

Table VI-2 presents for the seven largest mutual funds the same information as table VI-1 for all funds. Again there is no evidence that the rate of inflow varied significantly with market fluctuations either among or within the periods covered. Again also there is evidence that the net inflow was decreasingly channeled into common stock during the course of a market decline and increasingly into common stock during a market rise. The seven largest mutual funds do not, it will be noted, show the same strong uptrend in their gross and net purchases relative to New York Stock Exchange volume as funds generally. Apart from a stronger growth trend, other mutual funds as a whole experienced about the same relation of net inflow to market fluctuations and of gross and net purchases to net inflow as the seven largest funds.

Table VI-3 presents for each significant turning point in the market during 1956 and 1957, weekly data for 4 weeks (roughly centered about the turning point) covering the same information shown on a monthly basis for a longer period in table VI-1. The weekly data permit a closer examination of the behavior of mutual funds around turning points in the market than is possible for the monthly information. Once again, the rate of net inflow around each of the four major turning points in this period did not seem to be correlated with general market price movements. However, unlike the monthly data which indicated some positive correlation between fund net purchases of common stock and stock prices within major market movements there was no such consistent tendency evidenced by the weekly data around these four turning points. There is some indication that fund net purchases were positively correlated with (changes in) stock prices around the August 2, 1956, high which is presumably somewhat destabilizing, but they were negatively correlated with stock prices or stabilizing around the February 12, 1957, low and uncorrelated with stock prices around the July 15, 1957, high and the October 22, 1957, low. When attention is focused on mutual fund discretionary action in channeling inflow into the market, there is some evidence of destabilizing activity around both highs and stabilizing activity around both lows.

The ratio of fund net purchases to New York Stock Exchange volume was substantially higher around the two troughs in the stock market—particularly before the upturn—than around the two peaks; this finding, which cannot be explained by the differential rate of inflow in these periods, again points to a stabilizing influence by mutual funds at the lows in the market. Table 4 shows less evidence both of stabilizing activity at the lows and destabilizing activity at the highs of the market for the seven largest funds as a whole.

#### *Monthly analysis*

Several different types of correlation or regression analysis were carried out to examine the monthly aggregate impact of mutual funds on the market for the periods January 1953 to December 1953 and July 1955 to September 1958 as a whole and separately.<sup>13</sup> Stock prices at the end of a month were related to net purchases of common

<sup>13</sup> Rank correlation and chi-square tests were also carried out; these showed very little relationship between changes in stock prices and fund net purchases either on a monthly or daily basis. Simple correlation lead and lag analysis between stock prices and net purchases showed a small positive correlation between month-end prices and net purchases during that same calendar month, and about the same correlation between net purchases and beginning of month prices, but no correlation between month-end prices and net purchases of the preceding calendar month; on a daily basis, virtually no simple correlation is evident between the specific values of the variables indicated.

stock by all mutual funds simultaneously for each of the preceding 5 months, to net purchases less adjusted net inflow for each of these months, to net purchases and net inflow separately for each of these months, to net purchases for that month and stock prices at the beginning of the month, to net purchases and net inflow separately for that month and stock prices at the beginning of the month, and to net purchases and net inflow for each of the preceding 3 months and stock prices at the beginning of the 3-month period. Linear, logarithmic, and difference equations were all used. Corresponding relationships were also computed with net purchases as the dependent variable and with prior movements in stock prices and at times prior net inflow and initial net purchases as the explanatory variables. The logarithmic or linear equations generally gave the highest correlations, and the difference relationships as might be expected from statistical considerations the lowest correlations. The relationships with stock prices as the dependent variable, some of which are presented below, are not demand schedules but may be interpreted as representing the reaction of stock prices to shifts in demand occasioned by mutual fund activity (with the net stock supply but not the net demand schedule assumed relatively stable).

