

**FORECASTING PLANT AND EQUIPMENT EXPENDITURES
FROM BUSINESSMEN'S EXPECTATIONS**

by

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Since 1945, the Securities and Exchange Commission and the Department of Commerce have been collecting data on actual and anticipated plant and equipment expenditures of non-agricultural business. A large sample of firms at the beginning of each quarter submits data on the outlays made in the preceding quarter and outlays planned for the current quarter and the succeeding quarter. At the beginning of each year, since 1947, respondents have, in addition, been supplying information on the outlays they expect to make during that year and on their expected sales volume. 1/ The sample data serve as the basis for the quarterly and annual series on plant and equipment expenditures published jointly by the Securities and Exchange Commission and the Department of Commerce.

The purpose of this paper is to try to evaluate the results obtained in the survey. 2/ How accurately have plant and equipment expenditures anticipated by business been able to indicate the level or the movement of actual expenditures annually and quarterly? Have anticipatory data in this field given better results than the alternative procedures available such as using

NOTE: The Securities and Exchange Commission has no responsibility for the views expressed in this paper.

1/ The estimates for 1955 were based on a sample of approximately 3500 companies accounting for almost half of aggregate plant and equipment expenditures for all industries. This includes data for 1700 firms reporting to the Securities and Exchange Commission, 1700 reporting to the Department of Commerce and over 100 railroads reporting to the Interstate Commerce Commission. Currently the sample has been increased to about 10,000 firms by the addition of a large number of small non-manufacturing companies by Commerce and the I.C.C. For a description of methods used in this survey, see the Survey of Current Business, December 1951 and August 1952.

2/ A similar study of a somewhat broader nature was prepared in 1950-1951 by Irwin Friend and Jean Bronfenbrenner and presented in the Survey of Current Business, December 1950 and at the Conference on Research in Income and Wealth, September 1951, under the title "Business Investment Programs and their Realization." The analysis covered the results for the early years of the plant and equipment survey prior to the broad-scale revision of methods instituted in 1951 and 1952.

preceding year outlays or projecting quarterly rates? What has been the accuracy of anticipations for individual companies and what are the company characteristics related to accuracy?

The data on which this analysis is based consist of the published estimates of the Securities and Exchange Commission and the Department of Commerce for actual and anticipated expenditures for the period 1947 through the first quarter of 1956. Although the quarterly series began in 1945, annual expectations were not requested until 1947. Individual company data were analysed for 1954 and 1955 and cover the sample companies reporting to the S.E.C. or Commerce whose actual or anticipated annual outlays totalled at least \$10,000. Due to the absence of data on the revised basis, some of the analysis of the quarterly seasonally adjusted anticipations covers only the period 1952 to the present. For practical purposes it was also necessary to limit a few of the distributions only to the companies reporting to the S.E.C., generally the larger corporations in the sample.

From an examination of the estimates obtained in the survey and of the sample data certain conclusions can be drawn.

SUMMARY

In general, the annual estimates based on anticipations as published by the Securities and Exchange Commission and the Department of Commerce have accurately forecast plant and equipment expenditures both as to level and movement. With one exception, turning points were clearly indicated.

The seasonally adjusted quarterly data also indicate a high degree of accuracy. This accuracy, in both quarterly and annual expectational data, reflects the advanced planning involved in business decisions and the tendency for influences modifying these decisions to offset each other in aggregate.

Anticipatory data appeared to provide better estimates of capital outlays than did projections of past or current data. This was indicated both on an aggregate basis and for individual company data.

Positive and negative discrepancies in anticipations for individual companies tended to offset each other. However, there was considerable variation in the degree of dispersion. Accuracy appeared to be closely related to industry and size of company and to the relative magnitude of the investment program. Firms with longer-range programs and firms scheduling major outlays were more accurate in their projections as were the larger-sized manufacturers and the electric and gas utilities.

There appeared to be a systematic tendency on the part of manufacturing firms to underestimate capital outlays for plant and equipment. This was closely related to size of company, the larger companies showing little or no tendency in this direction.

For the period studied, there was little evidence of any close overall relation between accuracy and changes in company sales or between accuracy in one year and accuracy in the preceding year.

