1938 and the amount raised from the sale of common stock in 1939 was only $300,000, although preferred stock issues for new capital amounting to approximately $5,100,000 were sold in both years.

In contrast with this record, Schedule 9 reflects the sale by public utilities for new capital purposes of $6,600,000 of common stock and $21,300,000 of preferred stock in the year 1940 and $2,300,000 of common stock and $109,000 of preferred stock in the first two months of 1941. The combined total of such issues in 1940 and 1941 is somewhat in excess of the aggregate of all utility preferred and common stock issues for new capital purposes in the entire preceding six-year period.

Schedule 10.—This schedule contains a summary of all known electric operating utility bond issues, other than bonds and debentures having serial maturities, sold during the years 1935 to 1940, inclusive, and shows that during this period 327 such bond issues were sold aggregating in excess of five billion dollars. The sum-

mary on Page 1 is presented by years and discloses the following weighted average yields on newly issued electric operating utility bonds based on offering prices to purchasers: 1935—3.81%; 1936—3.48%, 1937—3.63%, 1938—3.43%, 1939—3.42%, and 1940—3.06%. The weighted average yield on all issues sold during the six-year period, irrespective of rating, was 3.47%.

Page 2 of Schedule 10 reflects average yields on the same bond issue classified according to ratings assigned by Moody's
31 publications. It will be seen that issues aggregating 4.2 billions, or 78.5% of the principal amount of all issues sold during the six-year period, represented bonds of Aaa, Aa and A rating, and issues aggregating only 352 millions, or 6.5% of the total, represented bonds of Baa rating. It thus appears that the major portion of electric operating utility bonds issues sold in the period 1935–1940 consisted of high and medium higher grade bonds.

The summary on Page 2 of Schedule 10 also discloses that average yields to purchasers have declined since 1936. With respect to bonds carrying the four highest Moody's ratings, yields on issues sold in 1940 were lower than in any other year of the six-year period, such yields being as follows: Aaa—2.64%; Aa—2.80%; A—3.07%; and Baa—3.81%.

Of the 327 issues included in the summary for the six-year period, 98 were issues to which no rating was assigned by Moody's publications. The majority of such issues represent bonds which were privately sold. No rating is ordinarily assigned to bonds which are sold privately inasmuch as there is usually no trading in such issues.

Schedule 10–A.—This schedule contains certain details in connection with offerings of electric operating utility bond issues sold during the year 1940. Such offerings aggregated approximately $800,000,000 in principal amount. The weighted average yield to purchasers of these issues was 3.06%. The schedule shows, for each issue, the name of the issuing company, month of offering, description of issue, principal amount of offering, price to public, and yield to maturity.

Schedule 10–B.—Schedule 10–B contains a list of all electric operating utility bond issues sold during the first two
32 months of 1941, and presents similar information with respect to such issues as that described above in connection with Schedule 10–A. The aggregate principal amount of the issues sold in the two-months' period was $157,991,000. There

were 10 issues sold during this period, including one Aaa issue sold in January on a 2.60% yield basis and two A issues sold to yield an average of 2.96%. Seven issues, to which no rating was assigned, were sold in this period, all of which were sold privately. The weighted average yield on all issues sold was 3.17%.

Schedule 11.—Schedule 11 presents a compilation of all known preferred stock issues of electric operating utility companies sold in the period 1935–1940, showing the cost of money to issuing companies and yields to purchasers. The average yield to purchasers of such issues was 4.38% for 1935, 4.62% for 1936, 4.63% for 1937, 4.85% for 1938, 4.99% for 1939, and 4.36% for 1940. Yields on individual issues in excess of $1,000,000 ranged from 3.85% to 5.95%. For the entire period, the average yield on all issues sold was 4.58%.

Comparison with Schedule 10 indicates the relatively low proportion of preferred stock to bonds issued by electric utilities during the six-year period, new issues of bonds and preferred stock having been sold in proportion of about 23 to 1. However, it should not be inferred that such a relationship exists between outstanding bonds and preferred stocks in the capital structures of electric operating utilities. For example, in the volume entitled "Statistics of Electric Utilities in the United States—1939", published by the Federal Power Commission, it is shown on Page X that for 383 Class A and Class B privately owned electric utilities, long-term debt constituted 51.8% of the total amount of securities outstanding as of December 31, 1939, while preferred stocks comprised as of December 31, 1939, addition, common stocks accounted for 32.2% of the securities outstanding and the remainder, or 0.7%, consisted of premiums, assessments, etc., on capital stock.

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Schedule 11 shows for each issue the net proceeds per share realized by the issuing company from the sale of preferred stock as well as the offering price per share to the public. In addition, it shows the percent relationship of annual dividends both to net proceeds and to price paid by public.

For example, a 4½% preferred stock issue of Appalachian Electric Power Company was sold in December 1940 at $106 per share to yield 4.25% to purchasers. The company realized $102.50 per share as the net proceeds from the sale after meeting all expenses of floating the issue, the dividend requirement of $4.50 per share representing an annual cost to the company for preferred stock capital of 4.39% ($4.50÷$102.50). The expenses of

floating the issue therefore resulted in increasing the annual preferred stock expense of the company over the annual yield to purchasers by 0.14%. Stated another way, the yield to purchasers, 4.25%, plus cost of flotation, 0.14%, equals the annual cost to the company for preferred stock capital, 4.39%.

Inspection of Schedule 11 reveals that the weighted average cost of flotation in connection with electric operating utility preferred stock issues was 0.12% in 1935 (4.50% − 4.38%), 0.15% in 1936 (4.77% − 4.62%), 0.15% in 1937 (4.78% − 4.63%), 0.19% in 1938 (5.04% − 4.85%), 0.22% in 1939
34 (5.21% − 4.99%), and 0.16% in 1940 (4.52% − 4.36%).

Over the entire period 1935–1940, the weighted average cost of flotation was 0.16% (4.74%−4.58%). In 1940 the cost of flotation for five preferred stock issues carrying a dividend rate of 4½% or lower ranged from 0.11% to 0.16%. These five issues were sold at prices to yield from 3.85% to 4.37% to purchasers.

Schedule 11–A.—This schedule contains details of the two electric operating utility preferred stock issues sold to the public in the first two months of 1941. The aggregate offering price of such issues was approximately $8,000,000, and the average yield to purchasers was 4.81%. It will be noted that both issues carried a dividend rate of 5%

Schedule 12.—Schedule 12 contains details of all known offerings of electric operating utility common stocks during the period from 1935 through February 1941. Of the six issues listed in this schedule, three were offered to the public in 1940, one was offered in 1939, and the other two issues were offered primarily to stockholders in 1935 and 1937, respectively. In contrast with Schedule 9, Page 5, which reflects the sale of $6,622,520 of new issues of common stock during the year 1940, Schedule 12 reflects common stock sales amounting to $22,687,290 in that year. By reference to the footnotes in Schedule 12 it will be seen that only the issue of West Penn Power Company ($4,320,000), and 68,855 shares of the Indianapolis Power & Light Company issue ($1,-652,520) fall within the category of new issues. The difference between the sum of the foregoing amounts, $5,972,520, and the above total of $6,622,520 for common stock issues in 1940, is represented by an issue of common stock of Bridgeport Hydraulic Company, a nonelectric utility, amounting to $650,000.
35 For each issue listed in Schedule 12 there are given the name of the issuing company, a description of the issue,

the offering date, the number of shares offered and amount of offering, the price to underwriters (if underwritten), the net price to company, the price to public in dollars per share, and the cost of flotation in dollars per share and percent of offering price, together with the amount of the issuing company's latest reported annual earnings per share of common stock for a twelve-months' period preceding the offering date, the percent of such earnings per share to offering price, and the percent of gross income available for common stock in the periods for which earnings per share are given.

The first issue in Schedule 12 is that of Boston Edison Company (formerly Edison Electric Illuminating Co. of Boston), comprising 82,289 shares of $100 par common stock offered to stockholders in the latter part of 1935 at a subscription price of $150 per share. Approximately 94% of the shares offered were taken up by stockholders and the remaining shares were offered to the public at a price of $166 per share. The proceeds were used to retire a portion of the company's outstanding indebtedness. On the basis of earnings of $9.73 per share recorded for the twelve months ended September 30, 1935, the average offering price of $150.93 per share resulted in an earnings-price ratio of 6.44%. The proportion of the company's gross income available for common stock in the period mentioned was 61.91%.

The second issue in Schedule 12 was sold as the result of an offering to stockholders of Tampa Electric Company in November 1937 to purchase 31,497 shares of the company's no par common stock at a subscription price of $20 per share. The 36 stockholders subscribed to 30,712 shares, or approximately 97.5% of the shares offered. On the basis of earnings of $2.41 per share for the twelve months ended July 31, 1937, the offering price of $20 per share resulted in an earnings-price ratio of 12.05%. In this connection, it should be mentioned that the range of market quotations for Tampa Electric Company common stock in 1937 was 25¼–41. It is thus apparent that the price of $20 per share paid by stockholders was well below the then current market price.

The next issue shown is that of Newport Electric Corporation, consisting of 59,550 shares of $20 par common stock offered to the public in May 1939 at $29.50 per share. This offering did not represent new financing by the company inasmuch as the stock offered, constituting all of the company's outstanding shares, was sold for the account of Utilities Power & Light Corporation,

former parent. The price of $27.00 per share to underwriters represented a discount of $2.50 per share from offering price to public, and the net proceeds from the sale amounted to $26.85 per share. The cost of flotation was therefore $2.65 per share, or 8.98% of offering price. On the basis of earnings of $2.85 per share for the twelve months ended March 31, 1939, the offering price of $29.50 resulted in an earnings-price ratio of 9.66%.

In April 1940, 714,835 no par common shares of Indianapolis Power & Light Company were offered to the public at a price of $24.00 per share. Of this number, 645,980 shares represented previously issued shares which had been held by the trustee for Utilities Power & Light Company, former parent company. The remaining 68,855 shares represented new financing by Indianapolis Power & Light Company, the proceeds from which con-
37 stituted new capital. The price of $22.00 to underwriters represented a discount of $2.00 per share from offering price, and the net proceeds from the entire issue amounted to $21.97 per share, resulting in a flotation cost of $2.03 per share or 8.46% of offering price. Based on pro forma earnings of $1.83 per share for the year ended December 31, 1939, the offering price of $24.00 per share resulted in an earnings-price ratio of 7.63%. The proportion of the company's gross income available for common stock in 1939 was 33.57%. In conjunction with the above offering of common stock Indianapolis Power & Light Company also sold privately an issue of 2,500 shares of 6% cumulative preferred stock as indicated in Schedule 11.

West Penn Power Company offered for sale to the public in April 1940 an issue of 160,000 shares of no par common stock representing new capital. The shares were sold to underwriters at a discount of $2.00 per share from offering price and other expenses of issuance amounted to $0.24 per share, resulting in a flotation cost of $2.24 per share, or 8.30% of offering price. Based on earnings of $1.62 per share for the year ended December 31, 1939, and on offering price of $27.00 per share, the earnings-price ratio was 6.00%. The proportion of the company's gross income available for common stock in 1939 was 52.84%. In the same month the company offered publicly its first mortgage 3% bonds, Series K, due 1970, Rating Aa, in the principal amount of $3,500,000 at a price of 104½ to yield 2.78% to purchasers, as indicated in Schedule 10–A.

In October 1940, 85,000 shares, constituting all outstanding common shares of Michigan Public Service Company, were of-

fered to the public at a price of $14.25 per share. The
38 shares offered had previously been held by the trustee for
Inland Power & Light Corporation, former parent company; accordingly, the offering did not represent new financing. The price to underwriters was $12.30 per share, or a discount from offering price of $1.95 per share. Details of other expenses of issuance were not available. The discount to underwriters was equal to 13.68% of offering price. On the basis of earnings of $1.16 per share for the twelve months ended June 30, 1940, and offering price of $14.25 per share, the resulting earnings-price ratio was 8.14%. The proportion of the company's gross income available for common stock for the period mentioned was 24.09%.

Economic Conditions.

Chart 7.—Chart 7 shows the range of the composite wholesale commodity price index of the U. S. Bureau of Labor Statistics during the period since 1920, as well as the wholesale price indexes for farm products, foods, and industrial products. From January 1926 through December 1937, the indexes are based on 784 commodity series. However, in January 1938 the number of series was increased to 813, and subsequently, in March 1940, to 863; in October 1940, to 887; and, in January 1941, to 889. The 889 items are grouped into 10 major classifications, consisting of farm products, foods, and eight classifications comprising the industrial products group.

Chart 7 clearly portrays the severe decline in prices which started in 1929 and carried prices to record low levels in 1933. It will also be seen that from March 1933 to March 1937 prices rose steadily, with minor interruptions, the combined index rising from 60% to 88% of the 1926 level during this period. Subsequent to
1937, there was a gradual but steady decline in wholesale
39 prices, the combined index in August 1939 reaching the
lowest level since 1934. However, in September 1939, coincident with the outbreak of war in Europe, all indexes advanced sharply. It is of interest to note that wholesale prices of farm products and foods advanced to a much greater extent than prices of industrial products, as indicated below:

	August 1939	September 1939	Net increase
All commodities	75.0	79.1	4.1
Farm products	61.0	68.7	7.7
Foods	67.2	75.1	7.9
Industrial products	80.1	82.1	2.0

Chart 7 discloses that the abrupt rise in wholesale prices which occurred in September 1939 was followed by a general decline which continued through August 1940. Following a moderate rise in September 1940 an upward trend in wholesale prices was maintained through the remainder of 1940. Data now available disclose that the general level of prices has continued to rise in 1941. The extent of the rise in wholesale prices since August 1940 and the distribution of price increases among the major classifications of commodities are indicated in the following comparison of index figures for the month of August 1940 and for the week ended April 19, 1941:

Number of commodities	Classification	August 1940	Week ended April 19, 1941	Percent increase
889	All commodities	77.4	83.0	7.24
67	Farm products	65.6	75.0	14.33
123 [1]	Foods	70.1	77.8	10.98
699	Industrial products	82.0	86.0	4.88
110 [1]	Building materials	93.3	100.0	7.18
138	Chemicals and allied products	76.7	82.2	7.17
24	Fuel and lighting materials	71.1	73.3	3.09
41	Hides and leather products	96.9	104.3	7.64
63	House-furnishing goods	88.5	91.6	3.50
146	Metals and metal products	94.9	97.8	3.06
114	Textile products	72.3	80.5	11.34
63	Miscellaneous	76.7	78.4	2.22

[1] Duplications have been eliminated from the total; 22 farm products are duplicated in foods; 23 metals and metal products are duplicated in building materials.

40 It will be seen from inspection of the last column shown in the above summary that since August 1940 all indexes have increased, the percentage gains being 14.33% for farm products and 10.98% for foods. Although standing at a higher level in relation to the 1926 average than the farm products and foods indexes, the index for the industrial products group in April 1941 was only 4.88% higher than in August 1940. The more important changes in the subgroup industrial products indexes were increases of 11.34% for textile products; 7.64% for hides and leather products; 7.18% for building materials; and 7.17% for chemicals and allied products.

Chart 8.—Chart 8 shows the Federal Reserve Board's index of industrial production and the U. S. Department of Labor's indexes of factory employment and pay rolls for the period since 1920, all without adjustment for seasonal variation. The Federal

Reserve Board also publishes a seasonally adjusted index of industrial production, as well as an adjusted index of factory employment derived from the unadjusted indexes computed by the U. S. Department of Labor. For the purposes of this study it was considered preferable to use unadjusted indexes for all three series in order to obtain uniformity. Comparison of the adjusted and unadjusted indexes for industrial production discloses slight variations, but the general pattern of the indexes over a period of time is quite similar. This is because adjustments for seasonal variation are applied to monthly data and cancel out when monthly figures are averaged for a year.

It will be noted that the base period of the index of industrial production is shown as 1923–1925, whereas the index as published uses the years 1935–1939 as the base period. This change in base period was made in order to permit comparison of the industrial production index with the indexes of factory employment and pay rolls for which the base period is also the years 1923–1925.

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The Federal Reserve Board recently published a complete revision of its index of industrial production, the revised index being constructed with the average for the years 1935–1939 as equal to 100, whereas in the old index the average for the years 1923–1925 was taken as equal to 100. As a result of the revision, which was carried back through 1919, the new index is derived from 81 individual monthly series directly representing all principal groups of industries in manufacturing and mining, as compared with 60 individual series from which the old index was derived. The index of industrial production was compiled by the Federal Reserve Board for the purpose of measuring changes in the physical volume of the country's industrial output.

Chart 8 indicates that the 1929 peak in industrial production was reached when the index advanced to 134.5 in September of that year. Commencing in October 1929, the index declined without important interruptions until it had fallen to 59.8 in mid-year of 1932. Following an advance in the Fall of 1932, which was largely cancelled in the first few months of 1933, the index advanced to 96.6 in 1933. After several major fluctuations, the index commenced to rise late in 1934 and this rise continued at an accelerated pace which carried the index 9.2 points above the 1929 peak to 143.7 in May 1937. Thereafter, the index fell

abruptly through the remainder of 1937 and more gradually in succeeding months, reaching its next low point in May
42 1938 at 93.1. From that level the index advanced to 117.2 in November. Following a minor recession in the early months of 1939, a substantial increase in industrial production resulted in the establishment of the index in October and November 1939 at a level slightly higher than the 1937 peak. After declining to 127.6 in April 1940, the index advanced sharply through the remainder of the year to a 1920–1940 record peak of 155.2 in November and December. It will be observed that the average level of industrial production in 1940, 139.9, was well above the averages of 126.4, 129.9, and 124.1, respectively, shown for the previous peak years 1929, 1937, and 1939.

Data now available disclose that following a minor decline from the December level in January 1941, the index of industrial production rose above the December level to 158.6 in February 1941 and 164.4 (preliminary) in March 1941.

Chart 8 shows that the general course of the index of industrial production has been closely followed by the indexes of factory employment and pay rolls throughout the period since 1920, although the latter indexes have shown a tendency in recent years to pursue lower levels than formerly in relation to the industrial production index. At the peak of industrial production in 1929 (134.5), the employment and pay rolls indexes reached simultaneous peaks of 110.3 and 114.4, respectively. The lowest levels recorded in 1932 and 1933 were 61.0 for employment and 38.3 for pay rolls, while the index of industrial production reached a depression low point of 59.8. At the production peaks of 1937, 1939, and 1940, the employment and pay rolls indexes, in comparison with the industrial production index, were as follows:

43	Industrial production	Factory employment	Factory pay rolls
May 1937	143.7	111.5	110.1
November 1939	144.8	107.5	103.2
December 1940	155.2	116.2	122.4

It is reported that the factory employment and pay rolls indexes for March 1941 were 119.9 and 131.0, respectively, representing increases over December 1940 of 3.7 points for employment and 8.6 points for pay rolls, as compared with an increase of 9.2 points (from 155.2 to 164.4) for industrial production.

It will be noted that although the 1940 average of 139.9 for industrial production was well above the average for previous peak years during the period 1920–1940, the 1940 average of 107.5 for employment was exceeded in 1937 and the 1940 average of 105.4 for pay rolls was exceeded both in 1929 and 1920.