TABLE VI-4.—Stock market behavior of 7 largest mutual funds during specified weeks around turning points,<sup>1</sup> 1956-57

[Dollar amounts in millions]

Weekly periods beginning	7 funds' net purchases of common stock	Fund net inflow	Percent of common net purchases to 60 percent of net inflow (1) ÷ 0.6(2)	Ratio of common net purchases to New York Stock Exchange volume (1) ÷ volume
	(1)	(2)	(3)	(4)
1956—July 23.....	\$9.9	\$7.7	214.8	0.018
July 30.....	7.0	8.0	146.1	.010
Aug. 6.....	-2.2	8.6	-43.4	-.003
Aug. 13.....	2.1	6.2	56.6	.004
1957—Feb. 4.....	6.3	15.3	68.8	.020
Feb. 11.....	11.3	7.5	251.7	.033
Feb. 18.....	6.2	13.9	71.5	.010
Feb. 25.....	-3.8	6.2	-102.4	-.005
July 1.....	2.1	6.7	52.3	.004
July 8.....	7.3	13.7	89.0	.010
July 15.....	6.2	4.6	225.1	.010
July 22.....	6.5	5.0	217.1	.013
Oct. 7.....	8.3	18.4	75.3	.013
Oct. 14.....	4.0	2.9	230.3	.007
Oct. 21.....	1.9	9.6	33.1	.002
Oct. 28.....	.4	4.8	13.9	.001

<sup>1</sup> The peaks were Aug. 2, 1956, and July 15, 1957; the troughs, Feb. 12, 1957, and Oct. 22, 1957.

When stock prices as the dependent variable are logarithmically related to net purchases, there is some evidence that higher net purchases in the same month and to a lesser extent in the month before are associated with higher stock prices. However, this evidence disappears if a difference equation is fitted, if the logarithmic relationships are fitted separately to the two periods covered, if net inflow is used directly or indirectly as an additional explanatory variable, or if the initial level of stock prices is introduced into the analysis (as a crude device both to hold constant the host of other influences affecting the market not explicitly included in the analysis and to make possible the disentanglement of the longrun and shortrun effects on stock prices of the other explanatory variables explicitly included).<sup>14</sup> In other

<sup>14</sup> It may be noted that  $\bar{R}^2$ , the adjusted coefficient of determination between successive month-end stock prices, is extremely high, viz, 0.955 in the simple linear relationship.

words, there is no conclusive indication in this analysis that the net purchases by mutual funds significantly affect the month-to-month movements in the stock market as a whole. Three of the simpler linear regressions are presented below:

$$(1) \quad M_t = .272 + .0005P_t + .996M_{t-1} \quad \bar{R}^2 = .966 \\ \quad \quad \quad (.008) \quad (.033)$$

where  $M_t$  represents stock prices (Standard and Poor's Composite Index) at the end of the month  $t$ ;  $P_t$ , net purchases (in \$100,000 units) during month  $t$ ;  $\bar{R}^2$ , the adjusted coefficient of determination; and the figures in parentheses, standard errors of the regression coefficients.<sup>15</sup> If net purchases of the 2 preceding months are included (1) becomes:

$$(2) \quad M_t = 1.08 + .012P_t + .008P_{t-1} + .005P_{t-2} + .949M_{t-3} \quad \bar{R}^2 = .905 \\ \quad \quad \quad (.049) \quad (.052) \quad (.050) \quad (.057)$$

If the cumulative total of net purchases of the same month and the preceding months are substituted for the separate monthly purchases, the result is:

$$(3) \quad M_t = 1.06 + .008 \sum_{t-2}^t P_t + .950M_{t-3} \quad \bar{R}^2 = .910 \\ \quad \quad \quad (.005) \quad (.056)$$

Here there is a little more but still not convincing evidence that higher purchases in the same and preceding months are associated with higher stock prices. A similar result is obtained for the regression coefficient of the cumulative purchases term if (3) is computed for the July 1955–September 1958 period alone, though the regression coefficient of initial market price and the coefficient of determination are substantially reduced.