AGGREGATE OUTLAYS

Actual vs. Anticipated

While generally over the period for which annual data on programmed outlays were available, that is, 1947 through 1955, the anticipatory data yielded fairly accurate estimates of actual expenditures, there was some variation from year to year and considerable variation among industries. In only two years, 1947 and 1950, did the difference between actual outlays

and planned expenditures amount to as much as 15 percent of anticipations. For 1947 the large discrepancy can in part be explained on the grounds of the newness of the survey and in part by the unanticipated easing of supplies. The substantial understatement of outlays in 1950 can in large part be ascribed to the rapid build-up of facilities required by the initiation of hostilities in Korea--a development certainly not foreseen in early 1950. (Table 1)

In 1953 and 1955 businessmen understated their plant and equipment expenditures by about 5 percent and were within 3 percent in the other years, Although somewhat obscured by a systematic tendency to underestimate, it appears that during periods of rising capital expenditures businessmen understated the increase in outlays, while in periods of declining outlays, they tended to understate the decline.

Of much greater importance than the level of outlays in using the series for the purpose of forecasting is the ability of the series to anticipate year-to-year movements and turning points. In every year since the beginning of the annual survey, except only 1950, the estimates based on anticipations moved in the same direction as actual expenditures. The percent changes from year to year indicated were within three percentage points of each other in five of the nine years and within six points in seven of the years. (Table 2)

In spite of shortcomings, however, anticipatory data have yielded more accurate estimates than are possible using techniques of extending past or current expenditures. Except for 1950, estimates based on businessmen's anticipations were superior to those obtained by projecting actual outlays of

the preceding year. Expectations also gave better results than using the seasonally adjusted rate of expenditures for the fourth quarter of the previous year as an indication for the current year. While the superiority of anticipatory data is not outstanding when compared with projections based on the actual first quarter rate, it should be noted that first quarter expenditures are not available until three months after the annual anticipations. (Table 3)

Use of past outlays to determine movements breaks down completely whenever there is a change in direction--the time when an indication is most needed. The less timely first quarter seasonally adjusted rate again gave results which were not too inferior to the annual anticipations although it missed the 1955 turning point as well as the 1950.

Quarterly Anticipations

The quarterly series presents two sets of anticipations based on the data submitted for the current quarter and for the succeeding quarter. These will be referred to as the second and first anticipations, respectively. The series is corrected for changes due to seasonal fluctuations. Seasonal influences are particularly strong in the fourth quarter when year-end auditing by most companies results in the inclusion of expenditures which may have been omitted from reports for earlier quarters. Since businessmen typically do not fully allow for this accounting adjustment in reporting anticipatory data, it is necessary to include a correction for systematic tendencies in the seasonal factors when applied to expectations.

Anticipatory data, using seasonally adjusted rates, provided accurate indications of quarterly plant and equipment expenditures. During

the period beginning in 1952 for which seasonally adjusted anticipations are available only in 1952 did the deviations of actual from second anticipations exceed 2 percent. In part, the overstatement of expenditures in the last half of 1952 reflects the effect of the protracted steel strike in that year. The results obtained by using the first anticipations although possessing a very acceptable level of accuracy, were somewhat inferior to second anticipations.

Regression analysis applied to the seasonally adjusted anticipatory series brings out their superiority over the use of projections based on previous quarter rates. Correlations of .95 and .91 are obtained between actual expenditures and the second and first anticipations, respectively, compared with .84 when the seasonally adjusted actual expenditures of the preceding quarter are used as the independent variable. 3/

The performance of the adjusted quarterly expectations was also appraised on the basis of movements. During the period since 1952 for which the seasonally adjusted anticipatory series is available, businessmen's outlays for plant and equipment reached a peak in the third quarter of 1953 and a low in the first quarter of 1955. These turning points were clearly indicated by both the first and second anticipations.

3/ All data, seasonally adjusted annual rates, in billions of dollars for period Q2 1952 through Q1 1956.

Y = Actual expenditures
X₁ = Second anticipation
X₂ = First anticipation
X₃ = Actual expenditures, preceding quarter.

