

The Investment Performance of All  
Institutional Investors:  
An Initial Appraisal

by

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## I. Introduction

Recent studies of investment performance show that mutual funds on the average realized roughly the same returns as could have been achieved on randomly selected portfolios of comparable risk. For the decade of the 1960's, equal-weighted portfolios of NYSE stocks selected at random surpassed the risk-adjusted performance of mutual funds, but value-weighted random portfolios performed worse than these same mutual funds.<sup>1</sup> Since the distribution of the holdings in fund portfolios is somewhere between that inherent in equal-weighted and that in value-weighted portfolios, an appropriate standard for comparison is some average of the two measures of random investment performance. By this standard the results achieved by managed portfolios of funds differed little from unmanaged portfolios.

Students of the stock market have long wondered whether the investment performance of other major groups of institutional investors has been similar, superior, or inferior to that of the mutual funds and the market as a whole. The stress on mutual funds stems only from the accessibility of data and not from the relative importance of this group in the total stockholdings of institutional investors. In fact, mutual funds account for only about twenty percent of the stockholdings of institutional investors. Non-insured pension funds and personal trusts, both of which are largely administered by banks, have individually larger

stockholdings than the mutual funds.<sup>2</sup> Pension funds in addition have been channeling for more than a decade much greater amounts of new money into the stock market than the mutual funds. Although all other institutional groups -- like life insurance companies, property and casualty insurance companies, foundations, college endowments, and state and local trust funds -- hold individually much less stock than any of the big three groups of institutional equity owners, their combined holdings are somewhat larger than those of the mutual funds.

Little is known of the investment performance of the more important institutional investors except for mutual funds. We do know however that non-insured pension funds over the past two decades have been increasing the proportion of their assets invested in common stocks as measured by either book or market values. This change, at least in retrospect, was a wise investment decision.<sup>3</sup> The other evidence is even more scanty and less amenable to meaningful interpretation.

One study of six pension funds over the ten-year period from 1953 to 1962 revealed annual rates of returns on common stock ranging from 11.0% to 13.3% per fund compared to returns of 13.1% for the Dow Jones Industrial average and 13.6% for the Standard and Poor's 425.<sup>4</sup> Obviously, this sample of pension funds is too small to draw any reliable conclusions on performance, and of equal importance these comparisons do not hold investment risk

constant.

Another study covering the period from 1963 to 1968 points to a somewhat inferior investment performance of common trust funds administered by banks to that of mutual funds or of the market as a whole, after adjusting for the varying proportions of senior securities.<sup>5</sup> It is dangerous to generalize this finding because common trust funds account for only about 3.5 percent of bank-administered personal trust funds and an even smaller proportion of their common stockholdings. This study like the previous one is defective in that it does not hold risk constant. Despite these serious limitations, this particular study has been widely cited as evidence that trust funds administered by banks have performed somewhat worse than mutual funds.

The most recent study analyzes the performance of most mutual funds, some bank-administered commingled funds and some life insurance company separate accounts. This last type of account primarily exists to fund pension and profit-sharing plans. The sample coverage was quite small in the latter two cases. This new analysis is contained in the Institutional Investor Study.

According to this Study, mutual funds over the period from 1960 through 1969 and separate accounts from 1965 through 1969 demonstrated marginally superior performance to the market as a whole. Commingled funds from 1967 through 1969 exhibited about the same performance as the market.

This analysis is deficient for two reasons: First, it is based upon a measure of performance which is invalid.<sup>6</sup> Second, the study measures institutional performance with respect to a market portfolio of stocks in which the investment in each stock is proportional to the total market value of the company's equity. Since some groups of institutional investors tend consistently to concentrate a greater than average proportion of their investments in stocks of lower market value, such a market-value criterion may be inappropriate.<sup>7</sup>

## II. The New Evidence

Data collected by the recent Institutional Investor Study of the Securities and Exchange Commission provide a new look into the investment performance of institutional investors and in particular into that of the banks which administer the bulk of corporate pension funds and personal trust funds.<sup>8</sup> The Institutional Investor Study analysis of the investment performance of institutions mentioned earlier is based, not upon the new data used in this paper, but upon other data much of which were available publicly.