A similar type of analysis was carried out with fund net purchases as the dependent variable to determine whether the chain of causation in these monthly data went from stock prices to net purchases.<sup>16</sup> There is some evidence from the relationships for the two periods as a whole that net purchases are stimulated by high stock prices in the previous month, but again this result is changed if the two periods are treated separately or if the initial level of net inflow is introduced into the analysis. If the two periods are treated separately, only 1953 shows an apparently significant influence of high stock prices (in the preceding 2 months) on fund net purchases. If monthly net inflow for each of the preceding 4 months is introduced into the analysis, the apparent influence of stock prices in preceding months is

<sup>15</sup> Under certain assumptions, which unfortunately are not too realistic for the equations discussed in this chapter, the longrun net purchases effect on stock prices can be obtained by dividing the regression coefficient of  $P_t$  (current period net purchases) by the complement of the regression coefficient of  $M_{t-1}$  (lagged price).

<sup>16</sup> See ch. IV for some extremely simple and not very satisfactory tests of the relations between changes in net purchases and changes in stock prices with somewhat conflicting results for the market as a whole and for individual issues.

further reduced. A typical simple relation among these variables for the two periods as a whole is:

$$(4) \quad P_t = -19.8 + 1.17M_{t-1} + .453P_{t-1}^{17} \quad \bar{R}^2 = .382$$

(.524)      (.138)

If net inflow is also introduced into this relation, it appears that the apparent influence of market prices on net purchases is mainly attributable to the intercorrelation of both with inflow. In other words, there is no indication in this analysis that the monthly net purchases by mutual funds are significantly affected by the prior month's fluctuation in the stock market except insofar as these fluctuations are positively correlated with inflow from net sales of fund shares. Net inflows in each of the preceding 5 months were tested simultaneously for their impact on fund net purchases, and a lead of at least 1 additional month seemed to be needed to properly reflect the influence of inflow on net purchases. The following relation was then computed:

$$(5) \quad P_t = -6.6 - 1.15M_{t-1} + .967M_{t-2} +$$

(2.02)      (1.99)

$$.206I_{t-1} + .388I_{t-2} + .257P_{t-2} \quad \bar{R}^2 = .632$$

(.091)      (.094)      (.113)

Here, there is no evidence that market prices affect fund purchases once net inflow ( $I$ ) and the initial level of purchases are held constant. If inflow is excluded but an additional market price variable included, again there is no significant correlation between net purchases and earlier market prices, viz:

$$(6) \quad P_t = -25.5 + 2.48M_{t-1} + 1.39M_{t-2} - 1.96M_{t-3} - .061P_{t-3} \quad \bar{R}^2 = .175$$

(2.96)      (4.35)      (3.02)      (.235)

#### *Weekly analysis*

A correlation or regression analysis of the weekly data on market prices and mutual fund purchases is less satisfactory than either the corresponding monthly and daily analyses, since the weekly data are centered around four significant turning points in 2 years (1956 and 1957) and contain only four weekly observations on fund purchases for each turning point. Thus the weekly data are less typical and have fewer observations than the two other sets of data. The small number of weekly observations on fund purchases pretty much invalidates any regressions with market price as the dependent variable so that the only regressions fitted are those with fund net purchases as the dependent variable. However, the various regressions tested do not show any consistent or significant effects of stock prices in the current and 5 previous weeks on fund net purchases.

#### *Daily analysis*

Table VI-5 presents daily data on closing stock market prices, fund net purchases, and New York Stock Exchange volume for the July 1-September 30, 1958, period. Since two large new funds formed in the second quarter of 1958 bought heavily in July, the early part of the third quarter was subject to special influences, and the ratio of fund

<sup>17</sup>  $\bar{R}^2$  between  $P_t$  and  $P_{t-1}$  above is 0.325.

net purchases of common stock to New York Stock Exchange volume was unusually high (amounting to 13 percent on 2 days). A simple inspection of the table does not show a strong relation on a daily basis between stock prices and fund net purchases.