Y = -1.53 + 1.047 X₁ r = .95
Y = -5.64 + 1.205 X₂ r = .91
Y = -2.72 + 1.112 X₃ r = .84

The percent change from the preceding quarter, indicated by the second anticipation seasonally adjusted, never differed by more than two percentage points from the actual change. Regression analysis of the seasonally adjusted data indicates a correlation of .85 between actual expenditures and second anticipations expressed as ratios to preceding quarter outlays. The correlation of movements obtained using first anticipations is somewhat lower. ^{4/}

OUTLAYS BY INDIVIDUAL COMPANIES

Actual vs. Anticipated

Although the estimates of plant and equipment outlays anticipated by business have been shown in aggregate, to be accurate, it remains to be seen how individual companies have fared and how individual discrepancies in programming are distributed. From this kind of an approach, it is possible to evaluate the relative accuracy of firms of different types, and characteristics.

The frequency distributions of the percent discrepancies of actual annual outlays from anticipations were prepared for the years 1954 and 1955. In addition to being the two most recent years for which the data were available, 1954 represents a year in which aggregate anticipations were about the

^{4/} Because of the systematic bias inherent in expectational data, no analysis of the unadjusted anticipations is presented. The seasonally adjusted series constitute a distinct improvement over the unadjusted series.

same as actual outlays while 1955 anticipations understated actual expenditures.^{5/} In general, the discussion will pertain to the 1955 data with a mention of 1954 where the differences are noteworthy. (Tables 4 and 5)

For manufacturing companies, a considerable degree of dispersion is indicated. A little more than one-fourth of the firms spent within 20 percent of their expectations. In contrast, almost one-third spent more than twice or less than half the amounts they had planned.

In 1954, when aggregate outlays by manufacturers turned out about the same as expectations, the distribution of discrepancies still showed a considerable amount of dispersion. The major difference between the two years was in the proportion of firms which more than doubled the amounts they had planned to invest--less than one-fifth in 1954 compared with one-fourth in 1955. In 1954 there was also a slightly larger proportion of firms that overestimated outlays.

From the data for 1954 and 1955 it appears that the accuracy of aggregate anticipations by manufacturers depends on the offsetting of negative and positive discrepancies. It will be shown, however, that certain types of manufacturing firms, carrying greater weight in the aggregates, were able to program outlays considerably more accurately than the distribution for all manufacturers indicated.

Greater accuracy was evident in the capital planning of electric and gas utilities, reflecting, in part, the longer-term nature of their programs. More than two-thirds of the utilities reporting were within 20 percent of

^{5/} In 1955, the data covered 1,663 manufacturing companies, 157 utilities and 96 railroads. This includes all reporting firms for which either actual or anticipated expenditures exceeded \$10,000. It was felt that percent discrepancies involving smaller expenditures would seriously distort the picture.

their anticipations. About one-third of railroads made capital outlays close to expectations with about one-fifth spending either more than twice or less than half the amounts previously anticipated.

There appears to be a systematic tendency on the part of manufacturing firms to underestimate their expenditures on plant and equipment. In 1954 and 1955, 58 percent and 66 percent of manufacturers, respectively, understated their capital outlays. Electric and gas utilities, on the other hand tended to overstate their investment programs with almost two-thirds of the companies failing to invest as much as previously indicated. As for railroads, in 1954 60 percent overstated their outlays as compared with a like percent which understated their expenditures in 1955. This reflected the pick-up during the year of railroad activity from the low levels of 1953 and the step-up of modernization programs. In all industries, including the utilities, there was an increase in the extent of understatement of investment programs in 1955, a year of sharp rise in economic activity, as compared with 1954, a year of leveling off.

Alternative procedures

As with the aggregate estimates, businessmen's anticipations were superior to projections based on past outlays for individual firms. (Tables 6 and 7) The data for the 870 manufacturing companies filing reports with the Securities and Exchange Commission for which information was available, indicate that the distribution of discrepancies from anticipations was considerably more symmetrical than the distribution of discrepancies from previous year expenditures. The proportion of relatively accurate projections was also greater for the anticipatory data -- one-third as compared with a little over one-fifth.

The largest proportion of accurate estimates occurred with companies whose outlays had changed by less than 20 percent from the preceding year. Almost half of these companies made accurate projections. It was also apparent that there was a tendency for manufacturing firms decreasing their outlays to underestimate the decline and for firms increasing their outlays to underestimate the rise.