These new data contain for slightly less than 800 stocks the monthly gross purchases and gross sales by groups of institutional investors from January 1968 through September 1969 -- a total of twenty-one months. This sample of stocks includes the 27 largest issues on the New York Stock Exchange.<sup>9</sup> Institutional activity was recorded in 766 stocks -- 401 on the NYSE, 155 on the AMEX, and 210 on the OTC. The monthly purchases and sales for each stock are available publicly in the aggregate for groups of institutions but not for individual institutions.<sup>10</sup>

The institutional respondents were grouped into seven classifications: bank trust departments, investment advisors, life insurance companies, property and liability insurance companies, and self-administered portfolios broken down further as to corpor-

ate employee-benefit plans, educational endowments, and foundations. Bank trust departments supervise the investments of most personal and corporate pension funds. Somewhat over half of the common stock managed by investment advisors is held by registered investment companies, mainly mutual funds.

Not all institutions in these groups were covered, but only those which met certain size criteria. However, the total group of 229 institutions included accounted for \$226 billion in common stockholdings, or an estimated 69% of all common stock held by the institutional groups covered. Only for two groups -- foundations and educational endowments -- did the common stockholdings managed by the institutions sampled account for less than two-thirds of the value of all common stocks held by the group as a whole. For the bank trust departments and investment advisors, monthly purchases and sales data were generally obtained only for a sample of accounts. In the case of banks, where records were available for all accounts they were used. Otherwise, data were obtained for the 50 largest trust department accounts, which are primarily employee benefit and commingled investment accounts. The bank trust departments only reported on assets over which they had at least partial discretionary control. Investment advisors reported data separately in three groups of accounts: all registered investment companies whose combined purchases and sales of common stock in 1968 exceeded \$1 million; the aggregate of all

investment partnerships and clubs, hedge funds, offshore funds, venture capital funds and similar funds not included in the first group; and the 25 largest other accounts.

These data make possible a more adequate analysis of the investment performance of institutional investors than any earlier investigation. They provide detailed investment information for each of 21 months and span a wide spectrum of institutional groups, including, for the first time, a broad coverage of bank trust departments.

Nonetheless, there are important limitations to these data: First, the period analyzed, while covering both rising and following markets, is not long. Second, comparable data are not yet publicly available on the monthly purchases and sales of individual stocks by individual institutions. It is therefore impossible to analyze the variation in performance among individual institutions in a group.<sup>11</sup> Third, the numbers and values of transactions are sufficiently large to guarantee reasonably reliable conclusions only for bank trust departments and investment advisors. These two groups of portfolio managers account for about 80 percent of the funds administered by all financial institutions. Fourth, the data do not allow separate measurement of the performance of the two main types of funds administered by bank trust departments. Finally, it is impossible to separate the different type of funds administered by investment advisors. This restric-



tion is less important since there are many studies of the investment performance of mutual funds and mutual funds account for roughly half of the stock under the management of investment advisors.

### III. Banks and Investment Advisors

The first use of these new data was to compare the subsequent returns realized on the stocks purchased to the subsequent returns realized on the stocks sold. This comparison proceeded as follows: The percentage increase in value including monthly reinvestment of dividends was calculated over the next month, three, six, and twelve months for the gross purchases in a particular institutional group. Similar returns were calculated for the corresponding gross sales. The ratio of returns on the purchases to the returns on the sales yields a measure of investment performance. A value greater than one would be consistent with superior performance.

The resulting set of ratios is extremely voluminous and must be summarized. One type of summary, presented in Table 1, is the weighted averages of the corresponding ratios in each month. Each ratio receives a weight in these averages proportional to the sum of the values of purchases and sales.<sup>12</sup> As mentioned above, only banks and investment advisors had sufficient data to draw reliable conclusions. The following section discusses the less reliable but still interesting results for these other groups.

The overall impression from Table 1 is that both bank trust departments and investment advisors displayed values of these ratios remarkably close to one. In 1968, investment advisors had

TABLE 1

Ratio of Subsequent Returns on Gross Purchases to Returns  
on Gross Sales By Banks and Investment Advisors

<u>Institution Type</u>	<u>Subsequent Months</u>				
	<u>1</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>
<u>A. 1968</u>					
Banks	0.998	0.992	0.982	0.990	0.990
Investment Advisors	1.001	1.003	1.006	1.000	1.000
<u>B. 1969</u>					
Banks	1.003	1.002	1.015	0.986	0.986
Investment Advisors	0.999	1.010	0.986	0.986	0.986
<u>C. Both Years</u>					
Banks	1.000	0.996	0.989	0.990	0.990
Investment Advisors	1.000	1.006	1.002	1.000	1.000

somewhat better performance than the banks, but the reverse occurred in 1969. For the two years combined, investment advisors had a slight edge. These differences in performance may be due solely to chance, and with this evidence it would be difficult to support any conclusion except that both investment advisors and banks displayed roughly the same average performance.