Chart 9.—This chart reflects changes in the indexes of durable and nondurable manufactures. These indexes represent two of the three major series on which the Federal Reserve Board's index of industrial production is based, the other series being that on minerals production. The chart also portrays the course of freight carloadings of Class I steam railways by means of an index derived by the Federal Reserve Board from weekly data computed by the Association of American Railroads. The monthly data shown on Chart 9 are adjusted for seasonal variation and cover the period from 1920 to date. The base period for the published indexes for durable and nondurable manufactures is the period 1935–1939; however, the indexes have been recomputed in order to change the base period to 1923–1925, as in the case of the index of industrial production shown on Chart 8. No change has been made in the base period of the published index of freight carloadings.

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The Federal Reserve Board's index of durable manufactures covers the production of iron and steel, machinery, transportation equipment, nonferrous metals and metal products, lumber and lumber products, and stone, glass, and clay products. The index of nondurable manufactures covers the production of the following, together with products thereof: textiles, leather, manufactured foods, aloholic beverages, tobacco, paper, printing and publishing, petroleum and coal products, chemicals, and rubber. In the base period used in the published index, i.e., the period 1935–1939, the proportions of the Federal Reserve Board's index of industrial production represented by production of durable and nondurable manufactures, respectively, were 37.93% and 46.87%, with minerals production accounting for the remainder of 15.20%.

Inspection of Chart 9 discloses that the indexes for both durable and nondurable manufactures, after the depression of 1920–1921, advanced without major declines until 1929, reaching peaks of 138 for durable manufactures and 132 for nondurable manufactures in June of that year. Following 1929 both indexes declined sharply, falling to their lowest depression levels in 1932 and 1933. It will be noted that the production index for durable

goods dropped to 31 in March 1933, while the lowest point reached by the nondurable manufactures index was 87 in July 1932. Subsequently, both indexes advanced to reach their next peaks in
1937. However, while the 1937 peak for nondurable man-
45 ufactures, at 158 in April and May, was considerably higher
than the 1929 peak of 132, the durable goods index, at 136 in August 1937, was slightly below the 1929 peak of 138.

The recession commencing late in 1937 resulted in severe declines in both indexes, the decline from the 1937 peak being about 21% for nondurable manufactures and more than 50% for durable manufactures. In the subsequent recovery period from mid-year of 1938 through the close of 1939 both indexes recovered to approximately the 1937 peak level. The upward trend was reversed during the early months of 1940, but thereafter both indexes advanced and by the year-end had exceeded previous peak levels, the indexes for December 1940 being 161 for durable manufactures (1929 peak, 138), and 171 for nondurable manufactures (1929 peak, 132). After a rise to 167 in January 1941, the index for durable manufactures rose to 169 in February and was 167 (preliminary) for March, while the index for nondurable manufactures, after declining to 168 in January 1941, advanced to 171 in February and to 176 (preliminary) in March.

As will be seen from Chart 9, the freight carloadings index exhibits fluctuations occurring generally at the same times and in the same direction as the production indexes for durable and nondurable manufactures. However, it will be noted that the carloadings index in recent years has moved at a considerably lower level than formerly in relation to the production indexes and failed to approach its predepression level in the production peaks of 1937, 1939, and 1940. From a peak of 110 reached in 1929, the carloadings index declined to 49 in 1932, advanced to 84 in 1937, and was 82 at the 1939 production peak. Declining
early in 1940 to 69, the index advanced through the re-
46 mainder of 1940 and in January 1941 stood at 86, the highest
level reached since October 1930. Data now available disclose that the index was maintained at 86 in February and advanced to 87 in March 1941.

Chart 10.—This chart shows the total amount of national income payments by type of payment annually from 1929 to date, as computed by the U. S. Department of Commerce. A full discussion of these data is contained in a bulletin recently published by the Department of Commerce entitled "Monthly Income

Payments in the United States, 1929–1940" and a revised series covering the period 1929–1939 was published in the October 1940 issue of the Survey of Current Business, a Department of Commerce publication. Briefly, the series is intended as an iddex of income payments actually received by individuals. For this reason the series is not identical with the annual estimates of national income published by the Department of Commerce. The principal differences are that in arriving at estimates of national income payments, all business savings (except in agriculture) and employer and employee contributions to retirement and unemployment reserve funds are excluded from national income; and all direct relief payments, public-assistance disbursements by governmental agencies, benefits paid under unemployment compensation and old-age insurance programs, and payments on veterans' adjusted service certificates are included.

The chart shows, as might be expected, that the bulk of national income payments represents compensation of employees. The other major classes of income payments in the order of their importance in proportion to the total consist of entrepreneurial income, dividends and interest, Social Security benefits and other labor income, including pensions, and direct and other relief payments.

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National income payments in 1929 are estimated to have been in excess of 82 billions of dollars. By 1933 the figure had declined to less than 47 billion dollars, or only 57.1% of the 1929 total. In 1934 national income payments increased to 54 billions, in 1935 to 58.8 billions, in 1936 to 67.8 billions and in 1937 to 71.8 billions. From 1937 forward the chart shows for each month a twelve-months' moving total in order to disclose the trend. It is indicated that the trend of national income payments was steadily downward through all of 1938 with the result that total income payments for that year were about 5½ billion dollars less than in 1937. Beginning in 1939, however, this downward trend was reversed, and each month during 1939 and 1940 has witnessed a gradual but consistent increase in total income payments with the result that national income payments in 1939 exceeded the total for 1938 by almost 4 billions of dollars, and 1940 payments exceeded those for 1939 by over 4 billions. It will be noted that total income payments of 74 billions in 1940 exceeded the 1937 total by 2½ billions, but amounted to about 8 billions less than the 1929 total.

Chart 11.—In any discussion of national income, some means of determining the relative value of the dollar, that is, its purchasing power over the necessities of life, is desirable in order to compare changes in real income as distinguished from cash income. For this purpose, an index of the cost of living may be used. Such an index has been computed by the National Industrial Conference Board to show the trend of living costs of wage earners' families. The index is based on a comprehensive list of retail prices and rents in five classifications which are weighted according to their relative importance as follows: Foods, 33; Housing, 20; Clothing, 12; Fuel and Light, 5; and Sundries, 30. In the latter group are included such items as household furnishings, reading materials, recreation and tobacco, as well as organization dues, medical care, carfare, drugs, etc.

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By obtaining the reciprocal of the cost of living index (using 1929 as the base year) the purchasing power of the dollar at 1929 prices may be determined for any date. For example, Schedule 17 indicates that the cost of living index for the year 1933 was 74.9. The reciprocal of this index is 1/74.9, or 0.01335, which, translated into dollars and cents, becomes $1.335. This represents an increase of 33.5 percent since 1929 in the purchasing power of the dollar in its command over the necessities of life for the average wage earner's family.

To illustrate, let it be assumed that in 1929 four units of a given commodity could be purchased for $1.00, and that by 1933 the cost of living index had declined from 100 to 80, and the same four units could be purchased in 1933 for $0.80. It is clear that, at $0.20 per unit in 1933, it would be possible to purchase five units for $1.00 in that year, as against four units in 1929, so that the 1933 dollar would purchase 25% more of that commodity than the 1929 dollar, or, in terms of 1929 prices the 1933 dollar was worth $1.25.

However, Schedule 17 indicates that for every $100 of income payments received by individuals in the year 1929, only $57.10 was received in 1933. On the basis indicated above, each dollar of this reduced amount of income was worth 1,335 times as much as the 1929 dollar in its command over the necessities of life, so that $57.10 of 1933 cash income was equivalent to $76.20 of 1929 cash income. Therefore, although the index of national income payments declined from 100 in 1929 to 57.1 in 1933, the decline in real income was only from 100 to 76.2.

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In other words, the effects of the depression would have been much more severe for all concerned if the cost of living had remained at the 1929 level during the depression period.

It is of interest to note that the purchasing power of income payments received by individuals in 1937, on the basis indicated, was practically the same as it was in 1929. In 1938 there was a decline both in cash income received by individuals and in its aggregate purchasing power, while in 1939 and 1940 there has been consistent improvement from the standpoint of both cash income and real income.

Comparative Risk.

In stating the basic principles in connection with the problem of rate of return, it was indicated that the element of risk is a fundamental factor to be considered in the determination of a proper rate of return. Accordingly, this section is devoted to the presentation of data by means of which the impact of risks confronting public utilities and other forms of enterprise may be measured from the standpoint of stability of earnings.

Chart 12.—Chart 12 reflects the trend of corporate earnings, that is, net earnings available for preferred and common stock, based on earnings indexes computed by Standard Statistics Company for 13 utilities, 117 industrials, and all Class I railroads.

From this chart it may be seen that the trend of utility earnings has not been subject to very sharp fluctuations, as in the case of industrials and railroads. While the earnings indexes for the latter two groups dropped within less than four years from peaks of 140 and 120, respectively, in the latter part of 1929, down to levels indicating substantial deficits in 1933, the reduction in public utility earnings in the same period is indicated by a decline in the earnings index from 140 to 90 (base year 1926=100).

Subsequent to 1933 all indexes exhibited a degree of recovery followed by recession in 1934 and 1935, after which there was continued improvement until 1937. The highest levels reached in the latter year were 131.4 for utilities, 114.4 for industrials, and 34.0 for railroads. A decline in earnings of all three corporate groups commenced in the latter part of 1937, but the decline in utility earnings was much less pronounced. It will be noted that an upward trend in net earnings was maintained by all three groups throughout the year 1939, with the result that 1939 earnings exceeded those for 1938. Utility and railroad earnings for

1939 almost equalled the 1937 calendar-year levels, but industrial earnings still remained approximately 25 percent below the 1937 level.

Earnings for the year 1940 on the basis of actual earnings for the first two quarters and estimated earnings for the third and fourth quarters of the year were above those for the calendar year 1939, with industrials and railroads showing the greater gain. The indexes for the year 1940, as shown in Schedule 18, are as follows: Utilities, 124.5; Industrials, 98.2; Railroads, 26.3. It will be noted that industrial earnings, at 98.2, were somewhat below the 1937 level of 106.1, while utility earnings were slightly lower and railroad earnings were considerably higher than in 1937.

51 It is of interest to note the average earnings indexes for the eleven-year period 1930–1940 of the three groups of companies, which are as follows: Utilities, 111.7; Industrials, 59.9; Railroads, 11.5. In each instance the earnings index is compared with 1926 calendar-year earnings as equal to 100.

The details supporting Chart 12 are contained in Schedule 18. The names of the thirteen utilities whose earnings form the basis of the public utility earnings index, together with the principal utility service performed by each company or system as measured by the proportion of total operating revenues derived therefrom, are listed on Page 7 of Schedule 18.

An independent compilation of net earnings available for preferred and common stock, as reported by the five predominantly electric utility companies or systems listed on Page 7 of Schedule 18, discloses that the earnings index for those five companies or systems was for the most part on a considerably higher level through the period 1925–1940 than the index for the entire group of thirteen utilities, as may be seen from the following comparison:

Year	Earnings index		Year	Earnings index	
	13 utilities	5 electric utilities		13 utilities	5 electric utilities
1925	87.3	84.5	1933	97.8	100.5
1926	100.0	100.0	1934	88.7	95.7
1927	106.9	107.2	1935	93.1	107.1
1928	124.0	136.3	1936	121.0	114.9
1929	142.6	164.0	1937	125.8	132.8
1930	127.7	163.8	1938	107.1	116.5
1931	123.6	154.3	1939	123.1	137.4
1932	96.9	120.6	1940	124.5	143.2

The above index for electric utilities may be compared with the following indexes based on net income of the entire private
52 electric light and power industry for the years 1932–1939, as reported in "The Electric Light and Power Industry in the United States, Year 1939" published by the Edison Electric Institute (Publication H 2, March 1940, p. 21): 1932, 120.6; 1933, 98.7; 1934, 95.4; 1935, 103.0; 1936, 112.4; 1937, 123.5; 1938, 110.8; 1939, 121.3. It will be seen that the latter index figures for the entire electric utility industry reasonably approximate those for the five electric utilities in the above summary except that from 1937 to 1939 the earnings level of the above five companies was somewhat higher than that of the industry.

It will be of interest to note the results of the following comparison of earnings indexes of the electric light and power and natural gas industries for the period 1932–1939, with the index for 1932 earnings available for dividends and surplus taken as 120.6 for purposes of comparability:

Year	Electric light and power industry	Natural gas industry [1]	Year	Electric light and power industry	Natural gas industry [1]
1932	120.6	120.6	1936	112.4	189.1
1933	98.7	73.6	1937	123.5	205.0
1934	95.4	86.1	1938	110.8	170.2
1935	103.0	153.8	1939	121.3	197.2

[1] Based on net income available for dividends and surplus as reflected in Volume III, Schedule 2, of this exhibit.

The above index figures for the natural gas industry are based in part on prior years' manufactured gas earnings by companies subsequently changing over to straight natural gas operations during the period mentioned. They also reflect in part the
53 introduction of natural gas in territories not previously supplied with gas service as well as increased net income of companies after commencement of natural gas operations through increased volume of sales, improved operations, or reductions in fixed charges resulting from debt refunding operations. However, while the above earnings indexes for the electric utility and natural gas industries may not be strictly comparable to one another in certain respects, they furnish ample indication that the risks confronting the natural gas industry have not deprived it of an opportunity to achieve substantial growth in recent years.

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Chart 13.—Chart 13 shows the relationship of net profit to total invested capital for leading American industrial, utility, and railroad corporations, based upon studies and publications of the Standard Statistics Company, and covers the thirteen-year period 1927–1939. Two methods of computing invested capital may be used. By one of these methods invested capital is considered as representing outstanding securities plus surplus and capital reserves. This method is the basis of the data reflected on Chart 13. Net profit, as defined in the computations used for this chart, represents the amount available for fixed charges after depreciation, etc. Accordingly, comparable earnings figures are obtained regardless of differences in capital structure.

It may be pointed out, in connection with Chart 13, that not only are utility earnings more stable than earnings of industrials and railroads but for the ten-year period 1930–1939 the average percent of utility net profit (as defined) to total invested capital was approximately equal to the industrial average and, of course, considerably higher than the railroad average. The aver-
54 ages for the ten-year period are as follows: Utilities 5.57%; Industrials 5.59%; Railroads 3.17%.

Page 3 of Schedule 19 contains a list of the 21 leading utility corporations for which the relationship of net profit to invested capital is expressed in Chart 13. For each utility corporation or system in the list is shown the principal utility service rendered, together with the percent of total operating revenues derived from such service. It will be noted that 13 of the 21 utility corporations or systems listed therein are predominantly electric utilities.

Chart 14.—Chart 14 portrays a similar relationship to that shown in Chart 13. However, in the data supporting Chart 14, which are contained in Schedule 20, invested capital is represented as the total of property accounts (less reserves for depreciation) plus inventories of materials and supplies. The resulting chart does not differ greatly from Chart 13 in the trends shown for the different types of companies, although the percentage levels differ somewhat.

In this instance, also, an independent compilation was made of underlying data for the 13 predominantly electric utility companies or systems (see page 3 of Schedule 19) included in the group of 21 leading utility corporations. From a comparison of the results of such compilation with the percentages of net profit

to property accounts and inventories for the group of 21 leading utility corporations, as presented on the following page, it would appear that the results shown in Chart 14 with respect to the group of 21 utility corporations very closely reflect the earnings experience of the electric utilities included in the group during the thirteen-year period 1927–1939.

55 Year	Percent net profit		Year	Percent net profit	
	21 utilities	13 electric utilities		21 utilities	13 electric utilities
1927	7 3	7.3	1934	5.8	5.8
1928	7.5	7.2	1935	5.7	5.8
1929	7.6	7.4	1936	6.1	6.0
1930	7.3	7.3	1937	6.4	6.3
1931	6.9	6.8	1938	6.2	5.9
1932	6.1	6.2	1939	5.9	5.8
1933	5.8	5.8		6.2	6.2

Local Conditions.

This section is presented to afford a perspective of economic conditions in the general area of ultimate consumption of natural gas supplied through the facilities of Hope Natural Gas Company.

Chart 15.—Chart 15 shows the comparative rediscount rates of the New York and Chicago Federal Reserve Banks and indicates that these rates are at the lowest point since 1920, namely, 1.00% and 1.50%, respectively. No change in rate has been effected by either bank since August 1937 as indicated in Schedule 21 which shows all changes in the rediscount rates effected by both Federal Reserve Banks since 1918.

Schedule 21–A.—This schedule presents a compilation of the year-end rediscount rates of the twelve Federal Reserve Banks for the years 1929 to 1940, inclusive. It will be observed that in 1937 the rediscount rate of each of the twelve banks, except the Cleveland Federal Reserve Bank, was reduced by one-half percent. The rate then established was 1.50% for all banks, except the Federal Reserve Bank of New York, which reduced its rate from 1.50% to 1.00%. There has been no change in rate since 1937 by any of the twelve banks with the exception of the Federal Reserve Bank of Boston which reduced its rate from 1.50% to 1.00% in 1939.

56 *Chart 16.*—Chart 16 compares averages of rates on commercial loans charged customers by banks in principal cities of the country and shows separately the rates for banks in New

York, banks in seven northern and eastern cities exclusive of New York City, and banks of eleven southern and western cities. As indicated in Schedule 22 supporting the chart, the figures relate to rates charged by reporting banks to their own customers as distinguished from open market rates. The averages are based on rates reported for all new commercial and industrial loans with maturity of 30 days to 12 months, except paper purchased in the open market and loans secured by real estate, but including business loans secured by stocks and bonds as well as business loans otherwise secured and unsecured. Loans to building and loan associations, insurance companies, credit unions, and similar organizations not engaged directly in financing the sale of consumers' or durable goods, loans to hospitals, educational institutions, etc., and personal or installment loans to individuals other than for business purposes are not included.

The cities included in the group of seven other northern and eastern cities and eleven southern and western cities are listed on Page 2 of Schedule 22. As indicated on Chart 16, the rates charged customers by New York City banks are considerably lower than those charged by the banks outside New York, while the rates of the seven other northern and eastern cities in turn are lower than the rates charged by the eleven southern and western cities. The comparative average rates for the year 1940 are as follows: New York City 2.04%; seven northern and eastern cities 2.56%; eleven southern and weestern cities 3.38%.

57 It will be noted that all rates drifted steadily lower during the period from the Spring of 1933 through 1936, after which time a certain degree of stability is noted until the early part of 1939. In the latter year changes were made both in the method of computing the averages and in the periods for which rates are reported. It should be noted that the current quarterly averages are not strictly comparable with the monthly averages shown for the period 1928–1938. The two series differ in that the monthly series were based on reports of prevailing rates, whereas for the present quarterly series each bank reports the numbers and amounts of loans made at specified rates and within various rate ranges. On the new basis, rates are at a higher level for New York City by approximately one-half per cent.