TABLE VI-5.—Mutual fund stock market behavior during specified days,  
July 1—Sept. 30, 1958

Date	Standard & Poor's composite market index	Change in Standard & Poor's	Fund net purchases (millions)	New York Stock Exchange volume (millions)	Ratio of fund net purchases to New York Stock Exchange volume
(1)	(2)	(3)	(4)	(5)	(6) = (4) ÷ (5)
July 1	45.28	+0.04	\$6.27	\$105.9	0.059
2	45.32	+ .04	6.62	96.6	.069
3	45.47	+ .15	4.15	107.2	.039
7	45.62	+ .15	2.60	102.3	.025
8	45.40	- .22	4.73	99.0	.048
9	45.25	- .15	5.99	107.2	.056
10	45.42	+ .17	7.47	102.3	.073
11	45.72	+ .30	12.79	97.8	.131
14	45.14	- .58	9.09	109.5	.088
15	45.11	- .03	10.05	125.9	.080
16	45.25	+ .14	16.84	132.0	.128
17	45.55	+ .30	5.95	129.5	.046
18	45.77	+ .22	13.23	136.5	.097
21	46.33	+ .56	9.81	140.2	.070
22	46.41	+ .08	9.13	139.4	.066
23	46.40	- .01	10.72	144.6	.074
24	46.65	+ .25	10.38	152.4	.068
25	46.97	+ .32	10.52	180.5	.058
28	47.15	+ .18	8.80	160.5	.055
29	46.96	- .19	11.02	134.9	.082
30	47.09	+ .13	5.94	149.9	.040
31	47.19	+ .10	12.89	180.9	.071
Aug. 1	47.49	+ .30	7.00	157.1	.045
4	47.94	+ .45	10.83	185.9	.058
5	47.75	- .19	8.61	195.6	.044
6	47.76	+ .01	6.56	159.9	.041
7	47.77	+ .01	3.46	148.7	.023
8	48.05	+ .28	5.85	169.6	.035
11	48.18	+ .13	2.96	133.4	.022
12	47.73	- .45	5.54	120.8	.046
13	47.81	+ .08	6.19	129.6	.048
14	47.91	+ .10	3.75	156.6	.024
15	47.50	- .41	6.30	137.5	.046
18	47.22	- .28	.74	111.1	.007
19	47.30	+ .08	3.70	104.6	.035
20	47.32	+ .02	3.36	114.3	.029
21	47.63	+ .31	1.90	116.2	.016
22	47.73	+ .10	2.41	123.6	.020
25	47.74	+ .01	3.91	121.3	.032
26	47.90	+ .16	3.64	139.2	.026
27	47.91	+ .01	4.90	151.0	.032
28	47.66	- .25	3.21	118.0	.027
29	47.75	+ .09	.42	105.0	.004
Sept. 2	48.00	+ .25	3.70	119.0	.031
3	48.18	+ .18	4.87	131.6	.037
4	48.10	- .08	2.62	125.9	.021
5	47.97	- .13	1.58	102.4	.015
8	48.13	+ .16	2.90	123.1	.024
9	48.46	+ .33	7.74	141.3	.055
10	48.31	- .15	3.19	114.5	.028
11	48.64	+ .33	3.96	134.0	.030
12	48.53	- .11	9.15	125.9	.073
15	48.96	+ .43	- .18	123.5	-.001
16	49.35	+ .39	4.04	160.0	.025
17	49.33	- .02	2.85	153.9	.018
18	49.08	- .25	5.02	140.5	.036
19	49.40	+ .32	6.49	157.6	.041
22	49.20	- .20	5.97	141.8	.042
23	49.56	+ .36	6.01	160.4	.037
24	49.78	+ .22	2.97	126.7	.023
25	49.57	- .21	4.28	182.3	.023
26	49.66	+ .09	4.22	138.9	.030
29	49.87	+ .21	5.54	149.5	.037
30	50.06	+ .19	5.98	169.0	.035