For electric and gas utilities and railroads anticipatory data also proved to be clearly superior to extrapolations based on preceding year outlays--particularly so in the case of utilities.

CHARACTERISTICS AFFECTING ACCURACY

Effect of company size

The distribution of the percent discrepancy of actual capital outlays from expectations classified by size of company clearly indicates the direct relationship between the degree of accurate programming and size of company assets. Not only was the proportion of accurate anticipations higher, the larger the company, but the distributions were also more symmetrical. (Tables 8 and 9)

For manufacturing companies with less than \$10 million in assets, only one-fifth made outlays within 20 percent of their anticipations while about one-third of the manufacturing firms with assets between \$10 million and \$50 million came within these limits of accuracy. In contrast, almost half of the companies with assets of \$50 million or more were within 20 percent of their anticipations. 6/

6/ It should be noted that these comparatively accurate companies account for more than half the outlays made by manufacturing firms.

As another indication of the greater accuracy of the larger sized firms we see that only one-tenth of these larger companies made expenditures of more than twice or less than half the amounts anticipated as compared to almost half for the smallest size group. In addition, the small size companies demonstrated a definite tendency to underestimate expenditures, medium size firms a moderate bias, while the large companies were about evenly divided between under and over statements of outlays.

These findings are similar to those obtained for 1949 in the earlier study by Friend and Bronfenbrenner. The reasons for such results were discussed by them and would still be expected to be valid. The plans of large companies usually cover a number of separate projects providing opportunity for the offsetting of discrepancies internally. The large firm, because of its broader experience can make an average allowance for expenditures due to unforeseen occurrences. The small firm because of the rarity of such incidents cannot include such allowance resulting in the tendency for the smaller firms to underestimate expenditures. The large corporation usually has a more formalized budgeting procedure requiring longer-term planning with a greater degree of firmness than the smaller company.

In 1955, the performance of anticipatory data was superior to that of projections of past data for all sizes of corporations. While there was some tendency for the improvement in performance to be greater for the larger-sized firms, this effect was not very pronounced. (Table 10)

Scale of Investment

One of the factors which was found to have a significant influence on the accuracy of the anticipatory data was the scale of investment. ^{7/} When

^{7/} The scale of investment was defined as the ratio of anticipated outlays to the gross fixed assets of the company at the beginning of the year.

discrepancies between actual expenditures and anticipations were distributed according to the scale of investment, it was found that corporations engaged in major expansion programs, representing 10 percent or more of gross fixed assets, were considerably more accurate than corporations engaged in smaller scale programs. (Table 11)

Almost half of the manufacturing firms which for 1955 planned major expansion programs, came within 20 percent of their anticipations. Only one-tenth of these firms spent more than twice or less than half the amounts expected. Firms with moderate size programs, between 5 and 10 percent of gross fixed assets, were within 20 percent of anticipations in a little more than one-third of the cases. Only one-fifth of the firms with minor programs, that is, accounting for less than 5 percent of their gross fixed assets, were within 20 percent of expectations, while over one-third more than doubled or less than halved their anticipated expenditures.

These data clearly indicate the definite relationship between relative accuracy and scale of investment, probably reflecting the more careful and longer period of advanced planning necessary in carrying out major investment programs.

While, of course, there is a very close relationship between scale of investment and size of company, it appears that even for firms within the same size group, those with the larger programs achieved a greater degree of accuracy. For instance, for companies with \$50 million or more in assets, 57 percent of those with major programs had relatively accurate anticipations, compared with 30 percent for those companies with minor expansion programs. Looking at companies with assets under \$10 million, accurate forecasts were made by one-third of the firms with major programs, compared with only one-eighth of the companies with minor programs.

Analysis of those firms planning minor or moderate expansion programs points out the systematic tendency to understate capital outlays. This was evident regardless of size of company with little variation from smaller to larger corporations. As regards companies with major programs planned, however, understatements and overstatements offset each other for the small and medium size groups, while there was a definite overstatement of programs for companies with more than \$50 million in assets. In this latter group approximately 70 percent of the firms indicated actual expenditures less than anticipated. In 1955, major expansion programs were indicated by one-fourth of the reporting companies.