Rates currently are based on reports made four times a year covering data on new loans for the first half of March, June, September, and December. Between September 1938 and September 1939 rates first increased and then declined, but it is reported that this

movement was largely due to seasonal influences. Because of methods of reporting, seasonal influences did not appreciably affect the rates that were formerly reported by banks. The rates charged customers by New York City banks and banks in the seven other northern and eastern cities, which include the cities of Pittsburgh, Cleveland and Chicago, reflected a decline in the last quarter of 1939 which was followed by rises in the first and third quarters and declines in the second and fourth quarters of 1940. On the other hand, rates charged by banks in the eleven southern and western cities reflected no substantial change in the last
58 quarter of 1939 but exhibited slight increases in the first three quarters of 1940 and a decline in the fourth quarter.

Schedule 23.—This schedule contains comparative indexes of department store sales for the United States as a whole and for the Cleveland and Richmond Federal Reserve Districts. The Cleveland District includes the State of Ohio, the western portion of Pennsylvania, the eastern portion of Kentucky and a portion of West Virginia, and the Richmond District includes the remainder of West Virginia, the States of Maryland, Virginia, North Carolina, South Carolina, and the District of Columbia. Schedule 23 indicates that during the period since 1919 the level of department store sales in the above districts compared rather favorably with that for the nation, the index for the Cleveland District being somewhat below the national level and that for the Richmond District considerably above the national level, particularly in recent years. The respective indexes for 1940 (1923–1925=100) were as follows: United States 94, Cleveland District 96, Richmond District 122.

Schedule 24.—This schedule is presented for the purpose of comparing the relative changes in the level of income payments for the United States and the States of Ohio, Pennsylvania, and West Virginia for the period since 1929. An index with 1929 as the base year has been computed from estimates published by the National Income Section of the U. S. Department of Commerce. The United States totals in Schedule 24 have been taken from Schedule 16 described above.

It will be noted that from 1929 to 1933 the index of income payments for the United States declined to 57.1, the indexes for Ohio and Pennsylvania falling somewhat below that level and the
59 West Virginia index declining only to 58.3. Subsequent to 1933 all indexes advanced through 1937, West Virginia ranking highest in that year at 95.2 and Pennsylvania rank-

ing lowest at 83.5, with Ohio slightly above the national total. All indexes declined in 1938 and advanced in 1939, but the respective 1939 levels remained below those for 1937. The United States index, at 85.4 in 1939, was fractionally higher than the Ohio index, 6.9 points above the Pennsylvania index, and 3.9 points below the index for West Virginia. Consequently it may be said that there has been no drastic change in the level of purchasing power in the three States referred to in relation to the country as a whole during the period since 1929.

Schedule 25.—This schedule presents comparative statistics on estimated cash farm income, value of manufactured products added by manufacture, and value of all minerals produced for the United States and the States of Ohio, Pennsylvania and West Virginia. In the upper section of the schedule the data are reported in millions of dollars, while in the lower section the dollar amounts have been reduced to an index with the year 1929 as the base year. Figures are not available for all years in all classifications. Inspection of the data in Schedule 25 reveals that the level of estimated cash farm income from livestock and crops (including Government payments beginning in 1933) was somewhat higher for the three States than for the nation. With respect to value added by manufacture in the States' manufacturing industries, it appears that the levels in the biennial census years for the State of West Virginia have been consistently higher than those for the nation since 1929 and that the indexes for the States of Ohio and Pennsylvania have fluctuated within a narrow range mostly below the national average. However, the value of minerals produced, except in the State of West Virginia, has been relatively lower since 1929, and particularly since 1935, than for the country as a whole. It is of interest to note from the upper section of Schedule 25 that the States of Ohio and Pennsylvania are predominantly engaged in manufacturing, while the production of minerals is the major industry of West Virginia and it will be observed that for each State the level of activity in the predominant industry has been maintained on a favorable basis in relation to the national level. For the three States combined, estimated cash farm income aggregated 7.3%, value added by manufacture amounted to 19.6%, and value of minerals produced was equivalent to 19.1% of the national total, in the latest year for which data are reported.

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Idle Money Factors.

The data in this section are presented for the purpose of showing the present situation with respect to the volume of idle investment

funds and the factors contributing to the growth of such funds in recent years.

Schedule 26.—This schedule reflects the total amount of funds carried by member banks of the Federal Reserve System in their reserve balances with the twelve Federal Reserve Banks, together with the portion thereof representing "required" reserves and "excess" reserves, as of the close of each year commencing with 1923.

Required reserves are funds which member banks are required by law to keep on deposit with the Federal Reserve Banks as reserves against deposits made with the member banks by their own customers. Member banks may carry balances with the Federal Reserve Banks in excess of their required reserves, such excess balances constituting what are known as excess reserves.

61 Changes in reserve requirements since June 21, 1917, are shown on Page 2 of Schedule 26. Reserve requirements on demand deposits of member banks vary according to classes of banks. Member banks are classified into three groups: central reserve city banks, reserve city banks, and country banks. Central reserve city banks are member banks located in New York City and Chicago, reserve city banks are member banks in sixty other cities of lesser size, and country banks are member banks located elsewhere. It will be noted that reserve requirements on time deposits are uniform for all member banks, while there are important variations among classes of banks in required reserves based on demand deposits.

It will be noted that in the early years of the period the total reserve balances were not subject to marked fluctuation and excess reserve balances were comparatively small in relation to total reserves, some years in fact, reflecting deficiencies in required reserves. This was the situation prevailing generally prior to 1931. In that year total reserves reached their lowest level following 1923 at 1,961 millions of dollars. In the following two years the reserves increased to 2,729 millions, but the increases in total reserves were reflected by increases in excess reserves which, at the end of 1933, were higher than those shown for any previous year.

From 1933 to 1935 total reserves more than doubled and excess reserves increased by approximately two billion dollars. Reserve balances continued to increase in 1936 but due to an increase in reserve requirements in August of that year excess reserves decreased 860 millions despite an increase of approximately a billion

dollars in total reserves. The increases in reserve requirements in March and May 1937 effected a still further
62 reduction of 772 millions in excess reserves, although total reserves increased about 400 millions in that year.

In April 1938 reserve requirements were reduced to approximately those established in March 1937 and thereafter, with no changes in reserve requirements, total reserves continued to increase to a level in excess of 14 billion dollars at the close of 1940. Required reserves have increased from 5,815 to 7,411 millions since 1937, but excess reserves have increased by 5,400 millions to the unprecedented total of over 6½ billion dollars, the figure at December 31, 1940, being 6,615 millions.

Schedule 27.—The purpose of this schedule is to set forth the factors which supply member bank reserve funds and those which use such funds in such manner as to show the various changes which have accounted for the rise in member bank reserve balances in the Federal Reserve Banks between June 1929 and the close of 1940.

The schedule shows that the factors supplying funds for the building up of member bank reserve balances are increases in outstanding Federal Reserve Bank credit, increases in the monetary gold stock, and increases in U. S. Treasury currency outstanding. Decreases in these items operate to decrease member bank reserve balances. Federal Reserve Bank credit consists of bills discounted for or advances made to member banks, bills bought in the open market, holdings of U. S. Government securities, and other items such as industrial advances made under Section 13b of the Federal Reserve Act.

On the other hand, the factors using or drawing upon member bank reserve balances are increases in currency in circula-
63 tion, in U. S. Treasury cash holdings, in U. S. Treasury deposits with Federal Reserve Banks, in non-member bank deposits with Federal Reserve Banks and in other Federal Reserve accounts. Decreases in these items operate to increase member bank reserve balances. The item "other Federal Reserve accounts" consists of the sum of paid-in capital, surplus, other capital accounts, and all other liabilities of the twelve Federal Reserve Banks (excluding funds deposited by member banks and Federal Reserve notes in circulation), less bank premises and all other assets of the Federal Reserve Banks (excluding gold certificates, cash, etc., on hand, holdings of bills discounted, U. S. Government securities, etc.).

Inspection of Schedule 27 will show that the net effect of changes in these factors between June 1929 and December 1940 has been an

increase of 11,670 million dollars in member bank reserve balances with the Federal Reserve Banks. With respect to such increase in member bank reserve balances, it is shown that required reserves increased by 5,078 million dollars and excess reserves increased by 6,592 million dollars.

It is apparent from inspection of Schedule 27 that the most important factor contributing to the increase in member bank reserve balances has been the increase in the monetary gold stock. From approximately 4 billion dollars in June 1929 the gold stock had increased to nearly 22 billion dollars in December 1940, a growth of 18 billion dollars during the period.

Analysis of the growth in the gold stock reveals that approximately 13¾ billion dollars of the increase has originated since 1934. Available data indicate that about half of this increase was accounted for by the net movement of capital to this country from foreign countries, not including over 4 billion dollars of gold imports arising from unaccounted-for transactions. The remainder of the increase was accounted for principally by a favorable net balance of trade and services with foreign countries and domestic gold production, which were offset to some extent by net imports of silver.

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Schedule 28.—This schedule shows comparative figures for all years since 1923 on total deposits and total loans and investments of all banks in the United States as contained in annual and monthly publications of the Board of Governors of the Federal Reserve System. Data are shown separately for nonmember banks and member banks of the Federal Reserve System.

The data on deposits reflect an increase of approximately 11.2 billion dollars in total deposits, exclusive of interbank deposits, from June 1929 to December 1940, whereas the comparable figures on loans and investments indicate a decrease during the same interval of about 4.3 billion dollars. The comparison reflects a net increase in uninvested funds during the period since June 1929 of 15.5 billion dollars for all banks in the United States.

For member banks of the Federal Reserve System the increase in deposits during the same period was 13.7 billion dollars which was offeset by an increase in loans and investments of 1.4 billion dollars, indicating a net increase of 12.3 billion dollars in uninvested funds of member banks during the period. This amount is seen to correspond fairly closely to the increase of 11.7 billions in member bank reserve balances, between June 1929 and December 1940, shown in Schedule 27.

65 Because of reserve requirements imposed upon member banks by law, it is evident from Schedule 27 that they are restricted in the use of reserve balances for expansion of loans and investments to that portion thereof representing excess or idle reserves. Such excess reserves, as above stated, amounted to 6,615 million dollars at the close of 1940. It is apparent, however, that loans and investments could be expanded by an amount several times greater than the current aggregate of excess reserves before the latter would be absorbed into required reserves under operation of the reserve requirements presently in effect. This possibility arises from the fact that expansion in loans and investments by the member banks considered as a group would give rise to increased deposits, unless there are offsetting influences, whereas the member banks would be required to increase their reserves against such increased deposits only to the extent of a portion of the amount of the additional deposits created by the new loans and investments, as indicated by the required percentages of reserves to deposits shown on Page 2 of Schedule 26.

From the data presented in this section, it may be seen that opportunities for investments, because of the huge growth in the volume of idle funds, have been more limited in recent years than formerly, particularly in view of the fact that since the beginning of 1934, as reflected in Schedule 9, more than seventy per cent of all corporate financing in the United States has been for refunding purposes. This situation with respect to idle funds has been reflected in the declining level of interest rates during the period since 1934.

66 STATEMENT ON VOLUME III OF EXHIBIT

As previously stated, Volume III of this exhibit contains general statistics pertaining to the natural gas industry, and in addition, presents facts with respect to the ownership, issuance, prices and yields of securities of natural gas companies. The statistical data are contained in Schedules 1 to 4, inclusive, and Charts 1 to 3, inclusive, as listed in the Table of Contents. The data pertaining to securities of natural gas companies are contained in Schedule 5, together with its underlying Schedules 5–A, 5–B, 5–C, 5–D, 5–E, 5–F1, 5–F2 and 5–G, and in Schedules 6 to 9, inclusive. Information respecting the ownership and corporate affiliations (in the natural gas industry) of Hope Natural Gas Company and certain details in connection with recent financing by its parent, Standard Oil Company (New Jersey), are contained in Chart 4 and Schedules 10 and 11.

Operating and Financial Statistics of the Natural Gas Industry.

Schedule 1—Revenues From Sales to Consumers.—Schedule 1 portrays the growth of the natural gas industry from the standpoint of revenues, volume of gas sales, and number of customers by years from 1929 to 1939, both inclusive, as taken from Statistical Bulletin No. 41, October 1940, published by the American Gas Association under the title "Annual Statistics of the Natural Gas Industry in 1939." The data on revenues, gas sales and customers are set forth under separate captions in the upper, middle, and lower portions of the schedule.

As indicated in the footnote, the figures do not include
67 natural gas used in field operations and in the manufacture of carbon black or gas used by distributing companies in the conduct of their own operations. Furthermore, the statistics do not include data for companies selling mixed manufactured and natural gas.

By referring to the upper section of the schedule, it will be seen that during the eleven-year period revenues increased from 376 million to 448 million dollars, or by approximately 19 per cent. With the general falling off of business in 1938, revenues declined some 28 million dollars below the 1937 level but in 1939 they increased approximately 33 million dollars and exceeded 1937 revenues by over 5 million dollars. Following 1929, revenues increased somewhat in 1930, fell off in 1931, 1932, and 1933 and recovered in 1934, each year thereafter except 1938 reflecting a substantial increase over the previous year. According to the report of the American Gas Association for December 1940, revenues for the year 1940 have reflected an increase of 39.3 million dollars, or 8.7%, over the revenues for the year 1939, such increase amounting to 24.5 millions for domestic sales, 5.1 millions for commercial sales, and 9.7 millions for sales to industrial and electric utility customers.

The classification of revenues shown in Schedule 1 reveals that revenues derived from sales to domestic consumers, including natural gas sold for househeating purposes, constitutes substantially more than half of the total revenues reported. In 1929 such revenues amounted to $223,000,000 and, while falling off to the extent of 5% at the low point of the depression, recovered rapidly and were $32,000,000 higher in 1939 than in 1929 and, as indicated above, increased $24,500,000 in 1940.

68 Commercial revenues have shown consistent improvement during the eleven-year period, except in 1933 and 1938, increasing from $32,000,000 in 1929 to over $50,000,000 in 1939, a gain of over fifty per cent. A further increase of $5,000,000 occurred in 1940.

Revenues from industrial sales, including natural gas used as fuel by electric utilities, amounted to $120,000,000 in 1929. During the depression years, revenues from this source declined to $75,000,000 in 1932, but subsequently increased and by 1937 were $26,000,000 higher than in 1929. In 1938 revenues from industrial and electric utility consumers amounted to $126,000,000 or $20,000,000 less than in 1937, but in 1939 recovered to $142,000,000 which amount, however, was still $5,000,000 below the 1937 total. As above indicated, revenues from this class of consumers for the year 1940 exceeded revenues for the year 1939 by almost $10,000,000.

It is thus indicated that the revenues of the natural gas industry in 1940 surpassed all previous levels by a substantial margin, with revenues from each class of consumers at the highest level in the history of the industry.

Average Annual Revenue per M C. F. of Gas Sales.—The average annual revenue per M C. F. of gas sold amounted to 38 cents in 1929, was 41.1 cents in 1932, 33.7 cents in 1937, 34.3 cents in 1938, and 33.8 cents in 1939, a net decrease of 4.2 cents since 1929. The average for 1940 was 33.9 cents.

The average revenue from domestic sales was 66.7 cents in 1929 and, after reaching 71.1 cents in 1932 and 1933, gradually declined to 68.6 cents in 1939, a net increase of 1.9 cents per M C. F. since 1929. A further decline to 66.8 cents occurred in 1940.

69 The average revenue per M C. F. of gas sold to commercial consumers has been following a steadily downward trend since 1929 and declined from 55.5 cents in 1929 to 46.1 cents in 1939, and to 45.2 cents in 1940, a net decrease of 10.3 cents per M C. F. since 1929.

The average for industrial and electric utility sales has declined from 20.1 cents per M C. F. in 1929 to 16.9 cents in 1939 and 1940, a decrease of 3.2 cents. However, the 1939 and 1940 average was almost one cent higher than the average of 16.0 cents for 1934.

Gas Sales to Consumers (M C. F.). Total gas sales reported for 1929 aggregated 991 million M C. F. In 1932, sales reached the low point for the depression period at 834 million M C. F. Subsequent years through 1937 witnessed rapid improvement in volume of sales and the 1937 total was 1,314 million M C. F. A decline of about 104 million M C. F. took place in 1938, but during 1939 the total again reached a new high level of 1,328 million M C. F. It is reported that in 1940 the volume of sales rose to the record level of 1,441 million M C. F. classified as follows: domestic—419 million M C. F., commercial—123 million M C. F., and industrial and electric generation—899 million M C. F.

The bulk of the large increase of 450 million M C. F. in volume of sales between 1929 and 1940 was brought about by increased sales to industrial consumers. Industrial consumption increased from 597 to 899 million M C. F., while commercial consumption increased from 59 to 123 million M C. F. and domestic consumption increased from 335 to 419 million M C. F. between 1929 and 1940. It may appear that fluctuations in industrial consumption since 1929 have merely reflected changes in economic conditions.

70 However, upon comparison with the fluctuations reflected in the Federal Reserve Board's index of industrial production (see Volume II, Schedule 14, of this exhibit) it is found that, using an index with 1929 as the base year in each instance, industrial consumption did not fall during the depression years to the lowest level reached by the index of industrial production, and in each year since 1934 the index of gas sales to industrial and electric utility consumers has been at a substantially higher level than the index of industrial production. This situation would appear to be accounted for in large part by expansion in the number of industrial customers since 1929, the number having increased from 22,000 customers in 1929 to 43,000 in 1939 and to 46,000 in 1940.

Average Annual Gas Sales (M C. F.) per Customer.—The data on average annual sales in M C. F. per customer shown in Schedule 1 are based on the number of customers at the end of each year.

Average annual consumption by domestic consumers declined during the period as a whole, the average M C. F. per customer having fallen from 60.5 in 1929 to 54.3 in 1939. However, the low point was 51.3 in 1934 and there were slight increases in 1935, 1936, and 1937, as well as in 1939, although in the latter year the average was still slightly below the 1937 figure. Increased consumption in 1940 raised the average for that year to 58.6 M C. F. per customer.

The average consumption per commercial customer was 175.6 M C. F. per year in 1929, fell to the low point of 164.2 in 1931, increased to 179.3 in 1932, declined to 170.4 in 1933, and increased thereafter in each year to 204.4 in 1937. It declined in 1938

71 to 192.3, but increased to 202.1 in 1939 and was 218.9 in 1940.

Average industrial sales in M. C. F. per customer per year, fluctuated more sharply as would be expected in a period of changing economic conditions such as business has experienced since 1929. The sales per customer were 27,135 M C. F. in 1929, dropped to 17,440 in 1933 and recovered thereafter, reaching 21,294 in 1937. In 1938 the average consumption per customer declined to 18,044 M C. F., but in 1939 it increased to 19,673 M C. F. In 1940 the average declined to 19,550 M C. F. per customer.

Number of Customers at End of Year.—The data on number of customers at end of year shown in the lower portion of Schedule 1 reveals a substantial growth since 1929, the number of all customers increasing from 5,896,000 in that year to 7,454,000 in 1939, an increase of 1,558,000 customers. A further gain of 309,000 customers in 1940 brought the number of customers at the close of the year to 7,763,000, classified as follows: domestic—7,157,000, commercial—560,000, and industrial—46,000. In only one year, 1932, is a decline in total number of customers shown although it will be noted that the number of customers did not vary between 1930 and 1931.