A more satisfactory indication of the relations between daily stock prices and net purchases is given by correlation analysis. The simplest of these relations which attempts to determine the immediate impact of a day's net purchases (in \$100,000 units) on stock prices (Standard & Poor's Composite Index) is the linear regression

$$(1) \quad M_t = .108 + .010P_t + .998M_{t-1} \quad \bar{R}^2 = .967 \\ (.011) \quad (.029)$$

which suggests a positive but statistically insignificant effect of net purchases. To determine the delayed impact of net purchases of preceding days as well as of the same day,  $P_{t-1}$  . . .  $P_{t-4}$  were introduced in addition to  $P_t$  as explanatory variables in the above regression and  $M_{t-5}$  substituted for  $M_{t-1}$ . The findings again suggest a positive impact generally of net purchases of preceding days as well as of the same day on stock prices, but once more the regression coefficients are not statistically significant. However, as a consequence, it seemed desirable to test the relation between closing stock prices on a given day and the cumulative total of the net purchases of the same day and the preceding 4 days, with the following result:

$$(2) \quad M_t = -3.92 + .016 \sum_{t-4}^t P_t + 1.08M_{t-5} \quad \bar{R}^2 = .882 \\ (.006) \quad (.06)$$

Equation (2) points to a significant impact of cumulative net purchases on stock prices.<sup>18</sup> According to this equation, if aggregate net purchases of mutual funds increase by \$10 million over a 5-day period, or about one-third of the average 5-day net purchases during the 3 months covered, the stock market index would be raised in price by 1.6 points by the end of the 5-day period, or about 3.3 percent of the average index during these 3 months.<sup>19</sup>

The corresponding regressions which relate net purchases to stock prices in order to analyze the impact of the latter on the former are:

$$(3) \quad P_t = 52.1 - 1.01M_{t-1} + .338P_{t-1} \quad \bar{R}^2 = .361 \\ (.343) \quad (.126)$$

and

$$(4) \quad P_t = 72.5 - .287 \sum_{t-5}^{t-1} M_t + .285P_{t-5} \quad \bar{R}^2 = .422 \\ (.061) \quad (.109)$$

These relations imply a statistically significant impact of the preceding day's and the preceding 5 days' stock prices on daily net purchases, with an apparent tendency for higher prices to result in lower net

<sup>18</sup> The reduction in the multiple correlation is simply a reflection of the much lower simple correlation between  $M_{t-5}$  and  $M_t$  than between  $M_{t-1}$  and  $M_t$ . The adjusted coefficient of determination between

$$\sum_{t-4}^t P_t \text{ and } M_t \text{ is } 0.300 \text{ whereas that between } P_t \text{ and } M_t \text{ is } 0.263.$$

<sup>19</sup> The regression coefficients of the explanatory variables in equations (1) and (2) are not changed greatly if the two large funds which instituted operations in the second quarter of 1958 are excluded. However, the coefficient of the  $M_{t-1}$  term in equation (3) which follows is halved though still statistically significant at the  $2\sigma$  level.

purchases. While the lagged price coefficient in (3) is larger than in (4), the lagged price variable in (4) is on the average five times as large as in (3), and its coefficient seems to be more statistically reliable. The use of lagged rather than current prices as an explanatory variable reflects of course the belief that it takes time for mutual funds to react to changes in stock prices. However, it is of some interest to test whether net purchases appear to react to price changes the same day, on the theory that extensive use of limit orders by mutual funds might result in a negative relation between net purchases and the same day's price change. The result obtained, which tends to confirm the hypothesis indicated, is:

$$(5) \quad P_t = 47.7 - .918M_t + .363P_{t-1} \quad \bar{R}^2 = .344$$

(.345)      (.126)

When  $M$  in equations (3) and (5) is replaced by  $\Delta M$  in one set of regressions, and also  $P$  by  $\Delta P$  in another set, the  $M$  coefficients are no longer significant (and not always negative). Inflow data are not available on a daily basis to isolate the influence of market prices on fund purchases when net inflow is held constant.