Although in 1955 electric and gas utilities indicated a high degree of accuracy in their anticipations the tendency for greater accuracy as regards major programs was still evident. Close to three-fourths of the utilities with major investment programs came within 20 percent of their programs, while a little less than half of the companies with minor programs showed the same degree of accuracy. The same systematic tendency to understate expenditures by those companies with minor programs was apparent for utilities. It should be noted that roughly four-fifths of the utilities reporting indicated major programs in 1955.

Relationship to discrepancies in preceding year

In order to determine whether tendencies to underestimate or overestimate capital outlays continued from year to year for the same corporations, an attempt was made to relate the size of discrepancies in 1955 with the size of discrepancies in 1954. (Table 12) The data did not indicate that there was any significant correlation between the size of discrepancy in one year as compared to the next. For manufacturing firms which had relatively accurate

anticipations in 1955, a little more than 50 percent had accurate anticipations the year before. For the companies which in 1955 spent more than twice or less than half the amounts anticipated, about one-fourth had estimated accurately in 1954.

While the relation between discrepancies in the two years was not very strong for manufacturing companies as a whole, there appeared to be more tendency for continued accurate anticipations for the larger corporations as compared with the smaller ones. Electric and gas utilities appeared to be much more consistent in the accuracy of their anticipations than manufacturing firms. Approximately two-thirds of the utilities reporting indicated accurate information in both 1954 and 1955 compared with only one-eighth of the manufacturing firms. The carryover of accuracy for railroads was not much better than for manufacturing.

Other factors and characteristics affecting accuracy

In addition to the factors and characteristics which have been discussed there are a large number which would certainly be relevant in considering the accuracy of expectational data. These include further classification by type of investment such as plant versus equipment or replacement and modernization versus expansion. An analysis of discrepancies for more detailed industry groups would reveal significant differences as would further cross-classifications of characteristics.

Changes in sales showed very little relationship to deviations of plant and equipment expenditures from anticipations. However, a more significant relationship would be found by relating deviations of sales from sales expectations to deviations of capital outlays from planned outlays. Other

factors whose relation to discrepancy might be tested are, earnings, changes in liquidity, the level of surplus liquid assets, plans for external financing, the condition of existing capital, and the pressure on productive capacity.

In closing, I would like to call attention to a survey of factors affecting business decisions currently being conducted by the Securities and Exchange Commission and the Department of Commerce. Firms which in 1955 did not come within 25 percent of anticipations are being asked to give the reasons for such a discrepancy. The results of this survey should be available in the early part of next year together with further testing of some of the factors mentioned.

Table 1 - Plant and Equipment Expenditures of U.S. Business
Actual and Anticipated, 1947-1955

	<u>Manu- fac- turing</u>	<u>Mining</u>	<u>Rail- road</u>	<u>Other transpor- tation</u>	<u>Public utili- ties</u>	<u>Commer- cial and other</u>	<u>All indus- tries</u>
	(Indexes, previous year = 100)						
<u>1955</u>							
Actual.....	104	98	108	106	102	115	107
Anticipated.....	97	92	89	99	104	107	101
Percent actual of anticipated.....	107	107	121	107	98	107	106
<u>1954</u>							
Actual.....	93	99	65	97	93	103	95
Anticipated.....	93	103	72	96	97	103	96
Percent actual of anticipated.....	100	96	91	101	95	100	99
<u>1953</u>							
Actual.....	102	100	94	104	117	113	107
Anticipated.....	100	103	93	101	114	100	102
Percent actual of anticipated.....	102	97	101	103	103	113	105
<u>1952</u>							
Actual.....	107	106	95	101	106	98	103
Anticipated.....	108	107	100	119	108	90	104
Percent actual of anticipated.....	99	99	95	84	98	108	100
<u>1951</u>							
Actual.....	145	131	133	123	111	107	124
Anticipated.....	145	131	133	141	112	110	129
Percent actual of anticipated.....	100	100	100	87	99	97	97
<u>1950</u>							
Actual.....	113	92	84	85	101	96	102
Anticipated.....	93	88	69	67	94	88	89
Percent actual of anticipated.....	122	105	123	126	108	110	115
<u>1949</u>							
Actual.....	87	92	102	74	117	95	94
Anticipated.....	87	102	110	93	117	93	95
Percent actual of anticipated.....	100	90	93	80	100	102	99
<u>1948</u>							
Actual.....	112	116	144	88	141	122	119
Anticipated.....	104	100	176	98	121	125	115
Percent actual of anticipated.....	108	116	82	90	116	97	103
<u>1947</u>							
Actual.....	126	123	161	<u>1/</u>	183	132	134
Anticipated.....	104	109	175	<u>1/</u>	163	112	115
Percent actual of anticipated.....	121	113	92	<u>1/</u>	112	118	117

NOTE: Percent actual of anticipated based on unrounded indexes.