Domestic customers increased in number from 5,540,000 in 1929 to 6,870,000 in 1939 and to 7,157,000 in 1940 a gain of 29% in the twelve-year period. Except in 1931 and 1932 there was a substantial increase in the number of domestic customers each year. The number of commercial customers reflected a marked growth during the period since 1929, the increase in this group being from 334,000 in 1929 to 560,000 in 1940, a gain of about 70 percent. The number of industrial customers has more than doubled, increasing from 22,000 in 1929 to 46,000 in 1940.

72 *Average Annual Revenue per Customer.*—The average revenue per domestic customer was $40.34 in 1929. The average had declined to $36.14 by 1934 but improved thereafter, rising to $38.06 in 1937. Following a decline in 1938, the average increased to $37.24 in 1939 and to $39.17 in 1940. Average revenue per commercial customer amounted to $97.54 in 1929. After declining to $85.83 in 1933, the average rose to higher levels in succeeding years and stood at $96.32 in 1937. Following a sharp decline in 1938 a partial recovery was recorded in 1939 for which year the average was $93.09. In 1940 the average increased to $98.96, establishing a record for the twelve-year period. Average revenues per industrial customer fluctuated considerably during the period under discussion. The average was $5,400 in 1929 but declined in $2,800 in 1932. Subsequent improvement was effected through 1937, the average for that year being $3,600. In 1938 the averaged dropped to $3,000, but recovered and stood at $3,300 in 1939 and 1940.

Schedule 2.—Schedule 2 contains comparative estimated income statements for the years 1931 to 1939, inclusive, of the companies for which revenues, gas sales, and customer data are presented in Schedule 1, and was taken from the same statistical bulletin of the American Gas Association.

It will be noted that the revenues from gas sales to consumers shown on the first line in Schedule 2 are in agreement with the revenue data shown in the upper portion of Schedule 1. Examination of Schedule 2 discloses that net operating income, designated as "Utility Operating Income" was $107,681,000 in 1939, or about $10,000,000 higher than that for 1938 although $4,000,000 lower than the 1937 figure of $111,811,000 which represented the peak for the nine-year period, and $2,000,000 lower
73 than the 1936 total. The low point following 1931, for which year net operating income was reported at $84,-061,000, was reached in 1933 at $65,188,000. In 1934 net operating income recovered to $71,382,000 and increased to $93,508,000 in 1935.

Net income available for dividends and surplus followed the same general trend, starting at $51,103,000 in 1931, declining to $26,940,000 in 1933, rising rapidly to $74,989,000 in 1937, falling to $62,275,000 in 1938, and increasing to $72,152,000 in 1939. It will be noted that although net operating income in 1939 was lower than in 1936, net income available for dividends and surplus was higher in 1939 by $3,000,000, chiefly because of a decrease in interest and other deductions of almost $6,000,000.

Utility plant, which is reported only for the years 1934 to 1939, inclusive, increased from 1934 to 1938 by approximately $111,000,000. In 1939 utility plant was reported at $2,414,490,000, which was about $27,000,000 less than the amount reported for 1938.

Chart 1.—This chart shows at the right monthly sales of natural gas by months during the years 1929, 1939, and 1940. At the lower left are shown monthly revenues of the natural gas industry and, at the upper left, revenues of the manufactured gas industry and combined revenues of the total gas industry during the same years.

The revenues for the entire gas industry were higher in 1939 than in 1929, but showed a substantial increase in 1940 over 1939, due to increased revenues from sales of natural gas. Revenues from the sale of manufactured gas show generally a decline although 1940 revenues were higher than those for 1939. The curves in the lower left section of the chart show that the
74 revenues of the natural gas industry have increased substantially since 1929 and are at a new high level in 1940.

The group of curves on the chart at the right shows that the business of natural gas companies is highly seasonal in character,

as indicated by monthly fluctuations in the volume of gas sold. Volume of sales in recent years has been substantially greater than in 1929. Deliveries during all of 1940 were greater in volume than in 1939 and were at the highest level in the history of the industry.

Chart 2.—Chart 2 is presented in order to show the monthly trend of sales in 1940 as compared with 1939 both in total and by classes of revenue, i. e., domestic, commercial, and industrial. The chart shows that total monthly revenues in 1940 were substantially higher than in 1939, with the largest consistent gain being in domestic revenues, although industrial and commercial revenues, particularly in the first few months of 1940, also reflected a substantial increase over 1939. The February peak in revenues will be seen to have been accounted for by peaks in domestic and commercial revenues recorded in that month.

Chart 3.—Chart 3 is a photostatic copy of a chart taken from the American Gas Association's Statistical Bulletin No. 41, October 1940, after superimposing thereon an added index showing the trend of total natural gas sales since 1929 independently computed from data contained in the statistical bulletin above mentioned. The chart compares the American Gas Association's index of total natural gas consumption by domestic and commercial consumers with its index of manufactured gas consumption by all classes of consumers, and with the Standard Statistics index of industrial activity, the year 1926 being employed as the base year for all indexes. For the added index of total natural gas consumption by all classes of customers, the year 1929 has been taken as equal to 125 (the index for that year of natural gas sales to domestic and commercial consumers only).

75

The reason for the method employed by the American Gas Association of excluding industrial sales in its index of natural gas sales while including such sales in its index of manufactured gas sales is found by comparison of the relationship of industrial sales to total sales. In the case of manufactured gas, industrial sales for the twelve months ended December 1940, as reported in the American Gas Association's Monthly Summary of Gas Company Statistics for that month, amounted to approximately 62.8 million M C. F., or roughly 16% of total manufactured gas sales. However, sales of natural gas for industrial use in the same period, including sales for electric generation purposes, amounted to approximately 899 million M C. F., or 65% of total natural gas sales.

The chart shows that manufactured gas sales rose to 116% of the 1926 level in 1930, fell to somewhat less than the 1926 level in 1933, increased steadily thereafter through 1939, the index reaching about 120 in that year. Sales of natural gas for domestic and commercial consumption, however, have increased to a substantially greater extent since 1926 than manufactured gas sales. The index of such natural gas sales rose to 130 by 1930, dropped to 118 in 1933, which was still far above the 1926 level, advanced to about 146 by 1937, and receded to a moderate extent in 1938, but reached a new peak in 1939. Thus in 1939 the volume of natural gas sales for domestic and commercial use was
76 approximately 54% greater than in 1926, while manufactured gas sales volume was only about 20% greater.

The superimposed index for total natural gas sales fell sharply commencing in 1931 and was approximately similar to that for total manufactured gas sales in 1931 and 1932. Thereafter, however, the index of total sales rose much more abruptly than that for domestic and commercial sales through 1937. The index declined in 1938 but rose to a new peak of 168 in 1939, as compared with the 1939 index of 154 for domestic and commercial sales only.

It will be seen by comparison with the Standard Statistics index of industrial activity that although both the natural and manufactured gas industries experienced a decline in volume of gas sold during the depression years, the volume did not decline below the 1926 level, except to a slight extent in the case of manufactured gas, in contrast with the experience of industry in general, for which a decline in activity of about 45 per cent from the 1926 level was recorded at the lowest depth of the depression.

Schedule 3.—Schedule 3 shows the aggregate volume of natural gas production and consumption in the United States for the years 1926 to 1939, inclusive, and the portion of the total gas consumed which was transported in interstate commerce. From 1926 to 1939, natural gas production increased from 1,313 million to 2,477 million M C. F. Consumption, excluding gas used for field operations and manufacture of carbon black, increased from 704 million to 1,446 million M C. F. in the same period. Natural gas transported in interstate commerce increased from 209 million M C. F. in 1929 to 687 million M C. F. in 1939. In other words, since 1926 production has increased 88%, and consumption other than for field
77 use and carbon black manufacture has more than doubled.

These increases were accompanied by an increase of over 225% in the quantity of natural gas transported in interstate com-

merce and, as will be seen from column (e) of the schedule, the proportion of the total quantity of natural gas consumed which is transported in interstate commerce has also been steadily increasing. Thus in 1939 this proportion was about 48% of total consumption, whereas in 1926 the proportion was approximately 30%, indicating the increased importance in recent years of natural gas as a commodity in interstate commerce.

Schedule 4.—Schedule 4 is presented for the purpose of disclosing the interstate movement of natural gas from and to the States of West Virginia, Ohio, and Pennsylvania, as indicated by data obtained from publications of the U. S. Bureau of Mines. Page 1 of the schedule shows that since 1926 the major portion of the gas produced in West Virginia has been delivered to other States and that the quantity of gas imported from other States has been negligible in proportion to the quantity produced in the State. Of the gas consumed within West Virginia the average consumption by domestic and commercial consumers has approximated one-third, and gas consumed by industrial customers, about two-thirds, of the total. The major portion of natural gas delivered to other States is accounted for by deliveries to the State of Ohio, with Pennsylvania, Kentucky, and Maryland ranking next in the order mentioned.

In 1939, the quantities of natural gas produced and consumed in the State of West Virginia, including receipts from and deliveries to other States may be summarized as follows in millions of cubic feet:

78	Produced in State---	159,226	Consumed within State---	69,394
	Received from other States----------	12,482	Delivered to other States--	[1]102,314
		171,708		171,708

[1] Consists of deliveries to : Ohio—70,578; Pennsylvania—25,766; Kentucky—5,051; and Maryland—919.

Page 2 of Schedule 4 shows similar data for the States of Ohio and Pennsylvania. It is indicated that the combined natural gas production of both States was less than that of West Virginia in both 1938 and 1939, although in prior years the reverse situation prevailed, except from 1926 to 1929, inclusive. The data disclose that since 1926 the consumption requirements of the State of Ohio have far exceeded the production of natural gas in that State. With respect to Pennsylvania it appears that the quantity

of gas consumed has been somewhat in excess of that produced except in the years 1935 and 1936. It is of interest to note, with respect to both States, that the largest proportion of gas imported from other States is received from West Virginia.

Ownership, Issuance, Prices and Yields of Securities of Natural Gas Companies

Schedule 5.—Schedule 5 contains summarized data with respect to the outstanding securities of 43 natural gas companies.

In preparing this list an attempt was made to include all natural gas companies which had the following characteristics:

(1) Companies engaged in the production and transmission of natural gas and sales thereof at wholesale and to main-line industrial customers.

(2) Companies engaged in the transmission of natural gas and sales thereof at wholesale and to main-line industrial cus-
79 tomers. (3) Companies such as those described in (1) and (2) above which also conduct retail distribution operations.

(4) Companies so engaged which have annual operating revenues of $2,000,000 or more.

The purpose of selecting companies conducting operations of the type mentioned with revenues of $2,000,000 or more was to obtain a group of companies exhibiting generally the characteristics of Hope Natural Gas Company.

Schedule 5 sets forth for each of the 43 companies having the characteristics just mentioned the total amount of securities outstanding and a break-down of the total for each company according to classes of securities, i. e., bonds, debentures, notes and advances, preferred stock, and common stock. Also shown for each company and each class of security, based on the most recent information available, are the amounts of securities held by the public, by institutions, and by affiliates. Institutional holdings include securities held by banks, insurance companies, universities, etc.

In this connection, it should be pointed out that Schedules 5–A to 5–G, inclusive, contain details supplementing or supporting the data contained in Schedule 5. For example, Schedule 5–A contains certain information with respect to the bonds, debentures, and notes of the companies listed in Schedule 5 which are held by the public. Schedule 5–B gives details regarding the

identity of institutional holders of bonds, debentures, and notes of the companies and the amounts of individual holdings. Schedule 5–C lists the holdings of bonds, debentures and notes and advances by affiliates. Schedule 5–D shows certain information with respect to preferred stocks of the companies held by the public, and
80 Schedule 5–E sets forth the holdings of preferred stocks by affiliated interests. Schedule 5–F1 contains data on market prices, earnings per share and earnings-price ratios on those common stocks of the companies which are publicly held, and Schedule 5–F2 contains historical data with respect to the earnings and dividends applicable to such common stocks. Lastly, common stock holdings by affiliates of the companies are listed in Schedule 5–G.

The summary at Page 8 of Schedule 5 discloses that the 43 natural gas companies listed therein had securities outstanding as of the latest date for which information is available in the aggregate amount of $1,185,843,857. These outstanding securities consisted of bonds, debentures, and notes and advances aggregating $479,329,723, or 40.4% of the total, preferred stocks in the amount of $98,789,710, or 8.3%, and common stocks in the amount of $607,724,424, or 51.3%. The respective amounts of bonds, debentures, and notes and advances outstanding together with the relationship of each to the total amount of all securities outstanding, were as follows:

	Amount	Percent of all securities outstanding
		Percent
Bonds	$262, 669, 523	22. 2
Debentures	45, 350, 000	3. 8
Notes and advances	171, 310, 200	14. 4
Total	479, 329, 723	40. 4

Of the total amount of bonds, debentures, and notes and advances, affiliated interests held $196,519,200, or 41.0%, institutional holdings totalled $183,459,000, or 38.3%, and holdings by the general public amounted to $99,351,523, or 20.7%. Of the total of $98,789,710 of preferred stocks outstanding, holdings by af-
81 filiated interests amounted to $35,661,000, or 36.1%, and public holdings amounted to $63,128,710, or 63.9%. Of the common stocks outstanding, amounting to $607,724,424, the public held $205,668,247, or 33.8%, and affiliated interests owned all but a fraction of the remainder.

Applying similar calculations to the total of all outstanding securities of the 43 companies listed in Schedule 5, it is found that the proportion held by the general public was 31.1%, and that held by institutional investors was 15.5%, while the proportion held by affiliated interests constituted 53.4%, or more than one-half of the total.

Inspection of Schedule 5 discloses that with respect to 28 of the 43 companies listed all of the securities outstanding were held by affiliates and institutions, leaving only 15 companies whose securities are available to the general public for investment purposes. The following summary discloses the magnitude of security holdings by affiliates and institutions in the 28 companies which have no securities outstanding in the hands of the general public:

	Securities held solely by			Percent of total for 43 companies
	Affiliates	Institutions and affiliates	Total	
				Percent
Bonds, debentures, etc	$133,502,200	$136,790,000	$270,292,200	56.4
Preferred stocks	21,345,000	2,000,000	23,345,000	23.6
Common stocks	128,778,716	139,184,211	267,962,927	44.1
Total	283,625,916	277,974,211	561,600,127	47.4
Number of companies	19	9	28	

Of the remaining 15 companies whose securities are held by the general public in whole or in part, 9 companies have bond issues, 5 companies have preferred stock issues and 13 companies have common stock issues which are traded in the securities markets.

82 Of the outstanding securities of the above 15 companies, aggregating $624,243,30, it is of interest to note that holdings by affiliates amount to $172,316,250 and institutional holdings equal $83,779,000, leaving a balance of $368,148,480 representing holdings by the general public.

The foregoing calculations clearly demonstrate that a substantial proportion of the outstanding securities of natural gas companies is held by affiliated interests and institutional holders. To summarize, affiliated interests and institutional holders owned 79.3% of the bonds, debentures and notes, and advances, 36.1% of the preferred stocks, 66.2% of the common stocks and 68.9% of the total amount of outstanding securities of the 43 companies listed in Schedule 5. On the other hand, securities held by the general public constituted 20.7% of the bonds, debentures and notes,

63.9% of the preferred stocks, 33.8% of the common stocks and 31.1% of the total of all outstanding securities of the 43 companies referred to.

There is presented in an appendix following the written statement contained in this Volume I, a brief description of the history, operations, properties, and subsidiaries of each of the companies listed in Schedule 5.

Schedule 5–A.—Schedule 5–A lists the bond and debenture issues of the companies included in Schedule 5 of which any portion was held by the general public. The schedule also lists the bond issues of such companies which were outstanding in the hands of the public during any part of the period since 1937, but which had been subsequently retired. For each issue the schedule shows the name of the issuing company, a description of the issue, the amount of the public offering, the offering price, the approximate yield at offering price, the offering date, the date of retire-
83 ment, the total principal amount outstanding, the portion thereof held by the public and the ratings assigned by Moody's and Poor's publications. The schedule next shows the averages of high and low market prices for the years 1937 to 1940, inclusive, together with the approximate yields to maturity based thereon. This information is followed by data on market prices as of February 28, 1941, and yields to maturity based on such prices. The last two columns of the schedule show the respective current call prices for general and sinking fund purposes.

The first issue shown in Schedule 5–A consists of first mortgage 4% bonds, due 1951, of Arkansas Louisiana Gas Company. This issue, which carried Moody's and Poor's A rating, was offered to the public in 1936 at a price of 98 to yield 4.18% to purchasers. On the basis of average high and low market prices the yield to investors was slightly less than 4.00% in 1937 and 1938, and 3.69% in 1939. The bonds were retired in connection with refunding operations in October 1939, as indicated by Note (d) of Schedule 6, when the company sold privately one issue of short-term, and one issue of long-term serial bonds at par to yield 2.75% and 3.50%, respectively, to purchasers.

The next two issues listed consist of pipe-line mortgage bonds of Cities Service Gas Company which were offered in 1927 and 1928 and retired in February 1939. The issues carried Moody's Baa rating and interest rates of 6% and 5½%, respectively, and during 1937 and 1938 were selling below par to yield from 6.36% to 7.06%. In December 1938 as indicated in Note (c) on Page 2 of Schedule

5–A, the above bonds were retired with proceeds from the private sale at par of $20,000,000 of first mortgage 3¾% bonds,
84 due 1947–54 and $15,000,000 of 3¼% notes, due 1940–46, secured by like amount of first mortgage 3¼% bonds of the same maturity. In addition, the company issued $8,000,000 of 5½% debentures to its parent. A portion of the proceeds from the securities sold was applied to reduction of indebtedness due to the parent company.

The next issue consists of Consolidated Gas Utilities Corporation's first mortgage and collateral 6% bonds, due 1943, originally issued in 1928. The bonds carried Moody's B rating and were selling at prices to yield from 11.22% to 18.25% during the period 1937–1940. However, as of February 28, 1941, the bonds were selling on a basis to yield 5.60% and it is reported that in April 1941 the company sold privately a $6,500,000 issue of first mortgage 4% bonds, due 1956, and $900,000 of 5% debentures, due 1951. With the proceeds from the latter issues and from a bank loan of approximately $100,000, the company retired its outstanding 6% bonds.