There are two general comments that should be made in connection with the comparison of equations (1)-(2) with (3)-(5). First, the higher correlations indicated in the former simply reflect the much higher serial correlation between stock prices than between net purchases of successive days. Second, the two sets of daily regressions together suggest that mutual funds as a whole show some tendency to gear or adjust their net purchases inversely to the daily trend in stock prices but that their net purchases do have a significant positive impact on stock prices.

#### *Intra-day analysis and characteristics of orders and transactions*

Since the mutual funds listed separately the details of each transaction within the July 1 to September 30, 1958, period, an attempt was made to analyze the within-day relationship of fund purchases and sales separately in individual stocks to up-ticks or rises, down-ticks or declines, and stability or no change in the market price of the stock involved; the Fitch sheets were used to obtain all individual market transactions in the securities covered. Unfortunately, it was not possible to identify a sufficiently high proportion of the mutual fund transactions on the Fitch sheets to avoid the possibility of substantial bias in the comparison of fund and nonfund transactions. However, a sample of mutual fund transactions, classified by size of transaction and by size of fund, seems to show that large purchase transactions by the funds are more likely to be made on up-ticks than are small purchase transactions and large sales transactions more likely on down-ticks than small sales transactions, a result which it is difficult to interpret without knowing the type of transactor (e.g., public versus professional) on the other side of these transactions. Perhaps more surprising is the indication that fund purchases and sales seem fully as likely to initiate or reinforce a short-run or intra-day market movement (rather than to counter the trend) as nonfund transactions even when size of transaction is held constant, in spite of the evidence to the contrary in the preceding section and the evidence below that funds rely more heavily on limit (as contrasted with market) orders. It seems likely that the biased nature of the fund trans-

actions available for this comparison commented on above is responsible for this result.

The detailed transaction data for the July 1–September 30, 1958, period make possible the derivation of the first reliable information on the characteristics of orders placed by mutual funds and of the resulting transactions effected for them. Table VI-6 presents for this period a percentage distribution of a random sample of mutual fund transactions<sup>20</sup> in common stock by type of order, place of execution, and size of transaction for purchases and sales separately.<sup>21</sup>

The heavy preponderance in the use of limit orders (day and good-till-canceled) by mutual funds is clearly shown in the table. Thus, of the fund purchases effected on the New York Stock Exchange during this period which could be classified by type of order (i.e., excluding the 13.7 percent of NYSE unclassified, 6.8 percent of other exchange, and 10.6 percent of over-the-counter transactions) 86 percent were attributable to limit orders and only 14 percent to market orders. Similarly, 89 percent of fund sales were attributable to limit orders, and 11 percent to market orders. These are probably much higher proportions of limit orders than those used by other investors generally, but comparable quantitative data for the market as a whole are not available for any recent period.

<sup>20</sup> A transaction in this table is defined somewhat differently from that in the Fitch sheets; it is the total amount of each security purchased or sold at one price on any 1 day through one broker-dealer in one market.

<sup>21</sup> The place of execution or market channel used by mutual funds has been analyzed in chapter IV and is introduced in Table VI-6 mainly as an additional basis for classification in studying type of order and size of transaction.



TABLE VI-6.—Distribution of mutual fund transactions in purchasing and selling portfolio common stocks, by type of order, place of execution, and size of transaction,<sup>1</sup> July 1–Sept. 30, 1958