1/ Included with Commercial and Other.

Source: Securities and Exchange Commission and the Department of Commerce.

Table 2

Percent Change from Actual Expenditures Previous Year:

	<u>Antici-</u> <u>pations</u>	<u>Actual Q1</u> <u>seasonally</u> <u>adjusted</u>	<u>Actual</u> <u>Expenditures</u>
1947	+ 15	+ 33	+ 35
1948	+ 15	+ 8	+ 19
1949	- 5	- 7	- 6
1950	- 11	- 4	+ 2
1951	+ 29	+ 15	+ 24
1952	+ 4	+ 5	+ 3
1953	+ 2	+ 5	+ 7
1954	- 4	- 3	- 5
1955	+ 1	- 5	+ 7

Source: Securities and Exchange Commission and U. S. Department of Commerce.

Table 3

Percent Deviations of Actual Expenditures from:

	(1)	(2)	(3)	(4)
	<u>Anticipations</u>	<u>Actual Previous year</u>	<u>Actual Previous Q4 seas. adjusted</u>	<u>Actual Q1 seas. adjusted</u>
1947	+ 17	+ 35	n.a.	+ 5
1948	+ 3	+ 19	+ 3	- 1
1949	- 1	- 6	- 13	- 8
1950	+ 15	+ 2	+ 16	+ 12
1951	- 3	+ 24	+ 10	+ 8
1952	--	+ 3	--	- 2
1953	+ 5	+ 7	+ 6	+ 2
1954	- 1	- 5	- 6	- 2
1955	+ 6	+ 7	+ 10	+ 12

Source: Securities and Exchange Commission and U. S. Department of Commerce.

Table 4

Frequency Distribution of Percent Change in
Investment Plans ^{1/}

1955

Percent change of actual from anticipated	<u>Manufacturing</u>		<u>Utilities</u>		<u>Railroads</u>	
	<u>No. of firms</u>	<u>Percent</u>	<u>No. of firms</u>	<u>Percent</u>	<u>No. of firms</u>	<u>Percent</u>
-100 to -80	27	1.6	-	-	1	1.0
-79.9 to -60	35	2.1	1	.6	4	4.2
-59.9 to -40	102	6.1	3	1.9	3	3.1
-39.9 to -20	179	10.8	21	13.4	13	13.5
-19.9 to 0	223	13.4	72	45.9	18	18.7
0 to 19.9	224	13.5	38	24.2	14	14.6
20 to 39.9	162	9.7	11	7.0	8	8.3
40 to 59.9	140	8.4	6	3.8	14	14.6
60 to 79.9	91	5.5	1	.6	5	5.2
80 to 99.9	60	3.6	1	.6	3	3.1
100 and over	<u>420</u>	<u>25.3</u>	<u>3</u>	<u>1.9</u>	<u>13</u>	<u>13.5</u>
TOTAL. . . .	1,663	100.0	157	100.0	96	100.0

^{1/}

Includes reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March 1955.

Source: Securities and Exchange Commission and U. S. Department of Commerce.

Table 5

Frequency Distribution of Percent Change in
Investment Plans 1/
1954

<u>Percent change of actual from anticipated</u>	<u>Manufacturing</u>		<u>Utilities</u>		<u>Railroads</u>	
	<u>No. of firms</u>	<u>Percent</u>	<u>No. of firms</u>	<u>Percent</u>	<u>No. of firms</u>	<u>Percent</u>
-100 to -80	37	2.4	-	-	1	1.0
-79.9 to -60	60	3.9	1	1.0	5	4.9
-59.9 to -40	121	7.8	2	2.0	7	6.9
-39.9 to -20	188	12.1	14	13.9	19	18.6
-19.9 to 0	240	15.5	52	51.5	30	29.4
0 to 19.9	188	12.1	25	24.8	14	13.7
20 to 39.9	172	11.1	2	2.0	8	7.8
40 to 59.9	115	7.4	2	2.0	5	4.9
60 to 79.9	93	6.0	1	1.0	-	-
80 to 99.9	64	4.1	2	2.0	3	2.9
100 and over	274	17.7	-	-	10	9.8
Total	1,552	100.0	101	100.0	102	100.0

Includes reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1954.