The next issue listed is that of El Paso Natural Gas Company, consisting of first mortgage 4½% bonds, due 1951. These bonds were offered to the public in 1936, together with an issue of 4¾% convertible debentures, due 1946. The bonds, carrying Moody's Ba rating, were sold at 98½ to yield 4.64% to purchasers and were selling above par in 1937 and 1938 to yield 4.17% and 4.09%, respectively. The 4¾ debentures, carrying Moody's B rating, were offered to the public at par in June 1936 and were quoted at prices ranging from 137½ to 173 during the remainder of 1936. Approximately 80% of the issue was converted into common stock prior to the end of 1936, the conversion ratio being 60 shares of common stock for each $1,000 debenture. The market
85 price of the debentures was apparently influenced by that of the common stock which ranged from 22¾ to 29¼ during 1936. The 4½% bond issue and the unconverted portion of the 4¾% debentures, together with an issue of first mortgage 4% bonds sold privately in 1937, were retired in January 1939 with the proceeds of a $4,000,000 issue of 3% serial notes, due 1939–45, and a $6,000,000 issue of first mortgage 3½% bonds, due 1953. The new bonds were sold privately at 99 to yield 3.59% to purchasers. In 1940 the company sold privately $3,000,000 principal amount of first mortgage 3% bonds, due 1955, at 98½ to yield 3.13%.

The next issue appearing on Schedule 5–A consists of first collateral 6% bonds, due 1943, of Houston Natural Gas Corporation. These bonds were publicly offered in 1928 at par. During the period 1937–1940, average market prices resulted in yields ranging downward in successive years from 5.70% to 4.71%. The bonds were retired in December 1940, the company in September 1940 having sold a new issue of first mortgage 4% bonds, due 1955. The new bonds were offered at par but were selling above call price at February 28, 1941, to yield 3.70% to purchasers. It is of interest to note that the new bonds were assigned Moody's Baa rating, representing an improvement over the Ba rating assigned to the prior issue.

Next in order on Schedule 5–A is a 5% debenture issue, due 1942, of Lone Star Gas Corporation. On the basis of the average market price of the debentures during 1937 up to the date of retirement in November, the yield to purchasers was 4.10%. The outstanding portion of this issue was retired with the proceeds from the sale in August 1937 of 1¾–4% unsecured notes, due 1938–42.

In August 1938, the company offered publicly, at a price of
86 102 to yield 3.33%, a $20,000,000 issue of 3½% convertible debentures, due 1953, carrying an A rating. The market price of these debentures during the years 1938–1940 resulted in yields ranging from 3.07% in 1938 to 2.80% in 1940. The 3½% debentures, together with certain bank loan notes, were retired in March 1941 with proceeds obtained from the sale to banks of $26,000,000 of 2–2¼% notes, due 1941–51, secured by pledge of substantially all of the company's holdings of securities of its subsidiaries.

From inspection of the data covering the various bond issues of Montana-Dakota Utilities Co. it appears that from 1937 until 1939 the company's bonds were selling at yields above 6.00%. However, in May 1939, the company made a public offering of first mortgage 4½% bonds, due 1954, and sold to banks $2,100,000 of 4¼% serial promissory notes, due 1940–46. With the proceeds the company retired all of its previously outstanding debt with the exception of the 4½% debentures which had been issued in 1936. The new 4½% bonds, which were assigned Moody's Baa rating, were offered at a price to yield 4.41%; but based on subsequent market prices the yield declined to 4.21% in 1939 and to 4.04% in 1940. In January 1941 the company retired its outstanding 4½% debentures, together with certain note indebtedness, through the issuance of 1½–3½% notes, due 1941–50, which were sold to

banks. In the same month the company retired its outstanding 4½% bonds, due 1954, which had been publicly offered in May 1939, together with an issue of 4½% bonds, due 1956, which had been sold privately in 1940. The latter two issues were retired with the proceeds from the sale in January 1941 of $7,500,000 of first mortgage 3½% bonds, due 1961, and $2,500,000 of first mortgage 2½% serial bonds, due 1942–49. Moody's Baa rating was
87 assigned to both issues. The new 3½% bonds were offered at a price of 103½ to yield 3.26% to maturity and at February 28, 1941, were quoted at 102¼ resulting in a yield of 3.34%. The shorter-term 2½% serial bonds were offered at prices resulting in yields ranging from 0.63% to 2.25%, according to maturity, and appear to have been sold privately inasmuch as a quotation on the issue as of February 28, 1941, was not available.

The next two issues consist of 5½% and 6½% first mortgage bonds of North Penn Gas Company, the former maturing in 1957 and the latter in 1942. Portions of the 5½% issue were sold to the public in 1927 and 1930, respectively, the 6½% issue having been offered in 1932. Both issues carry Moody's A rating. The 5½% issue was originally offered at discounts below par but in the period 1937–1939 was quoted at average prices in excess of par to yield slightly above 5.00%. The average price in 1940 was 99, resulting in a yield of 5.59%. However, at February 28, 1941, the issue was again selling above par to yield 5.36% to maturity. Quotations are not available on the 6½% issue.

Oklahoma Natural Gas Company in June 1936 issued $20,000,000 of first mortgage 4½% bonds, due 1951, rating Baa, at a yield of 4.64% and at the same time offered publicly a $10,000,000 issue of 5% convertible debentures, due 1946, rating Ba, at par. During the years 1937–1939 the yields on these issues reflected substantial declines and in 1939 the 4½% bonds were selling on a 3.92% yield basis and the 5% debentures were quoted at prices resulting in an average yield of 4.15%. In connection with refunding operations the company in August 1939 made a public offering of $17,000,000 of first mortgage 3¾% bonds, due 1955, of Baa rating, at
88 a price of 103½ to yield 3.46% to purchasers. With the proceeds from the sale, together with proceeds from an $8,000,000 issue of unsecured 2¾% promissory notes, due 1941–46, and from the sale of 58,000 shares of $5.50 convertible prior preferred stock, the company retired its outstanding 4½% bonds and 5% debentures together with 22,200 shares of 6%, $100 par, convertible prior preference stock. In 1939, subsequent to their is-

suance, the new 3¾% bonds were selling on a 3.29% yield basis. In 1940 the average yield declined to 3.20%, and at February 28, 1941, the bonds were quoted at 2½ points above call price to yield 3.09%.

The next group of issues listed in Schedule 5–A is comprised of bond issues of Pacific Lighting Corporation and its subsidiaries, Southern California Gas Company and Southern Counties Gas Company of California. The first issue shown consists of 4½% debentures, due 1945, of Pacific Lighting Corporation. These debentures, carrying Moody's A rating, were publicly offered in 1935 at par. During the years 1937 and 1938 in which the debentures were outstanding they were selling at prices to yield 3.26% and 3.85%, respectively. The 4½% debentures then outstanding were called on April 5, 1939, the funds for their retirement having been obtained from the sale of $7,000,000 of 3% unsecured promissory notes, due 1940–49.

Southern California Gas Company in March 1931 offered a $12,500,000 issue of first mortgage 4½% bonds, due 1961, and in July 1935 sold $15,000,000 of first mortgage 4% bonds, due 1965. Moody's Aaa rating was assigned to both issues. In the years 1937–1940 the 4½% bonds were selling at prices considerably above par to yield approximately 4.00% throughout the period.

89 The 4% bonds, which were offered in July 1935 at 101½ to yield 3.91%, were being sold during the years 1937–1940 on the basis of yields ranging from 3.74% in 1937 to 3.45% in 1940. Both issues were retired in November 1940 with the proceeds from a public offering in September 1940 of $30,000,000 of first mortgage 3¼% bonds, due 1970, at a price of 103½ to yield 3.07%. During the remainder of 1940 the bonds were selling on a 2.94% yield basis and at February 28, 1941, the bonds were quoted at 105¾ to yield 2.95%. It is reported that in April 1941 the company floated an additional $5,000,000 principal amount of first mortgage 3¼% bonds, due 1970, at a price of 104¼ to yield 3.03% to investors. The 3¼% bond issues offered in 1940 and 1941 were assigned Moody's Aa rating, whereas the prior bond issues had carried the Aaa rating.

Southern Counties Gas Company of California in January 1941 offered publicly $11,500,000 principal amount of first mortgage 3% bonds, due 1971, rating Aa, from the proceeds of which the company retired its outstanding first mortgage 4½% bonds, due 1968, also rated Aa, which has been sold to the public in 1928. It is of interest to note that whereas the 4½% bonds averaged

yields of about 4.25% during the years 1937–1940, the new 3% bonds offered in January 1941 were sold to the public at a price of 101 to yield only 2.95%. The 3% bonds were quoted at 101⅜ as of February 28, 1941, to yield 2.93%.

The two issues next appearing in Schedule 5–A consist of first mortgage bonds of Panhandle Eastern Pipe Line Company. The first issue shown was offered in the principal amount of $24,000,000 in 1937 and consisted of 4% bonds, due 1952, carrying an A rating. The bonds were offered at a discount of 2½ points
90 below par in April 1937 to yield 4.23% to maturity. However, the yield declined from 4.06% in 1937 to 3.60% in 1940. In March 1941 the company retired the outstanding portion of the above 4% bond issue with proceeds from the sale in January 1941 of first mortgage bonds and notes. The company offered publicly $12,000,000 of 3% bonds, due 1960, rating A, at a price of 102, which resulted in a yield of 2.87% to purchasers. At February 28, 1941, the 3% bonds were quoted above par on a 2.92% yield basis. In addition to its public offering of first mortgage 3% bonds in January 1941, the company sold privately $6,250,000 of first mortgage serial bonds, due 1946–50, carrying interest rates of 1.65, 2.30%, according to maturity, and sold to banks $5,000,000 of serial notes, due 1942–45, with interest rates from 0.75, 1.50%, according to maturity.

The bonds of Southern Natural Gas Company listed in Schedule 5–A include two issues, consisting of first mortgage 4½% bonds, due 1951, carrying a Baa rating, and Adjustment Mortgage 6% bonds, due 1960, which have been assigned Moody's B rating. In addition there is shown in Schedule 5–A the amount of outstanding funded debt of the company's subsidiaries and the portion thereof held by the general public. The 4½% bonds were offered in November 1936 at par. During 1937 and 1938 the bonds were selling below par to yield as high as 4.87%, but in 1939 and 1940 the yields based on average market price were 4.12% and 3.87%, respectively. At February 28, 1941, the 4½% bonds were quoted at one point above call price to yield 3.77%. The 6% adjustment mortgage bonds were issued in 1936 pursuant to a reorganization plan to holders of the predecessor company's 6% convertible debentures, due 1944, and to holders of
91 allowed claims on the basis of $500 of new adjustment bonds (plus 48 shares of new class A stock) for each $1,000 principal amount of old debentures and $1,030 principal amount of such claims held (Moody's Public Utilities, 1937,

p. 205). The yield on the 6% adjustment bonds declined from 7.74% in 1938 to 6.19% in 1940 and at February 28, 1941, was 5.95%.

In this connection it should be mentioned that according to Holding Company Act Release No. 2740, dated May 3, 1941, Southern Natural Gas Company has filed a declaration with the Securities and Exchange Commission regarding the proposed sale of $13,000,000 of first mortgage pipe line sinking fund 3¼% bonds, due 1956, and $4,500,000 of 2½% serial notes, due 1942–47, and, in addition, 234,868 shares of $7.50 par common stock. The release indicates that the company proposes to apply the proceeds from the above financing to the retirement of the 4½% bonds, due 1951, which were publicly offered in 1936; a small issue of 4½% bonds, due 1952, which was privately sold in 1937; the entire issue of 6% adjustment mortgage bonds; and indebtedness of $450,000 on an outstanding 4% collateral note. The balance of the proceeds is proposed to be added to general funds.

The last group of issues on Schedule 5–A consists of first mortgage 6½% bonds, due 1939, of Southern Gas Utilities, Inc. (assumed by United Gas Pipe Line Company) and a 6% first mortgage bond issue and a 6½% debenture issue of Houston Gulf Gas Company, a subsidiary of United Gas Pipe Line Company. The latter company assumed the bonds of Southern Gas Utilities, Inc., in connection with the acquisition, following its organization in 1937, of all of the field gathering lines, main pipe lines, compressor stations, and natural gasoline plants of United Gas Public Service Company and its subsidiaries, except those
92 of Houston Gulf Gas Company. After the divorcement from United Gas Public Service Company of the above properties, the company was merged with United Gas Corporation, which is the parent of United Gas Pipe Line Company. The 6½% bonds of Southern Gas Utilities, Inc., were redeemed in September 1938 prior to maturity. The bonds and debentures of Houston Gulf Gas Company, rated Ba and B, respectively, were sold at progressively declining yields during the years 1937–1940 and the 6% bonds, due 1943, were selling in 1940 above par to yield 5.00%, while the 6½% debentures, due 1943, were also selling above par to yield 5.82%.

It is reported that the bonds and debentures of Houston Gulf Gas Company were called for redemption in October 1940, in connection with proposed refunding operations by United Gas Corporation. The Commercial and Financial Chronicle (issue

of May 10, 1941, p. 3040) reports that United Gas Corporation has filed application under the Holding Company Act regarding the proposed private sale of $75,000,000 of 3½% first mortgage and collateral trust bonds, due 1958. In connection with such financing, it is indicated that Houston Gulf Gas Company will sell $5,400,000 of first mortgage 4% bonds, due 1961, to its parent, United Gas Pipe Line Company, and use the proceeds to discharge a like amount of indebtedness evidenced by a 2½% note held by First National Bank of Boston. The proceeds from the latter note apparently had been applied by Houston Gulf Gas Company to the redemption of its 6% bonds and 6½% debentures which are listed in Schedule 5–A. It is reported that Houston Gulf Gas Company will also issue an additional $1,300,000 of first mortgage 4% bonds, due 1961, in exchange for its $1,300,000 7% income note held by United Gas Pipe Line Company.

From the foregoing comments on the data presented in
93 Schedule 5–A with respect to yields on bonds of natural gas companies and the sequence of refunding operations conducted by each of the companies listed, with the single exception of North Penn Gas Company, it is readily apparent that the declining trend of interest rates and bond yields in recent years, to which attention has previously been directed, has exerted a strong influence upon the yields demanded by investors on bonds and other debt of natural gas companies. Without important exception, interest rates and yields on presently outstanding debt of such companies, or on bonds and other debt proposed to be issued in connection with which declarations have been filed, are at lower levels than ever before witnessed in the history of natural gas companies such as those listed in Schedule 5–A.

It may be noted that the total shown in Schedule 5–A under the column "Held by Public," $99,351,523, is in agreement with the total for bonds, debentures and notes held by the public indicated in the summary at Page 8 of Schedule 5.

Schedules 5–B and 5–C.—These schedules show the individual holdings by institutions and affiliates, respectively, of bonds, notes and debentures of the companies included in Schedule 5.

Schedule 5–D.—Schedule 5–D contains substantially similar information with respect to preferred stock of the companies listed in Schedule 5 which are held by the public as was shown in Schedule 5–A for bonds and debentures and notes of such com-

panies. However, Moody's publications do not assign ratings to capital stock issues; therefore, only Poor's ratings are given.

The schedule shows that 7 of the 43 companies listed in Schedule 5 had preferred stock issues outstanding in the hand
94 of the public during all or a portion of the period since 1937.

It will be seen that the entire issue of 7% preferred stock of El Paso Natural Gas Company is held by the public. Of the total amount of $1,479,700, about $600,000 par value appears to have been issued at date of organization in 1928 and the remainder through subsequent conversion of other securities. It is indicated that the stock has been selling above par during the entire period since 1937 and that at February 28, 1941, the bid price was equal to call price of 110, resulting in a yield of 6.36%. The dividend record on this stock indicates that dividends in arrears amounting to $26.25 per share were cleared up on June 22, 1936, since which date dividends have been paid regularly.

The next issue shown in Schedule 5–D consists of $50 par 7% preferred stock of Houston Natural Gas Corporation which appears to have been issued at organization of the company in 1928. The stock was selling somewhat below par in 1937 and 1938, but the market price subsequently improved and the average price was above par in 1939 and 1940. At November 30, 1940, the date of the most recent quotation available, the bid price of 55 equalled call price and the resulting yield was 6.36%.

Next in order is an issue of $100 par 6½% preferred stock of Lone Star Gas Corporation. The aggregate par value of this stock outstanding as of December 31, 1937, was $7,975,500. Funds for retirement of the entire issue and for other purposes were obtained from the sale in August 1938 of $20,000,000 of 3½% convertible debentures, due 1953, and $11,300,000 of 2⅞% serial notes, due 1939–45. During 1937 and 1938, prior to its retirement, the preferred stock was selling above call price of
95 $110 per share.

Next appear two issues of preferred stock of Montana-Dakota Utilities Co. consisting of $100 par stock with dividend rates of 5% and 6%, respectively. The two issues have equal preference as to assets and dividends. Neither series enjoyed a favorable market during the years 1937–1939 the market price in each instance being considerably below par throughout that period. However, by 1940 the market prices for both series had improved substantially over the 1937 level, although quotations

were still below par. At February 28, 1941, the market price for each series was the highest recorded during the four-year period, the 5% series being quoted at 90 to yield 5.56%, and the 6% series at 98½ to yield 6.09%.

The $7 dividend prior preferred stock of North Penn Gas Company consists of a small issue for which quotations could be obtained only for the year 1937. The yield in that year based on average market price of 89 was 7.87%. This stock has preference as to assets and dividends over an issue of $7 dividend preferred stock all of which is held by affiliates.

The next group of preferred stocks listed in Schedule 5–D is comprised of three issues of Oklahoma Natural Gas Company. The first issue consists of $100 par 6% convertible prior preference stock. This stock was issued in 1936 par for par in exchange for $2,220,000 of the company's 5% notes, due 1936–41. The market price of the 6% stock was below par in 1937 and 1938, but in 1939 the stock was selling above par to yield 5.84%. In conjunction with certain refunding operations conducted in the latter part of 1939, as described in Note (d) of Schedule 5–D, the entire issue of the 6% prior preference stock was retired, and the
96 company sold 58,000 shares of $5.50 no par convertible prior preferred stock. The new stock was offered publicly at a price of 104 to yield 5.29% to purchasers. The market price of the new stock remained above par following its issuance, resulting in yields of 5.02% in 1939 and 5.07% in 1940. At February 28, 1941, the stock was quoted at 3¾ points above call price of 110 to yield 4.84% to purchasers. The third issue listed for Oklahoma Natural Gas Company consists of $50 par $3 dividend preferred stock of which there are 91,055 shares outstanding, this stock having been issued in 1933 in exchange with holders of preferred stock of Oklahoma Natural Gas Corporation under the plan of reorganization of the latter company. From its low level of $26 per share in 1937, the market price of this stock has gradually increased and at February 28, 1941, was equal to par value of $50 per share. It should be noted that the $3 dividend preferred stock is outranked with respect to preference as to assets and cumulative dividends by the $5.50 prior preferred stock. It also appears that dividends on the $3 dividend stock did not become cumulative until after January 1, 1939, and that the initial dividend on the stock was paid on March 15, 1939.

Pacific Lighting Corporation in May 1939 offered to exchange new $5 preferred stock with holders of the Company's outstand-

ing $6 preferred stock. The $6 preferred stock had been issued over a period of years and there were outstanding 196,665 shares as of December 31, 1938. The $6 preferred stock was selling above par in 1937 and 1938 to yield 5.84% and 5.79%, respectively. In 1939 up to date of retirement the average market price had exceeded call price of $105 per share resulting in a yield of 5.63%. Holders of 161,081 shares of the com-
97 pany's $6 preferred stock accepted the offer to exchange their holdings for $5 preferred stock, and the remaining 38,919 shares of the 200,000 shares of $5 preferred stock issued, were offered publicly at $102 per share to yield 4.90%. Following the issuance of the $5 preferred stock, the market price remained above par in 1939 and 1940. At February 28, 1941, the stock was quoted at 1¾ points above call price of 105 to yield 4.68%.