Size of transaction	New York Stock Exchange										Over the counter		Other exchange		Total	
	Market		Day		G.T.C. <sup>2</sup>		Unspecified		Subtotal		Number	Per-cent	Number	Per-cent	Number	Per-cent
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent						
Less than \$1,000.....	0	0	0	0	1	0.3	0	0	1	0.1	2	1.4	1	1.1	4	0.3
\$1,000 to \$5,000.....	22	16.9	70	15.2	52	15.9	35	19.2	179	16.3	22	15.6	21	23.3	222	16.7
\$5,000 to \$10,000.....	29	22.3	165	35.7	65	19.9	47	25.8	306	27.8	26	18.4	19	21.1	351	26.4
\$10,000 to \$25,000.....	43	36.9	149	32.3	103	31.5	59	32.4	359	32.6	39	27.7	24	26.7	422	31.7
\$25,000 to \$50,000.....	21	16.2	61	13.2	64	19.6	28	15.4	174	15.8	24	17.0	16	17.8	214	16.1
\$50,000 to \$100,000.....	8	6.2	11	2.4	33	10.1	11	6.0	63	5.7	12	8.5	4	4.4	79	5.9
\$100,000 to \$500,000.....	1	.8	5	1.1	8	2.5	2	1.1	16	1.5	15	10.6	5	5.6	36	2.7
\$500,000 to \$1,000,000.....	1	.8	0	.0	1	.3	0	0	2	.2	1	.7	0	0	3	.2
\$1,000,000 and over.....	0	0	1	.2	0	0	0	0	1	.1	0	0	0	0	1	.1
Total.....	130	100.0	462	100.0	327	100.0	182	100.0	1,101	100.0	141	100.0	90	100.0	1,332	100.0
Percent of grand total.....	9.8		34.7		24.6		13.7		82.7		10.6		6.8		100.0	

  

SALES																
Size of transaction	Market		Day		G.T.C. <sup>2</sup>		Unspecified		Subtotal		Number	Per-cent	Number	Per-cent	Number	Per-cent
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent						
Less than \$1,000.....	1	1.6	0	0	1	0.5	0	0	2	0.3	1	1.1	2	3.3	5	0.6
\$1,000 to \$5,000.....	12	19.7	56	19.6	37	19.2	13	14.0	118	18.6	9	10.2	19	31.2	146	18.7
\$5,000 to \$10,000.....	15	24.6	73	25.5	32	16.6	21	22.6	141	22.3	18	20.5	15	24.6	174	22.3
\$10,000 to \$25,000.....	15	24.6	84	29.4	53	27.5	38	40.9	190	30.0	27	30.7	14	23.0	231	29.5
\$25,000 to \$50,000.....	11	18.0	51	17.8	35	18.1	19	20.4	116	18.3	20	22.7	9	14.8	145	18.5
\$50,000 to \$100,000.....	5	8.2	14	4.9	22	11.4	2	2.2	43	6.8	10	11.4	1	1.6	54	6.9
\$100,000 to \$500,000.....	1	1.6	8	2.8	13	6.7	0	0	22	3.5	2	2.3	1	1.6	25	3.2
\$500,000 to \$1,000,000.....	1	1.6	0	0	0	0	0	0	1	.2	1	1.1	0	0	2	.3
\$1,000,000 and over.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total.....	61	100.0	286	100.0	193	100.0	93	100.0	633	100.0	88	100.0	61	100.0	782	100.0
Percent of grand total.....	7.8		36.6		24.7		11.9		81.0		11.3		7.8		100.0	

<sup>1</sup> Unit equals transaction. Based on 5 percent sample of common stock transactions by all funds during July to September 1958.

<sup>2</sup> Good until canceled.

The only published information on type of order used for the market as a whole relates to a much earlier 1-day period, September 3, 1946, when the market was subject to an unusually large decline in price. On that day, most sellers used market orders, accounting for fully 85 percent of the value of classified sales, and most buyers used limit orders, accounting for close to 65 percent of classified purchases.<sup>22</sup> While the overwhelming importance of market orders on the sales side may have largely reflected the substantial decline in stock prices that day, presumably the importance of limit orders on the purchase side was similarly exaggerated by the same special circumstances. As a result, it seems reasonably clear that mutual funds in the later period were much more likely to use limit orders than the market as a whole in the earlier period. It seems unlikely that this conclusion would be markedly changed if more current data were available for the market as a whole, but in the absence of such data there is no certainty that this is true.