Source: Securities and Exchange Commission and U. S. Department of Commerce

Table 6

Two-way Frequency Distribution of Present Deviations
of Actual Expenditures from Anticipated Expenditures
and from Actual Expenditures, Previous Year

Manufacturing Firms
1955

Percent change of actual from anticipated	Percent change - Actual from previous year						TOTAL
	-100 to -50	-49.9 to -20	-19.9 to 19.9	20 to 49.9	50 to 99.9	100 and over	
	(number of firms)						
-100 to -50	24	5	5	1	3	1	39
-49.9 to -20	31	45	26	16	7	16	141
-19.9 to 19.9	24	59	87	30	31	48	279
20 to 49.9	8	20	30	34	22	27	141
50 to 99.9	6	15	18	23	29	34	125
100 and over	8	14	22	17	20	64	145
TOTAL. . . .	101	158	188	121	112	190	870

^{1/} Includes ^{SEC} reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1955.

Table 7

Two-way Frequency Distribution of Percent Deviations
of Actual Expenditures from Anticipated Expenditures
and from Actual Expenditures, Previous Year^{1/}

Manufacturing, 1954

Percent change of actual from anticipated	Percent change - actual from previous year						TOTAL
	-100 to -50	-49.9 to -20	-19.9 to 19.9	20 to 49.9	50 to 99.9	100 and over	
-100 to -50	46	9	2	3	-	-	60
-49.9 to -20	56	51	30	10	10	11	168
-19.9 to 19.9	36	75	96	33	29	30	299
20 to 49.9	20	27	46	29	13	15	150
50 to 99.9	6	24	18	24	22	27	121
100 and over	10	14	15	16	15	43	113
TOTAL.....	174	200	207	115	89	126	911

^{1/}

Includes S.E.C. reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1954.

Table 8

Frequency Distribution of Percent Change in Investment Plans;
Manufacturing Firms, by Asset Size, 1955^{1/}

Percent change of actual from anticipated	Asset Size					
	Under \$10,000,000		\$10,000,000 to \$50,000,000		\$50,000,000 and over	
	No. of firms	Percent	No. of firms	Percent	No. of firms	Percent
-100 to -80	27	2.6	-	-	-	-
-79.9 to -60	23	2.3	10	2.2	2	1.1
-59.9 to -40	69	6.8	24	5.3	9	4.7
-39.9 to -20	85	8.3	63	13.9	31	16.3
-19.9 to 0	97	9.5	75	16.5	51	26.8
0 to 19.9	115	11.3	71	15.6	38	20.0
20 to 39.9	83	8.1	54	11.9	25	13.2
40 to 59.9	86	8.4	41	9.0	13	6.8
60 to 79.9	61	6.0	23	5.1	7	3.7
80 to 99.9	41	4.0	17	3.7	2	1.1
100 and over	332	32.6	76	16.7	12	6.3
TOTAL.....	1,019	100.0	454	100.0	190	100.0

^{1/} Includes reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1955.

Source: Securities and Exchange Commission and U.S. Department of Commerce.

Table 9

Frequency Distribution of Percent Change in Investment Plans:
 Manufacturing Firms, by Asset Size, 1954 ^{1/}

Percent change of actual from anticipated	Asset Size					
	Under \$10,000,000		\$10,000,000 to \$49,999,999		\$50,000,000 and over	
	No. of firms	Percent	No. of firms	Percent	No. of firms	Percent
-100 to -80	35	3.9	2	.4	-	-
-79.9 to -60	41	4.6	16	3.4	3	1.6
-59.9 to -40	77	8.6	34	7.3	10	5.2
-39.9 to -20	93	10.4	57	12.3	38	19.9
-19.9 to 0	98	10.9	86	18.5	56	29.3
0 to 19.9	83	9.3	68	14.7	37	19.4
20 to 39.9	82	9.1	66	14.2	24	12.6
40 to 59.9	76	8.5	32	6.9	7	3.7
60 to 79.9	57	6.4	31	6.7	5	2.6
80 to 99.9	38	4.2	20	4.3	6	3.1
100 and over	217	24.2	52	11.2	5	2.6
TOTAL.	897	100.0	464	100.0	191	100.0

^{1/}

Includes reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1954.