The last two preferred stocks listed in Schedule 5–D are issues of Southern California Gas Company, a subsidiary of Pacific Lighting Corporation. Both issues consist of $25 par 6% preferred stock, but the issues are distinguishable by the fact that the larger issue is identified as Series A stock. The generally lower market price associated with the Series A stock may be attributable to the fact that this stock as a class is entitled in liquidation merely to par value and accrued dividends in preference to the common stock, whereas the smaller issue of 6% preferred stock as a class has equal preference with the Series A stock in liquidation but is entitled, in addition to par value and accrued dividends, to share pro rata with common stockholders in the distribution of assets remaining after payment to common stock of its par value. Based on average market value the yield on the 6% preferred stock ranged from 4.84% in 1937 to 4.29% in 1940 and the yield on the Series A preferred stock declined from 5.12% in 1937 to 4.63% in 1940. At February 28, 1941, the 6% stock was quoted at 33, or one-fourth point below the price quoted for the Series A stock, resulting in yields of 4.55% for the 6% stock and 4.51% for the Series A stock. It will be noted that neither issue of preferred stock is subject to call.

It should be pointed out with respect to the data shown
98 Schedule 5–D that the indicated yields for the four preferred stock issues for which quotations are reported as being equal to or in excess of call price cannot be considered as representing the true yields for the respective issues. It is apparent that an investor purchasing preferred stock at a price

in excess of call price would be confronted with the risk that the issuing company may exercise its option to redeem the issue at a price less than that paid for the stock. Consequently, the fact that a certain issue of preferred stock is subject to redemption tends to prevent the price of the stock from rising much beyond the call price and, conversely, tends to maintain the yield on such stock at an artificially high level. The four preferred stocks currently quoted at prices at or above call price are the 7% issue of El Paso Natural Gas Company, the 7% issue of Houston Natural Gas Corporation, the $5.50 dividend prior preferred issue of Oklahoma Natural Gas Company, and the $5 dividend preferred issue of Pacific Lighting Corporation.

It will be noted that the amount of $63,128,710 shown as the total of the column "Total Outstanding and Held by Public" in Schedule 5–D is in agreement with the amount designated as total preferred stock holdings by the public in the summary at Page 8 of Schedule 5.

Schedule 5–E.—It is believed that Schedule 5–E, which shows individual holdings by affiliated interests of preferred stock of the companies listed in Schedule 5, requires no comment.

Schedules 5–F1 and 5–F2.—Schedule 5–F1 contains certain information relative to the common stock issues of the 13 companies listed in Schedule 5 which have common stock outstanding in the hands of the public. The schedule shows for each issue the name of the issuing company, the number of shares and book amount of common stock outstanding, the portion thereof held by the public, the par value, if any, and Poor's rating. Next are shown for the years 1937 to 1940, inclusive, the annual earnings per share, the averages of annual high and low market prices, and the earnings-price ratios, i. e., the per cent of earnings per share to market price, of the respective common stocks. Finally, there is shown for each issue an earnings-price ratio based on market price at February 28, 1941, and on earnings for the latest year for which reported.

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Schedule 5–F2 reflects, for each of the companies listed in Schedule 5–F1, annual operating revenues, together with annual earnings and dividends per share of common stock, during the 15-year period 1926–1940, insofar as such data are available in publications generally accepted as reliable sources of information. Page 1 of Schedule 5–F2 contains the data on operating revenues, earnings and dividends by years set forth in columnar form under

appropriate captions. It will be noted that the date of incorporation appears immediately below the column headings applicable to the respective companies. A symbol immediately following the name of a company is keyed to an explanatory notation appearing on Page 2 of Schedule 5–F2. In certain instances it has been necessary, in computing earnings and dividends per share, to revise the reported figures retroactively to give effect to stock split-ups and stock dividends. Accordingly, for purpose of comparison, all data on earnings and dividends per share for the years preceding the year in which such changes occurred are based on the present common stock.

The earnings-price ratios of the respective common stock issues for the periods and on the basis indicated in Schedule 5–F1
100 are set forth in the following tabulation:

Company	Common stock earnings-price ratios				
	1937	1938	1939	1940	2/28/41
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Consolidated Gas Utilities Corp	3.78	----------	11.70	17.75	17.14
El Paso Natural Gas Co	13.79	14.08	10.60	9.69	12.19
Houston Natural Gas Corp	11.10	14.35	18.77	25.40	20.64
Interstate Natural Gas Co., Inc	9.90	10.02	8.88	9.08	9.17
Lone Star Gas Corp	11.69	10.27	11.24	12.73	12.00
Memphis Natural Gas Co	16.63	13.96	15.74	15.75	14.90
Montana-Dakota Utilities Co	5.91	10.00	8.64	11.48	7.91
Mountain Fuel Supply Co	3.94	6.99	9.47	8.82	8.35
National Fuel Gas Co	6.10	6.36	7.52	9.69	9.43
Oklahoma Natural Gas Co	19.27	16.19	12.17	21.20	19.73
Pacific Lighting Corp	9.27	10.90	7.84	7.54	8.58
Panhandle Eastern Pipe Line Co	----------	----------	9.61	11.74	11.65
Southern Natural Gas Co	----------	----------	18.14	19.51	24.38

Comments pertaining to the above earnings-price ratios and to data appearing in Schedule 5–F2 relative to each of the companies listed are presented below in the order of their appearance.

Consolidated Gas Utilities Corporation.—The earnings-price ratio of this company's common stock was 17.14% as of February 28, 1941, based on market price of $1.75 per share and 1940 earnings of $0.30 per share. The ratio was somewhat higher in 1940, at 17.75%, which compares with the ratios of 11.70% in 1939 and 3.78% in 1937. Operations in 1938 resulted in a net loss of $0.47 per share; therefore no earnings-price ratio appears for that year. From information contained in Schedule 5–F2 it appears that the

company was incorporated in 1935 to take over the business of its predecessor pursuant to a plan of reorganization. The company therefore has an operating history of only five years, in two of which operations resulted in a net loss. No dividends have been paid on the common stock since its issuance.

101 *El Paso Natural Gas Company.*—The common stock of this company had an earnings-price ratio of 9.69% in 1940, which was somewhat lower than the ratio of 10.60% in 1939 but considerably lower than the ratios of 13.79% and 14.08% in 1937 and 1938, respectively. At February 28, 1941, the ratio was 12.19%, being well above the ratio of 9.69% for 1940. From inspection of the data shown in Schedule 5–F2, it will be seen that earnings per share increased from $3.00 to $3.75 between 1937 and 1939, but declined to $3.29 in 1940, as contrasted with increased earnings in 1940 reflected for a majority of the companies represented in Schedule 5–F2. The company's operating revenues have increased from $1,197,795 in 1930 to $6,380,311 in 1940. More than half of the increase in revenues, however, has occurred subsequent to 1936. The initial dividend on the common stock was paid in 1936, in which year the company disbursed $26.25 per 7% preferred share, clearing up all arrears in preferred dividends from September 1, 1932, through June 1, 1936, since which data preferred dividends have been paid regularly. Beginning in 1937 the company has paid annual dividends amounting to $2.00 per share on its common stock.

Houston Natural Gas Corporation.—The earnings-price ratio of this company's common stock increased from 11.10% in 1937 to 25.40% in 1940 and at February 28, 1941, was 20.64%. The present company is a Texas corporation formed in 1940 which acquired the properties and assets of the Delaware corporation of the same name, including the assets of the latter's subsidiaries. The Delaware corporation had been organized in November 1928 as a holding company. Schedule 5–F2 discloses that consolidated operating revenues increased from $1,578,218 in 1929 to $3,128,613 in

102 1940, half of the increase having occurred subsequent to 1936. Earnings per common share have fluctuated considerably. From $0.63 per share in 1935, earnings increased to $1.69 in 1936 and to $1.72 in 1937, but declined to $1.22 in 1938. Thereafter earnings increased to $1.83 per share in 1939 and to $2.89 per share in 1940. The initial dividend on common stock was paid in 1936. From $0.50 per share in 1936 (erroneously shown as $0.75 in Schedule 5–F2) dividend payments on common

stock were increased to $1.25 in 1937, reduced to $0.80 in 1938 and to $0.40 in 1939, and increased to $1.20 in 1940. In 1937 the predecessor Delaware corporation distributed to common stockholders a stock dividend of 50% payable in common stock. Earnings and dividends per share for the years 1929–1936 prior to the stock dividend are shown in Schedule 5–F2 on the basis of the present common stock.

Interstate Natural Gas Co., Inc.—The earnings-price ratio of this company's common stock has fluctuated within a narrow range around 9.00% during the years 1937–1940 and was 9.17% as of February 28, 1941, based on market price of $23 and earnings for the year 1939 of $2.11 per share. The company was incorporated in 1926. Published figures show that its operating revenues increased from $3,101,950 in 1933 to $5,868,450 in 1939, the latest year for which information is available. The initial dividend on the company's common stock was paid in 1930 and the company also paid common dividends in 1931, the amount paid in each year being $0.25 per share. No common dividends were paid during the years 1932–1935, but in 1936 the company paid dividends of $1.75 per share. Dividend payments were increased to $2.60 per share in 1937, reduced to $1.75 in 1938, and in the following two years amounted to $2.00 per share. Earnings increased
103 from $0.35 per share in 1933 to $2.50 in 1937, but declined to $2.13 per share in 1938 and to $2.11 in 1939.

Lone Star Gas Corporation.—This company's common stock earnings-price ratio has fluctuated between limits of 10.27% and 12.73% during the four-year period 1937–1940. At February 28, 1941, the ratio was 12.00% as compared with 12.73% in 1940. Earnings during the four-year period have likewise fluctuated, declining from $1.14 per share in 1937 to $0.88 in 1938, and increasing to $0.98 in 1939 and to $1.17 in 1940. The company commenced operations in 1926 when it was organized to acquire control of Lone Star Gas Company. Operating revenues have increased from $10,983,055 in 1926 to $22,378,903 in 1940. Approximately forty percent of the indicated increase in revenues has occurred since 1935. Earnings and dividends per share for years prior to 1932 as shown in Schedule 5–F2 have been computed on the basis of giving effect to the 1929 stock split-up and the 1931 stock dividend described on Page 2 of Schedule 5–F2. Common stock earnings during the years 1926–1930 were generally higher than those since recorded and ranged from $1.13 to $1.58 per share in that period. During the depression years

earnings declined to $0.53 per share but increased to $1.02 per share by 1936 and, as stated above, were $1.17 per share in 1940. Common dividends have been paid regularly since 1926 but the amounts paid fluctuated considerably during the ten-year period ending in 1935. Dividends subsequently paid amounted to $0.60 per share in the three years 1936–1938 and to $0.70 per share in 1939 and 1940.

Memphis Natural Gas Company.—The earnings-price ratio reflected for this company's common stock during the years
104 1937–1940 has ranged from 13.96% to 16.63%, and was 14.90% at February 28, 1941. Earnings per share during the years 1938–1940 did not vary appreciably but were at a lower level than in 1937 when earnings of $0.78 per share were the largest reported since inception of the company. The company commenced operations in 1928 and in 1931 reported earnings of $0.66 per share. During the depression years earnings fell to a low level, being reported at amounts ranging from $0.36 in 1932 to $0.22 in 1935. The company paid the initial dividend on its common stock in 1930 and continued payments in the two succeeding years. No dividend payment was made in 1933, but dividends were resumed in 1934 and have been paid regularly since. Annual dividend payments amounted to $0.10 per share in 1934 and 1935, $0.50 in 1936 and $0.60 in 1937. The amount paid was reduced to $0.45 in 1938, but was increased to $0.50 in 1939 and to $0.55 in 1940.

Montana-Dakota Utilities Co.—The common stock earnings-price ratio of this company was 7.91% as of February 28, 1941, as compared with percentages ranging from 5.91% in 1937 to 11.48% in 1940. Earnings in 1940 showed a substantial improvement over those in 1939, while the latter, in turn, were lower than 1937 and 1938 earnings. The company has been in existence since 1924. but its name was changed from Minnesota Northern Power Company to the present title in 1935, prior to which time the company was primarily a holding company. Published earnings figures on a comparable basis do not extend beyond 1933. However, the company's common dividend record for prior years discloses that an initial dividend was paid in 1926, and that dividends were paid in increasingly larger amounts (after giving effect to an 8 for 1 stock split-up in 1928 and a 6 for 1 split-
105 up in 1930) through 1931. No dividends were paid on common stock after January 1, 1932, until December 1937 when a dividend of $0.10 per share was paid. Dividends on pre-

ferred stock were paid regularly through January 1, 1932, but none were paid thereafter through 1936 when arrearages were cleared up under a preferred stock readjustment settlement whereby 12,889 shares of 5% preferred stock were issued in full satisfaction of accrued dividends through January 1, 1937. Since the latter date preferred dividends have been paid regularly. Operating revenues have increased from $3,357,676 in 1933 to $4,984,994 in 1940. In 1933 and 1934 operations resulted in substantial net losses. Earnings thereafter increased from $0.08 per share in 1935 to $0.65 in 1937, declined to $0.60 in 1938 and to $0.54 in 1939, but increased to $0.89 in 1940. Following the payment of $0.10 on the common stock in 1937, the company paid dividends of $0.32 per share in 1938, but lowered dividends to $0.24 per share in 1939 and 1940.

Mountain Fuel Supply Company.—The current earnings-price ratio reflected for the common stock of this company, based on market price at February 28, 1941, is 8.35%. This ratio compares with percentages of 8.82% in 1940, 9.47% in 1939, 6.99%, in 1938, and 3.94% in 1937. It will be noted that earnings have shown gradual improvement since 1937. As disclosed by data in Schedule 5–F2, however, 1937 earnings were lower than those in 1936. Prior to 1936 earnings were at relatively lower levels and operations resulted in net losses in two of the six years represented. The company was organized in 1935 as successor by consolidation and merger to Western Public Service Corporation (incorporated in 1928) and its subsidiaries. Operating revenues have in-
106 creased from $1,378,881 in 1930 to $3,388,133 in 1940, approximately one-half of the increase having occurred subsequent to 1936. Dividends were first paid in 1933 in the amount of $0.20 per share. The amount paid was reduced to $0.10 in 1934 and 1935. Dividend payments amounted to $0.25 in each of the three years 1936–1938, but were increased to $0.35 in 1939 and to $0.40 in 1940.

National Fuel Gas Company.—This company's common stock earnings-price ratio ranged from 6.10% in 1937 to 9.69% in 1940 and was 9.43% as of February 28, 1941. During the four-year period the company's earnings were lowest in 1938, at $0.83 per share, and highest in 1940, at $1.12 per share. Inspection of Schedule 5–F2 discloses that operating revenues during the years 1926–1930 were at a higher level then any since reported. For example, operating revenues amount to $19,418,690 in 1926, but were reported at $15,750,559 in 1935, and ranged from $14,713,093

in 1936 to $13,189,292 in 1938, and by 1940 had risen to $15,591,937, which amount was still below the total recorded in 1935. The company's earnings record reflects a similar situation, with earnings averagng approximately $1.50 per share in the years 1926–1930, $1.15 in the years 1931–1935, and $1.00 in the years 1936–1940. The company's dividend record has been more consistent, dividends of $1.00 per share having been paid in each year of the 15-year period, with the exception of the years 1926 and 1935, when dividends of $0.80 and $1.35 per share, respectively, were paid. The company, which was incorporated in 1902, made its initial dividend payment in 1909 and since that time has paid dividends annually. In addition to paying cash dividends, the company declared a 100% stock dividend in 1922.

107 The common stock was changed from $100 par to no par in 1927, 10 shares of no par stock being issued in exchange for each share of $100 par stock held. Earnings and dividends for the years 1926 and 1927 have been computed on the basis of the present common stock.

Oklahoma Natural Gas Company.—The earnings-price ratio of this company's common stock has varied considerably during the years 1937–1940. From 19.27% in 1937, the ratio declined to 16.19% in 1938 and to 12.17% in 1939, but increased to 21.20% in 1940. At February 28, 1941, the ratio, based on earnings for the twelve months ended December 31, 1940, was 19.73%. Ratios for the years 1937 to 1940, inclusive, are computed on the basis of fiscal-year earnings. As stated in Note (g) of Schedule 5–F1, the company's fiscal year was changed from the year ended November 30 to the year ended August 31, effective in 1939. It will be noted that during the four-year period 1937–1940, earnings per common share declined from $2.06 in 1937 to $1.70 in 1938 and amounted to $1.75 in 1939, but increased substantially in 1940, the earnings for the fiscal year ended August 31, 1940, being reported at $3.71 per share. Earnings reported for the twelve months ended December 31, 1940, amounted to $4.02 per share. It is indicated in Note (i) of Schedule 5–F2 that the company was organized in 1933 as the successor through reorganization to the business and property of Oklahoma Natural Gas Corporation. Since 1933 operating revenues have increased from $6,575,598 to $9,421,698, the increase in 1940 alone amounting to $1,200,000. Commencing in 1934 at $0.07 per share, earnings increased to $0.58 in 1935, and to $0.95 in 1936, since which year, as above indicated, earnings have risen to a substantially higher level. The

company paid common dividends for the first time in 1939.
108 In that year the amount paid was $1.00 per share, which was increased to $1.10 in 1940.

Pacific Lighting Corporation.—Following 1938 when the earnings-price ratio of this company's common stock, at 10.90%, reflected an increase over the previous year's ratio of 9.27%, the ratio declined to 7.84% in 1939 and to 7.54% in 1940. In 1941 the current ratio, based on market price of the common stock at February 28, 1941, was 8.58%. It will be noted that earnings, which amounted to $4.10 per share in 1937, increased to $4.18 per share in 1938, but declined to $3.60 in 1939 and had fallen to $3.13 in 1940. From inspection of Schedule 5–F2 it will be seen that annual operating revenues were at a level of approximately $45,000,000 during the three years 1938–1940. Operating revenues in the peak year, 1936, amounted to $51,000,000. However, it should be noted that 1936 was the last full year of operation of the Los Angeles Gas & Electric Corporation, a subsidiary whose electric properties, which produced operating revenues of approximately $9,000,000 in 1936, were sold to the City of Los Angeles in May 1937. In the five years 1926–1930 earnings averaged $3.71 per share; in the five years 1931–1935, $3.39 per share; and in the last five years of the fifteen-year perior 1926–1940 average earnings rose slightly above the 1926–1930 level to $3.78 per share. The company, which was incorporated in May 1907 as the successor to Pacific Lighting Company (incorporated in 1886), has maintained a continuous record of common dividend payments since 1909. In addition to cash dividends on its common stock, the company declared stock dividends of 10% in December 1922 and 80% in December 1924 payable in common stock. Since 1928 the company has paid annual dividends of $3.00 per share on its common stock, except in 1935 and 1936, when amounts of $2.40 and
109 $2.85, respectively, were paid, and in 1937, when the amount paid was $3.50 per share. In 1927 the common stock was changed from $100 par to no par and 10 no par shares were exchanged for each $100 par share held. Earnings and dividends per share for the year 1926 and 1927 have therefore been computed on the basis of the present common stock.