Table VI-6 also shows the distribution of mutual fund transactions for the July 1-September 30, 1958, period by size of transaction. There were extremely few transactions under \$1,000 in size. The most common transaction fell in the \$10,000 to \$25,000 range, with \$5,000 to \$10,000 second in frequency. While the size groups from \$50,000 up accounted for a relatively small proportion (less than 10 percent) of the number of transactions, they constituted a much more important part (over 50 percent) of the value of transactions. There were no marked consistent differences in the size of transactions effected as a result of market orders as compared with limit orders, although transactions effected as a result of good-till-canceled orders were larger on the average than those resulting from day orders. (Transactions flowing from good-till-canceled limit orders seemed somewhat larger on the average and those from day limit orders somewhat smaller than market orders.) Scattered data available for New York Stock Exchange transactions as a whole point to a much greater concentration of small transactions.<sup>23</sup>

A distribution of the types of orders typically placed by size of fund is presented in table VI-7. The predominance of limit orders is again evident though it is not so pronounced for funds as for transactions, that is, when a fund rather than a transaction is the unit of observation. The larger funds relied much more heavily on limit orders than the smaller funds. Thus, for the smallest funds, viz, those with assets less than \$10 million, market orders seemed fully as important as limit orders.

<sup>22</sup> See "Stock Trading on the New York Stock Exchange on Sept. 3, 1946," pp. 63-64.

<sup>23</sup> A sample of New York Stock Exchange transactions was compiled from the Fitch sheets for the 3d quarter of 1958; see also a similar sample for May 1953 summarized in Irwin Friend, G. Wright Hoffman, and Willis J. Winn, "The Over-the-Counter Securities Markets," McGraw-Hill, 1958, p. 28. In addition more comprehensive data on New York Stock Exchange transactions are available for Dec. 8 and 15, 1954 (and on orders for 6 periods from March 1953 to October 1957), from the "New York Stock Exchange Public Transaction Studies."

TABLE VI-7.—Distribution of mutual funds by types of orders used<sup>1</sup> in purchasing and selling portfolio common stocks, by size of fund, July 1-Sept. 30, 1958

	Mainly <sup>2</sup> market orders		Mainly <sup>2</sup> day orders		Mainly <sup>2</sup> g.t.c. <sup>3</sup> orders		Combinations																Total	
							Market and g.t.c.								Day and g.t.c.									
	More market		Fairly even		More g.t.c.		Subtotal		More day		Fairly even		More g.t.c.		Subtotal		Num- ber	Per- cent						
	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent			Num- ber	Per- cent				
All funds.....	32	27.8	23	20.0	38	33.0	3	2.6	7	6.1	2	1.7	12	10.4	5	4.4	2	1.7	3	2.6	10	8.7	115	100
Funds with assets of—																								
\$300,000,000 and over.....	1	14.3	2	28.6	1	14.3									3	42.9					3	42.9	7	100
\$50,000,000 to \$300,000,000.....	3	9.4	6	18.8	15	46.9	1	3.1	2	6.2	2	6.2	5	15.6	1	3.1	1	3.1	1	3.1	3	9.4	32	100
\$10,000,000 to \$50,000,000.....	7	20.6	10	29.4	11	32.4	2	5.9	4	11.8			6	17.6									34	100
Less than \$10,000,000.....	21	50.0	5	11.9	11	26.2			1	2.4			1	2.4	1	2.4	1	2.4	2	4.8	4	9.5	42	100
All common stock funds.....	16	23.2	14	20.3	27	39.2			4	5.8	2	2.9	6	8.7	3	4.4	2	2.9	1	1.4	6	8.7	69	100
All balanced funds.....	11	28.9	8	21.0	9	23.7	3	7.9	3	7.9			6	15.8	2	5.3			2	5.3	4	10.5	38	100

<sup>1</sup> Unit equals fund.<sup>2</sup> Over 90 percent.<sup>3</sup> Good until canceled.