Source: Securities and Exchange Commission and U.S. Department of Commerce.

Table 10.

Comparative Accuracy of Projections -- Expenditures Based on
 Anticipations and on Actual Outlays, Previous Year. 1/

Manufacturing Firms 1955, By Asset Size

Percent change from projection	Total Assets											
	Under \$10,000,000				\$10,000,000 to \$49,999,999				\$50,000,000 and over			
	Anticipated Expenditures		Actual in Previous Year		Anticipated Expenditures		Actual in Previous Year		Anticipated Expenditures		Actual in Previous Year	
	No. of Firms	Percent	No. of Firms	Percent	No. of Firms	Percent	No. of Firms	Percent	No. of Firms	Percent	No. of Firms	Percent
-100 to -50	19	5.5	49	14.1	14	4.1	38	11.0	6	3.4	14	7.9
-49.9 to -20	54	15.5	59	17.0	57	16.5	65	18.8	30	16.9	34	19.2
-19.9 to 19.9	83	23.9	56	16.1	112	32.5	75	21.7	84	47.5	57	32.2
20 to 49.9	45	12.9	50	14.4	63	18.3	45	13.0	33	18.6	26	14.7
50 to 100	64	18.4	40	11.5	49	14.2	47	13.6	12	6.8	25	14.1
100 and over	83	23.9	94	27.0	50	14.5	75	21.7	12	6.8	21	11.9
TOTAL	348	100.0	348	100.0	345	100.0	345	100.0	177	100.0	177	100.0

1/ Includes Securities and Exchange Commission reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1955.

Table 11

Frequency Distribution of Percent Change in Investment Plans, Classified
by Ratio of Anticipated Expenditures to Gross Fixed Assets

Manufacturing Firms, 1955 ^{1/}

Percent change of actual from anticipated	Anticipations relative to gross fixed assets					
	less than 5%		5% to 9.9%		10% and over	
	No. of firms	Percent	No. of firms	Percent	No. of firms	Percent
-100 to -80	1	.3	1	.3	4	1.8
-79.9 to -60	5	1.4	3	1.0	6	2.7
-59.9 to -40	18	5.2	14	4.7	17	7.7
-39.9 to -20	27	7.7	45	15.0	39	17.7
-19.9 to 0	32	9.2	51	16.9	60	27.3
0 to 19.9	36	10.3	60	19.9	40	18.2
20 to 39.9	31	8.9	48	15.9	22	10.0
40 to 59.9	40	11.5	28	9.3	14	6.4
60 to 79.9	29	8.3	13	4.3	7	3.2
80 to 99.9	18	5.2	11	3.7	5	2.3
100 and over	112	32.1	27	9.0	6	2.7
TOTAL.	349	100.0	301	100.0	220	100.0

^{1/} Includes S.E.C. reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March, 1955.

Table 12

Two-way Frequency Distribution of Percent Change
in Actual Expenditures for Plant and Equipment
from anticipations - 1955 compared with 1954

Manufacturing Firms,^{1/}

Percent change - actual from anticipated

1955	1954						TOTAL
	-100 to -50	-49.9 to -20	-19.9 to 19.9	20 to 49.0	50 to 99.9	100 and over	
-100 to -50	5	10	11	1	4	4	35
-49.9 to -20	12	37	46	15	8	11	129
-19.9 to 19.9	12	41	105	44	28	20	250
20 to 49.9	6	18	44	33	17	12	130
50 to 99.9	9	12	25	22	19	16	103
100 and over	8	15	27	16	14	36	116
TOTAL.....	52	133	258	131	90	99	763

^{1/} Includes S.E.C. reporting firms for which either actual or anticipated expenditures exceeded \$10,000. Anticipated expenditures were reported by business in February and early March of the respective years.