Panhandle Eastern Pipe Line Company.—None of the common stock of this company was held by the public prior to September 1939. Accordingly market quotations have been available only since that time. Based on average market price for the remainder

of 1939 the earnings-price ratio for that year was 9.61%. This ratio increased to 11.74% in 1940 and was 11.65% as of February 28, 1941. Reference to Schedule 5–F2 discloses that the company was incorporated in 1929 as Interstate Pipe Line Company, the present title having been adopted in 1930. Operating revenues reflected a moderate increase from $3,048,518 in 1934 to $3,611,865 in 1935, but increased by $2,400,000 in 1936. This increase is attributable to the fact that the company on July 9, 1936, commenced delivery of natural gas to Detroit, Michigan, under a contract with Michigan Consolidated Gas Company (formerly Detroit City Gas Company). Thereafter operating revenues continued to increase and in 1940 aggregated $13,535,453, which represents an increase since 1937 of approximately $4,000,000. Schedule 5–F2 discloses that in 1934 and 1935, prior to commencement of natural gas deliveries to Detroit, the company's operations resulted in substantial net losses. However, in 1936 the company reported net earnings of $1.44 per share, and earnings increased to $3.57 per share in 1937. A considerable decline in earnings occurred in 1938, in which years earnings amounted to $2.84
110 per share. In 1939 earnings reported at $3.82 per share exceeded the 1937 amount, and in 1940 earnings increased to $3.99 per share. The initial dividend on the company's common stock was paid in 1937. Following the payment of $0.50 per share in that year, common dividends were increased to $2.25 in 1938, reduced to $1.50 in 1939 and increased to $3.00 in 1940.

It will be seen from Note (k) of Schedule 5–F2 that Panhandle Eastern Pipe Line Company has outstanding two issues of $6 dividend preferred stock. One issue consists of 10,000 shares of Class B nonparticipating preferred stock. The second issue is represented by 100,000 shares of Class A participating preferred stock. By reference to Schedule 5–E it will be found that both preferred stock issues are held by Columbia Oil & Gasoline Corporation, which company and Missouri-Kansas Pipe Line Company together own 92.13% of the outstanding common stock of Panhandle Eastern Pipe Line Company, as shown on Page 5 of Schedule 5–G. Dividends on both classes of preferred stock became cumulative after January 1, 1936. Dividends thereon paid in 1937 included $6.00 per share in full payment of arrears for 1936. With respect to the Class A participating preferred stock it is provided that after common stock has received $1.50 per share and Class A preferred stock $6.00 per share in dividends, holders of Class A stock are entitled to participate with holders

of common stock in any further distribution of earnings in the proportion of 25% to Class A preferred stock as a class and 75% to common stock as a class. The earnings per common share reflected in Schedules 5–F1 and 5–F2 are computed after giving effect to the participating feature of the Class A preferred stock.

It should be noted in this connection that a portion of the
111 common dividends paid by Panhandle Eastern Pipe Line Company in 1938 and 1940 constituted participating dividends under the above provision. For example, in those years, after dividend payments of $1.50 per share to common stock and $6.00 per share to Class A preferred stock, participating dividends of $0.75 in 1938 and $1.50 in 1939 were distributed on the common stock. The aggregate amounts of such participating common dividends were $546,489 in 1938 and $1,211,051 in 1940; consequently Class A preferred stock received participating dividends aggregating $182,163 in 1938 and $403,683 in 1940, equal to $1.82 and $4.04 per share, respectively, on the 100,000 shares of Class A preferred stock outstanding. The years 1938 and 1940 are the only years in which the company has paid participating dividends.

Southern Natural Gas Company.—The present $7.50 par common stock of this company has been outstanding only since May 1939 when it was issued in exchange with holders of the company's formerly outstanding Class A and B common stocks. The exchange was made on the basis of one share of new stock for each share of Class A stock held and one-half share of new stock for each share of Class B stock held. Based on average market price during the period in 1939 following its issuance, the earnings-price ratio of the new common stock was 18.14% in that year, increased to 19.51% in 1940, and was 24.38% as of February 28, 1941. It will be noted that earnings amounted to $2.01 per share in 1937 and declined to $1.49 in 1938, but increased to $2.55 in 1939 and to $3.17 in 1940. The company paid its initial dividend in 1936 when a dividend payment of $0.80 per share on the former Class A stock was made. In 1937 a dividend of $0.25 was paid on the former Class B stock. No

further dividends were paid on the Class B stock, but
112 subsequent dividend payments on the Class A stock amounted to $1.20 in 1937 and $0.50 in 1938. Dividends amounting to $1.25 per share were paid in 1939 and 1940 on the new $7.50 par common stock. As indicated in Note (1) of Schedule 5–F2, the company was organized in 1935 to acquire the

properties of its predecessor, Southern Natural Gas Corporation (incorporated in 1928), pursuant to a plan or reorganization.

The foregoing historical analysis of operating revenues, earnings, and dividend payments of individual companies discloses the following facts with respect to the 13 companies represented in Schedules 5–F1 and 5–F2:

1. One company has paid no dividends on common stock since its inception;

2. Three companies did not commence payment of common dividends until 1936; one until 1937; and one until 1939;

3. Three companies paid lower dividends in 1939 than in 1938;

4. Five companies ceased the payment of dividends altogether during the depression years or made substantially reduced dividend payments;

5. Preferred dividends of three companies were in arrears during the depression years;

6. Three companies were organized to take over the properties of predecessor companies which had been placed in receivership;

7. Common stock earnings of three companies were lower in the latest year for which reported than in the preceding year;

8. Common stock earnings of two companies, which have been in existence since 1926, reflect a decline in average earnings for the five years 1936–1940 as compared with the five years 1926–1930;

9. Operating revenues of two companies, which have been in existence since 1926, were lower in 1940 than in 1930.

In the following tabulation the above numbered paragraphs are keyed to the respective companies to which reference is made therein by the symbol "X" appearing below the paragraph number:

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Company	Paragraph number								
	1	2	3	4	5	6	7	8	9
Consolidated Gas Utilities Corp	X					X			
El Paso Natural Gas Co		X(1936)			X		X		
Houston Natural Gas Corp		X(1936)	X						
Interstate Natural Gas Co., Inc				X			X		
Lone Star Gas Corp				X				X	
Memphis Natural Gas Co				X					
Montana-Dakota Utilities Co			X	X	X				
Mountain Fuel Supply Co				X					
Natural Fuel Gas Co								X	X
Oklahoma Natural Gas Co		X(1939)				X			
Pacific Lighting Corp							X		X
Panhandle Eastern Pipe Line Co		X(1937)	X		X				
Southern Natural Gas Co		X(1936)				X			

The above tabulation illustrates some of the factors which may influence investor appraisal of risk in connection with the purchase of common stock. The fluctuations noted in annual earnings-price ratios of the common stocks listed in Schedule 5–F1 during the period since 1937 may have been occasioned by one or more of these or other factors.

The foregoing comments indicate that caution must be exercised in appraising the significance of the earnings-price ratios exhibited for the above group of common stocks of natural gas companies. It also appears that the propriety of employing such earnings-price ratios in connection with the problem of a fair rate of return for Hope Natural Gas Company would be doubtful if consideration were not given to comparative analyses of operating revenues, earnings, and dividends, as well as to other factors indicative of the degree of risk confronting the enterprise.

Schedule 5–G.—This schedule contains a list of the individual holdings by affiliates of common stock of the natural gas companies listed in Schedule 5. None of such common stock is held by institutions, except that as will be noted by reference to Page 1 of Schedule 5, an amount of $451,697 of the common stock of Godfrey L. Cabot, Inc., was held by three educational institutions.

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Schedule 6.—Schedule 6 contains a compilation of bond issues sold by the natural gas companies listed in Schedule 5 during the period from January 1, 1935, to March 31, 1941, inclusive. The issues are grouped according to Moody's ratings, and for each issue there appear the name of the issuing company, the approximate offering date, a description of the issue, principal amount of the offering, net price and cost to company, and price and yield to public. In addition, the schedule shows the distribution of holdings of issues presently outstanding, i. e., whether held by the general public, or by institutional investors.

Under "Net Price to Company" are shown the net proceeds to the company per $100 of principal amount after underwriters' commissions and other expenses and in the adjoining column a percentage representing the annual cost of the funds borrowed calculated to maturity. Under "Price to Public" are shown the selling price to the public and in the adjoining column a percentage representing the annual yield to purchasers calculated to maturity.

All but two of the issues shown in Schedule 6 have been referred to in the preceding comments pertaining to the data con-

tained in Schedule 5–A. The issue of Mississippi River Fuel
Corporation not previously described, which is the first
115 issue listed in the lower section of Schedule 6 covering
bonds privately sold, consists of $10,000,000 of first mortgage 4% bonds, due 1952. These bonds were sold privately in February 1937 at an assumed price of par, the proceeds having been used for redemption of the company's previously outstanding first mortgage 6% bonds, due 1944. As of December 31, 1940, $7,665,000 principal amount of this issue was outstanding, the entire amount being held by institutions.

The second issue not previously described consists of $16,000,000 of first mortgage 3¼% bonds, due 1954, of Northern Natural Gas Company, which were sold privately in August 1939 at par to the group of insurance companies identified on Page 5 of Schedule 5–B. The proceeds from the sale of the 3¼% bonds were applied to the retirement as of August 1, 1939, of the company's outstanding first mortgage 4¾% bonds, due 1947, Series A ($11,120,000); first mortgage 4¼% bonds, due 1947, Series B ($1,454,000), and 4½% debentures, due 1948 ($2,930,000). The 4¾% Series A bonds and the 4¼% Series B bonds, both due 1947, in the principal amounts of $16,000,000 and $2,000,000, respectively, had been sold privately in July 1935 to four insurance companies, the proceeds being used to retire bank loans and to provide additional capital for construction. The 4½% debentures, due 1948, in the principal amount of $3,000,000, had been sold privately in July 1938, it being reported that the proceeds were used for general corporate purposes.

By inspection of Schedule 6 it will be seen that a considerable proportion of the bonds sold by the companies listed in Schedule 5 during the period shown has been purchased by institutions,
which affords an indication of the investment quality of the
116 bonds of the natural gas companies represented. In addition, it will be observed that the ratings assigned to a majority of the bond issues of such companies which have been publicly offered fall within the Baa to Aa groups. However, it is of interest to note that in numerous instances the yield at which the issues shown in Schedule 6 have been sold is lower than Moody's public utility bond yield average in the month of sale for the rating group in which the issue falls, as indicated below:

Rating	Company	Offering date	Issue	Yield to public	Moody yield [1]
				Percent	
A	Lone Star Gas Corp	Aug. 1938	Deb., 3½%, 1953	3.33	3.84
A	Panhandle East, P. L. Co	Jan. 1941	1st Mtg., 3%, 1960	2.87	3.15
Baa	Oklahoma Nat. Gas Co	June 1936	1st Mtg., 4½%, 1951	4.64	4.72
Baa	Southern Nat. Gas Co	Nov. 1936	1st Mtg., 4½%, 1951	4.50	4.53
Baa	Montana-Dakota U. Co	May 1939	1st Mgt., 4½%, 1954	4.41	4.50
Baa	Oklahoma Nat. Gas Co	Aug. 1939	1st Mtg., 3¾%, 1955	3.46	4.39
Baa	Montana-Dakota U. Co	Jan. 1941	1st Mtg., 3½%, 1961	3.26	3.87

[1] Moody's public-utility bond yield average in month of offering, per Schedule 4 of Volume II of this exhibit.

From Schedule 6 it will be observed that a characteristic feature of natural gas company bond issues, arising from the fact that the business of such companies is based on exploitation of a wasting resource, is their relatively short life to maturity. As will be noted by comparison of offering dates with maturities, the life of the issues generally does not exceed 15 years, whereas for electric utility bond issues the life is generally 25 or 30 years. For example, aside from the five debenture issues listed in Schedule 6, for which the period to maturity is 10 years in all but one instance, 16 of the mortgage bond issues shown have a life of 15 or 16 years. However, three issues have a life of 30 years, another of 20 years, and another of 19 years. The remaining five issues consist of mortgage bonds having short-term serial maturities.

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Finally, it will be noted that in the majority of instances the bonds listed in Schedule 6 are indicated as having been issued under indentures containing provisions relative to sinking fund requirements with a view toward the gradual retirement of the bonds over the life of the issue. The provision for serial maturities in respect of the five issues mentioned above accomplishes the same purpose as a provision for redemption through sinking fund operations.

Schedule 7.—Schedule 7 is presented for the purpose of disclosing certain details with respect to the issuance, terms, and purpose of issuance of outstanding note issues of the natural gas companies listed in Schedule 5 which were held by institutions. The schedule shows for each note issue, in columnar form and under appropriate captions, the name of the issuing company, the approximate date of issuance, a description of the issue including date of maturity, the principal amount of the issue, the purpose

of issuance, the interest rate, the identity of the lending institutions and the principal amount outstanding.

The purpose of the note issues which are indicated in the column "Purpose of Issuance" as having been issued for refunding purposes, and in connection with which there is a reference to Schedule 6, has been described in the preceding comments pertaining to Schedule 5–A.

It will be noted that the total amount of all outstanding notes shown in the last column of the schedule is an agreement with the amount indicated in the summary on Page 8 of Schedule 5
118 as representing notes held by institutions.

It is of interest to note that in many instances the companies have refunded previously outstanding mortgage debt and debentures carrying higher rates of interest by means of short-term bank loans carrying low interest rates, and that in several instances the loans have been made by groups of participating banks and insurance companies. In the majority of instances the notes have been issued for refunding purposes. However, in the case of Northern Natural Gas Company, a loan of $6,000,000 was obtained for new capital purposes. The loan was evidenced by unsecured 2⅛% promissory notes, due 1940–46, issued to the Chase National Bank of New York in August 1939. It was reported that the proceeds from the loan were to be used as follows: $3,600,000 for construction of a 240-mile pipe line from Sioux City, Iowa, to Minneapolis; $1,200,000 for compressor station property, lateral pipe lines, distribution system properties of subsidiaries and development costs, all directly incidental to the pipe line; and $1,200,000 to defray cost of additions and betterments to the company's existing property, including distribution systems of subsidiaries, etc.

Schedule 8.—This schedule presents data on preferred stock issues of the natural gas companies listed in Schedule 5 which were sold in the period 1935–1941. The issues represented include those of Oklahoma Natural Gas Company and Pacific Lighting Corporation and have been described in the preceding comments pertaining to Schedule 5–D.

Schedule 9.—In this schedule are presented certain details with respect to offerings of common stock either to stockholders or to the public by the natural gas companies listed in Schedule
119 5 during the period since 1935. Only three such offerings have been made, the issuing companies including El Paso

Natural Gas Company, Panhandle Eastern Pipe Line Company, and Southern Natural Gas Company.

There appear for each of the issues listed in Schedule 9 the name of the issuing company and description of the issue, the offering date, the number of shares offered, the amount of the offering, the price to underwriters, the offering price, the earnings per share for the most recent twelve-months' period reported on prior to the offering date, and the ratio of the earnings for such period to the offering price.

The first issue listed in Schedule 9 consists of 60,000 shares of $3 par common stock of El Paso Natural Gas Company which were offered to the public in September 1936. As indicated in Note (a) of Schedule 9 the offering did not represent new financing by the company and the proceeds were not received by the company inasmuch as the shares constituted a portion of the company's outstanding common stock held by Engineers Public Service Company. The shares were sold to underwriters by the trustee for the latter company at a price of $19 per share. The underwriters offered the shares to the public at a price of $20 per share. On the basis of pro forma earnings of $2.21 per common share for the twelve months ended June 30, 1936, the earnings-offering price ratio was 11.05%.

The next issue shown in Schedule 9 is one consisting of 80,000 shares of no par common stock of Panhandle Eastern Pipe Line Company. A distribution of rights to subscribe to these shares was made in September 1939 to stockholders of Missouri-Kansas Pipe Line Company (holder of 42.05% of the presently outstanding common stock of Panhandle Eastern Pipe Line
120 Company) pursuant to a plan approved by the Court of Chancery for New Castle County, Delaware. The subscription warrants, which expired on October 27, 1939, entitled the holders thereof to purchase the stock at the subscription price of $25 per share. Holders of such rights acquired 78,715 shares, leaving 1,285 shares unsubscribed. It is reported that the unsubscribed shares were the subject of litigation as the result of an action instituted in October 1939 against Panhandle Eastern Pipe Line Company and others by Missouri-Kansas Pipe Line Company and Lucille I. Dammann. Based on earnings of $3.39 per share reported for the twelve months ended March 31, 1939, computed after giving effect to the participating feature of the company's Class A preferred stock, the earnings-offering price ratio of the common stock was 13.56%.

The last issue shown in Schedule 9 consists of 484,379 shares of $7.50 par common stock of Southern Natural Gas Company which were offered for subscription by stockholders in January 1941 in the ratio of 7/10 of one share of each share held. Of the shares offered, Federal Water Service Corporation, as the holder of 52.31% of the company's stock, purchased 253,372 shares, and other holders of subscription warrants purchased 227,782 shares, resulting in a total of 481,154 shares subscribed and 3,225 shares unsubscribed. The subscription price was fixed at $10 per share. On the basis of such price and earnings of $2.89 per share for the twelve months ended August 31, 1940, the earnings-offering price ratio was 28.90%. It was reported that $600,000 of the proceeds from the sale of common stock would be used to retire an equal amount of 2½% notes issued November 22, 1940, and that the company contemplated employing a substantial
121 portion of the remaining funds for development of gas supplies, for construction of pipe lines to transport gas produced, for increasing the delivery capacity of its present system and for extensions to serve other markets.

Standard Oil Company (New Jersey)—

Natural Gas Interests and Long-Term Financing.

Chart 4.—The purpose of this chart is to show the identity of the companies in the natural gas industry which are affiliated with Standard Oil Company (New Jersey). The chart discloses that Hope Natural Gas Company is a wholly owned subsidiary of Standard Oil Company (New Jersey), and that other wholly owned natural gas subsidiaries of the latter company include The East Ohio Gas Company, The Peoples Natural Gas Company, Hope Construction & Refining Company, Hope Producing Company, and The River Gas Company. It will also be seen that Standard Oil Company (New Jersey) holds controlling interests of 81.70% in Lycoming United Gas Corporation and 53.96% in Interstate Natural Gas Co., Inc. Lycoming United Gas Corporation, in turn, is the parent of two wholly-owned natural gas subsidiaries, namely; New York State Natural Gas Corporation and Keuka Construction Corporation. In addition to the above interests, Standard Oil Company (New Jersey) holds substantial minority interests in Colorado Interstate Gas Company (42.50%), Mississippi River Fuel Corporation (22.39%), and Natural Gas Pipeline Company of America (14.28%).

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Domestic Coke Corporation, a nonnatural gas subsidiary of Standard Oil Company (New Jersey), is shown on the chart inasmuch as Hope Natural Gas Company, in its financial and statistical report to the Federal Power Commission for 1939
122 (F. P. C. Form No. 133), reported the purchase of 1,376,357 M C. F. of manufactured gas from that company. Gas Companies, Inc., whose stock is owned in equal percentages by Hope Natural Gas Company, The East Ohio Gas Company, and The Peoples Natural Gas Company, is included for the reason that its function is that of a service organization for the natural gas subsidiaries of Standard Oil Company (New Jersey).

Schedule 10.—This schedule was prepared for the purpose of presenting certain details of the physical characteristics, location of properties and volume of natural gas transactions of the natural gas companies which are controlled by Standard Oil Company (New Jersey) or in which that company holds a substantial minority interest. The companies are segregated into four groups, each group comprising a different system, except that group IV includes the natural gas companies in which Standard Oil Company (New Jersey) holds a minority interest.

The information presented for each system consists of a general description of the system, the names of the companies included therein, the percent of voting power of each company directly held by Standard Oil Company (New Jersey), and statistical data pertaining to the individual companies. Such data include miles of pipe line operated, classified according to function (i. e., production, transmission, or distribution); number and location of gas wells; volume of natural gas produced, purchased and transported; and sales of natural gas to other gas utilities at wholesale, to industrial main-line customers, and to other domestic, commercial, and industrial customers at retail.

It should be mentioned that the data on pipe-line mileage and gas wells presented in Schedule 10 are given as of July 1,
123 1938, and the statistics on volume of gas transactions are given for the twelve months ended June 30, 1938. However, it is believed that the information presented will be useful for the purpose of indicating in a general way the importance of the natural gas systems of Standard Oil Company (New Jersey) from a national standpoint.

By inspection of Schedule 10 it will be seen that fourteen companies are listed therein. However, two of the companies have been merged with other companies in the group since 1938. As

indicated in the schedule, the two companies referred to are Reserve Gas Company and Columbia Natural Gas Company. It will also be seen that Lycoming United Gas Corporation has no physical properties, its function being that of a holding company. Consequently, only eleven of the fourteen companies represented in Schedule 10 are companies presently engaged in natural gas operations. It is of interest to note that of the eleven companies so engaged, there are eight companies which are among the group of 43 natural gas companies listed in Schedule 5, as follows: Hope Natural Gas Company; East Ohio Gas Company; Peoples Natural Gas Company; New York State Natural Gas Corporation; Interstate Natural Gas Co., Inc.; Mississippi River Fuel Corporation; Colorado Interstate Gas Company; and Natural Gas Pipeline Company of America.

Also of interest is the fact that the companies listed in Schedule 10 produced during the twelve months ended June 30, 1938, approximately 80,000,000 M C. F. of natural gas and in the same period, excluding duplications arising from intercorporate sales among the respective companies, sold approximately 275,000,000 M C. F. of natural gas for ultimate consumption. Although the 80,000,000 M C. F. of gas produced by the
124 combined companies represented only 3.5% of the total natural gas production in the United States in 1938, the 275,000,000 M C. F. of gas sold by them for ultimate consumption represented in excess of 20% of the total amount of gas consumed in the United States in that year other than for field use and for manufacture of carbon black.

The companies listed in group I of Schedule 10 operate in West Virginia, Ohio, and Pennsylvania and deliver natural gas to approximately 714,000 customers in numerous cities of which Cleveland, Akron, Canton, Youngstown, and Marietta, Ohio; Pittsburgh and Altoona, Pennsylvania; and Clarksburg and Parkersburg, West Virginia, are the largest. This group is the only one of the four groups shown in Schedule 10 the members of which are engaged in retail distribution.

The only operating companies in group II are New York State Natural Gas Corporation and Keuka Construction Corporation, both wholly owned subsidiaries of Lycoming United Gas Corporation. These companies operate in north central Pennsylvania and south central New York. Natural gas is produced and transported by these companies for sale to distribution systems of others in several cities and towns in central New York of

which Syracuse, Auburn, Cortland, and Ithaca are the more important.

Group III consists of two companies: namely, Interstate Natural Gas Co., Inc., and Hope Producing Company. These companies operate production facilities in fields in northeastern Louisiana and a main transmission pipe line extending from the gas fields through Louisiana and across Mississippi to Baton Rouge, Louisiana.

Group IV includes companies in which Standard Oil
125 Company (New Jersey) holds a minority interest. They are all important natural gas pipe-line companies and their operations are described in the Appendix to this Volume I of this exhibit. The companies include Mississippi River Fuel Corporation, Colorado Interstate Gas Company, and Natural Gas Pipeline Company of America.

Schedule 11.—In this schedule are presented certain details with respect to long-term financing by Standard Oil Company (New Jersey) since 1926. In November 1926, as indicated in Schedule 11, the company sold an issue of 5% debentures, due 1946, in the principal amount of $120,000,000 at a price of 100½ to yield 4.96% to purchasers. In February 1935 three series of debentures aggregating $37,000,000, due 1939–41, were sold at par to yield 3.25%, 3.50%, and 3.75%, according to maturity. In May 1936 an issue consisting of $85,000,000 of 3% debentures, due 1961, was sold at a discount of 2 points below par to yield 3.12%. It is reported that $55,000,000 principal amount of this issue was privately sold to Rockefeller Foundations. In July 1938, the company sold an issue of 2¾% debentures, due 1953, in the amount of $50,000,000, and 1¾–2½% serial notes, due 1943–47, in the amount of $35,000,000. The 2¾% debentures were offered at 99 to yield 2.83%, and the serial notes were sold at par. The latter serial notes were refunded in July 1940 with proceeds from the sale at par of $35,000,000 of 1¼–1½% serial notes, due 1943–47.

CHARLES W. KNAPP, Jr.,
Charles W. Knapp, Jr.,
Principal Examiner of Accounts.

WASHINGTON, D. C., *May 26, 1941.*

77 **EXHIBIT NO. 82.-A.. RATE OF RETURN, VOLUME II, F. P. C. WITNESS KNAPP**

[Pages 1 to 76 omitted]

Schedule No. 19

Relation of Net Profit to Total Invested Capital for Leading American Industrial, Utility and Railroad Corporations

[Unit: $1,000,000]

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
400 leading industrial corporations													
Total invested capital	$25,114	$26,559	$28,743	$29,397	$28,050	$26,049	$25,632	$24,902	$24,701	$25,150	$26,182	$26,588	$26,800
Net profit	$2,187	$2,836	$3,251	$1,949	$825	$250	$798	$1,122	$1,583	$2,278	$2,538	$1,363	$2,023
Percent of net profit to total invested capital	8.7	10.7	11.3	6.6	2.9	1.0	3.1	4.5	6.4	9.1	9.7	5.1	7.5
21 leading utility corporations													
Total invested capital	$6,695	$7,470	$8,119	$8,929	$9,339	$9,231	$9,113	$8,761	$8,778	$8,522	$8,529	$8,699	$8,664
Net profit	$447	$526	$587	$604	$588	$514	$482	$443	$462	$473	$467	$440	$464
Percent of net profit to total invested capital	6.7	7.0	7.2	6.8	6.3	5.6	5.3	5.1	5.3	5.5	5.5	5.1	5.4
42 leading railroad corporations													
Total invested capital	$18,747	$19,262	$19,844	$20,252	$20,058	$20,028	$19,741	$19,392	$18,895	$18,743	$18,784	$18,351	$17,893
Net profit	$1,082	$1,153	$1,269	$990	$658	$462	$556	$543	$560	$681	$609	$424	$598
Percent of net profit to total invested capital	5.8	6.0	6.4	4.9	3.3	2.3	2.8	2.8	3.0	3.6	3.2	2.3	3.3

Notes:

Total invested capital—includes funded debt, preferred and common stock, capital reserves and surplus.

Net profit—represents the amount available for fixed charges after depreciation, etc.

Source of above:

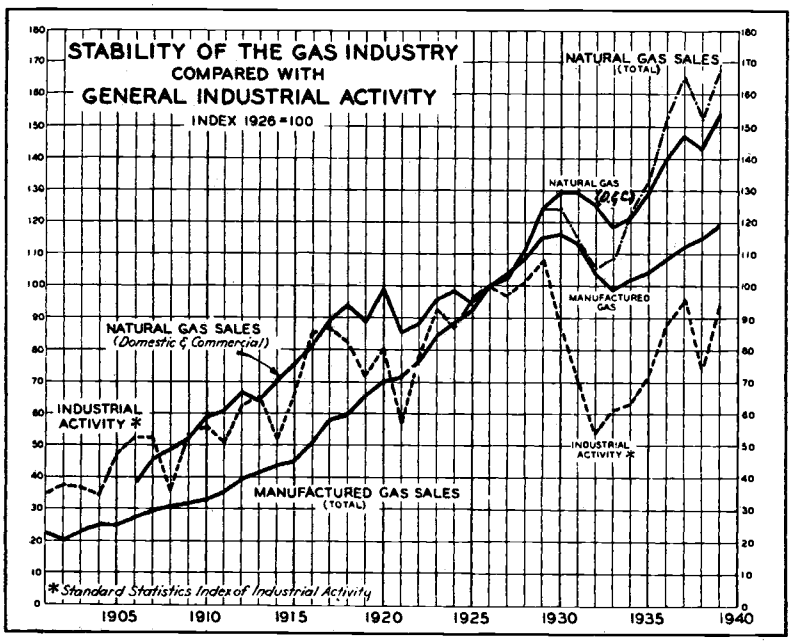
Standard Trade and Securities (published by Standard Statistics Co., Inc.), volume 6, number 9, section 2, dated Sept. 1940.

[Page 79 to 95 omitted.]

5 **EXHIBIT NO. 82-B, RATE OF RETURN, VOLUME III, F. P. C. WITNESS KNAPP**

[Pages 1 to 4 omitted]

CHART NO. 3, STABILITY OF GAS INDUSTRY



Source: Annual Statistics of the Natural Gas Industry in 1939, Statistical Bulletin No. 41, October, 1940, Page No. 4, issued by the American Gas Association.

[Pages 6 to 42 omitted.]

 Schedule No. 6

Bonds of natural gas companies sold in period from January 1, 1935 to March 31, 1941

MOODY'S Aaa RATING

[Cost of money to issuing companies and yield to public]

Source of data	Company	Approximate offering date	Issue	Principal amount	Net price to company		Price to public		Held by—		Date called
					Amount	Cost, percent	Amount	Yield, percent	Public	Institutions	
(1)	Southern California Gas Co. (subsidiary of Pacific Lighting Corp.).	July 1935	First & Ref. Mtg. 4%, 1965	$15,000,000	$98.09	4.11	$101.50	3.91			Nov. 1, 1940 (a).

MOODY'S Aa RATING

(1)	Southern California Gas Co. (subsidiary of Pacific Lighting Corp.).	Sept. 1940	First Mtg. S. F., 3¼%, 1970	$30,000,000	$101.13	3.19	$103.50	3.07	$30,000,000	(b)	
(2)	Southern Counties Gas Company of California (subsidiary of Pacific Lighting Corp.).	Jan. 1941	First Mtg. S. F., 3%, 1971	11,500,000	(c)	(c)	101.00	2.95	11,500,000	(b)	
				41,500,000							

Bonds of natural gas companies sold in period from January 1, 1935 to March 31, 1941—Continued

MOODY'S A RATING

[Cost of money to issuing companies and yield to public]

Source of data	Company	Approximate offering date	Issue	Principal amount	Net price to company		Price to public		Held by—		Date called
					Amount	Cost, percent	Amount	Yield, percent	Public	Institutions	
(1)	Pacific Lighting Corporation.	Oct. 1935	S. F. Debentures, 4½%, 1945	$10,000,000	$96.17	4.86	$100.00	4.50			Apr. 5, 1939 (1).
(1)	Arkansas Louisiana Gas Co.	July 1936	First Mtg. S. F., 4%, 1951	10,000,000	93.29	4.62	98.00	4.18			Oct. 30, 1939 (d).
(1)	Panhandle Eastern Pipe Line Co.	Mar. 1937	First Mtg. S. F., A, 4%, 1952	24,000,000	95.02	4.46	97.50	4.23			Mar. 5, 1941 (f).
(1)	Lone Star Gas Corp	Aug. 1938	S. F. Conv. Debentures, 3½%, 1953.	20,000,000	99.36	3.56	102.00	3.33			Mar. 1, 1941 (e).
(1)	Arkansas Louisiana Gas Co.	Sept. 1939	First Mtg. B, 3½%, 1945–54	9,700,000	99.20	3.59	100.00	3.50		$9,700,000	
(2)	Panhandle Eastern Pipe Line Co.	Jan. 1941	First Mtg. & First Lien, S. F., B, 3%, 1960.	12,000,000	(c)	(c)	102.00	2.87	$12,000,000	(b)	
				85,700,000							

MOODY'S Baa RATING

(1)	Oklahoma Natural Gas Co.	June 1936	First Mtg. S. F., A, 4½%, 1951	$20,000,000	$94.89	4.99	$98.50	4.64			Sept. 22, 1939 (i).
(1)	Southern Natural Gas Co.	Nov. 1936	First Mtg. P. L. S. F., 4½%, 1951.	15,000,000	96.29	4.85	100.00	4.50	$5,413,000	$5,961,000	
(1)	Montana-Dakota Utilities Co.	May 1939	First Mtg. S. F., 4½%, 1954	9,000,000	96.01	4.88	101.00	4.41			Feb. 8, 1941 (g).
(1)	Oklahoma Natural Gas Co.	Aug. 1939	First Mtg. S. F., B, 3¾%, 1955	17,000,000	100.88	3.68	103.50	3.46	7,946,000	8,854,000	
(1)	Houston Natural Gas Corp.	Sept. 1940	First Mtg. S. F., 4%, 1955	3,500,000	95.19	4.44	100.00	4.00	3,500,000	(b)	
(2)	Montana-Dakota Utilities Co.	Jan. 1941	First Mtg. 2½% Serial, 1942–49	2,500,000	(c)	(c)	Various	0.63–2.25	2,500,000	(b)	
(2)	Montana-Dakota Utilities Co.	Jan. 1941	First Mtg., S. F., 3½%, 1961	7,500,000	(c)	(c)	103.50	3.26	7,500,000	(b)	
				74,500,000							

MOODY'S Ba RATING

(1)	El Paso Natural Gas Co.	June 1936	First Mtg. S. F., A, 4½%, 1951	$7,500,000	$94.14	5.06	$98.50	4.64			Jan. 16, 1939 (h).
(1)	Oklahoma Natural Gas Co.	do	Conv. Debentures, 5%, 1946	10,000,000	95.72	5.56	100.00	5.00			Oct. 7, 1939 (i).
				17,500,000							

MOODY'S B RATING

(1)	El Paso Natural Gas Co.	June 1936	Conv. Debentures, 4¾%, 1946	$3,750,000	$95.16	5.38	$100.00	4.75			Jan. 16, 1939 (h).
(1)	Montana-Dakota Utilities Co.	Oct. 1936	Conv. Debentures, 4½%, 1946	2,300,000	96.19	4.99	100.00	4.50			Jan. 1, 1941 (j).
				6,050,000							

Bonds of natural gas companies sold in period from January 1, 1935 to March 31, 1941—Continued

NO RATING ASSIGNED (ALL ISSUES PRIVATELY SOLD)

[Cost of money to issuing companies and yield to public]

Source of data	Company	Approximate offering date	Issue	Principal amount	Net price to company		Price to public		Held by—		Date called
					Amount	Cost, percent	Amount	Yield, percent	Public	Institutions	
(2)	Mississippi River Fuel Corp.	Feb. 1937	First Mtg. P. L. S. F., 4%, 1952	$10,000,000	(c)	(c)	$100.00(k)	4.00		$7,665,000	
(2)	El Paso Natural Gas Co.	Oct. 1937	First Mtg. S. F., B, 4%, 1952	1,200,000	(c)	(c)	97.75	4.20			Jan. 16, 1939 (h).
(2)	Southern Natural Gas Co.	do	First Mtg. P. L. S. F., 4½%, 1952.	650,000	(c)	(c)	97.75	4.71		528,000	
(2)	Cities Service Gas Co.	Dec. 1938	First Mtg. P. L. 3¾%, 1947–54	20,000,000	(c)	(c)	100.00	3.75		20,000,000	
(2)	El Paso Natural Gas Co.	do	First Mtg. S. F., 3½%, 1953	6,000,000	(c)	(c)	99.00	3.59		6,000,000	
(1)	Northern Natural Gas Co.	Aug. 1939	First Mtg. S. F., A, 3¼%, 1954	16,000,000	$98.84	3.35	100.00	3.25		16,000,000	
(1)	Arkansas Louisiana Gas Co.	Sept. 1939	First Mtg. A, 2¾%, 1940–44	3,300,000	99.20	3.01	100.00	2.75		3,300,000	
(2)	El Paso Natural Gas Co.	June 1940	First Mtg. S. F., 3%, 1955	2,500,000	(c)	(c)	98.50	3.13		2,900,000	Feb. 8, 1941 (g).
(2)	El Paso Natural Gas Co.	July 1940	First Mtg. S. F., 3%, 1955	500,000	(c)	(c)	98.50	3.13			
(3)	Montana-Dakota Utilities Co.	do	First Mtg. S. F., 4½%, 1956	1,200,000	101.06	4.40	104.00	4.16			
(2)	Panhandle Eastern Pipe Line Co.	Jan. 1941	First Mtg. & First Lien, A, 165–2.30%, 1946–50.	6,250,000	(c)	(c)	100.00	1.65–2.30		6,250,000	
				67,600,000							
	Total			307,850,000							

NOTE.—See Page 2 for Source of Data and Notes.

[Pages 44 to 50 omitted.]

Long-term financing by Standard Oil Co. (New Jersey)

Issue	Date of offering	Amount	Offering price	Yield to purchasers, percent
Debentures, Gold, 5%, 1946	November 1926	$120,000,000	100½	4.96
Serial Debentures, Series A, 3¼%, 1939	February 1935	12,334,000	100	3.25
Serial Debentures, Series B, 3½%, 1940	February 1935	12,334,000	100	3.50
Serial Debentures, Series C, 3¾%, 1941	February 1935	12,332,000	100	3.75
Debentures, 3%, 1961	May 1936	[1] 85,000,000	98	3.12
Debentures, 2¾%, 1953	July 1938	50,000,000	99	2.83
Serial Notes, 1¾–2½%, 1943–47	July 1938	35,000,000	100	1.75–2.50
Serial Notes, 1¼–1½%, 1943–47	July 1940	35,000,000	100	1.25–1.50

[1] $55,000,000 Debentures, 3%, 1961, sold privately to Rockefeller Foundations.

Source of data: Moody's Manuals of Investments, 1931–40 (Industrials).

U. S. GOVERNMENT PRINTING OFFICE: 1942