The second type of analysis calculates the ratio of the subsequent returns on the gross purchases of a group of institutions to the same returns on the gross purchases of all other groups of institutions. These results directly pit one group of institutions against the others. These ratios again were calculated for each month and summarized by averaging them, giving a weight to each one proportional to the value of the gross purchases. Table 2 contains this summary.

Like the previous analysis, the results are mixed. In 1969, the purchases of banks outperformed the purchases of all other institutions in all the subsequent periods. Since the capital assets of investment advisors account for roughly two-thirds of the sampled assets of all other institutions, there is some presumption that the purchases of banks returned more than those of investment advisors. In 1968, one observes the same phenomenon twelve months after the purchase, but the reverse in the shorter intervals.

These results show little, <sup>consistent</sup> difference between the overall investment performance of banks and investment advisors. The re-

TABLE 2

Ratio of Subsequent Returns on Gross Purchases to Returns on  
Gross Purchase of All Other Institutions

<u>Institution Type</u>	<u>Subsequent Months</u>			
	<u>1</u>	<u>3</u>	<u>6</u>	<u>12</u>
<u>A. 1968</u>				
Banks	0.997	0.995	0.993	1.014
Investment Advisors	1.001	1.002	1.002	0.985
<u>B. 1969</u>				
Banks	1.011	1.021	1.066	
Investment Advisors	0.987	0.972	0.924	
<u>C. Both Years</u>				
Banks	1.002	1.003	1.005	1.014
Investment Advisors	0.997	0.994	0.991	0.985

maintaining analyses in this section examine the ability of institutional investors to select stocks, holding risk constant, and their ability to switch among groups of stocks in anticipation of general market movements.

To examine their selection ability, the ratios in Table 1 were recalculated for each of four different categories of risk or cyclicity as measured by the beta coefficient. The values of the beta coefficient for NYSE and AMEX-listed stocks were obtained from the Rodney L. White Center for Financial Research. OTC stocks were excluded because no beta coefficients were available. Table 3 contains these more detailed results.

The ratios of the subsequent returns on gross purchases to the subsequent returns on gross sales appear to fluctuate randomly about one implying the trading activity of neither banks nor investment advisors generated additional returns within a beta class. In other words, portfolio turnover which maintained the same level of portfolio risk did not pay off. The reader should note that this is not the same as saying that they may have not experienced abnormally high returns on the stocks they hold -- only that their trading activity did not produce additional returns.

Table 4, which breaks down the ratio of Table 2 in the same way as Table 3, gives some indication that banks within a beta class purchased stocks with somewhat higher subsequent return than those returns experienced on av-

TABLE 3

Ratios of Subsequent Returns on Gross Purchases to Returns on  
Gross Sales by Banks and Investment Advisors and by Beta Class

<u>Beta Class</u>	<u>Institution Type</u>	<u>Subsequent Months</u>				
		<u>1</u>	<u>3</u>	<u>6</u>	<u>12</u>	
<u>A. 1968</u>						
0.4-0.8	Banks	1.004	0.996	0.994	1.004	
	Investment Advisors	1.002	1.010	1.002	0.998	
0.8-1.2	Banks	0.995	0.998	0.999	1.007	
	Investment Advisors	1.009	1.009	1.012	0.985	
1.2-1.6	Banks	0.992	0.974	0.969	0.978	
	Investment Advisors	1.003	1.005	1.008	1.018	
Above 1.6	Banks	1.014	1.020	1.000	1.025	
	Investment Advisors	0.994	0.991	1.003	1.040	
<u>B. 1969</u>						
0.4-0.8	Banks	1.000	0.997	1.029		
	Investment Advisors	1.002	1.004	1.002		
0.8-1.2	Banks	1.006	1.016	1.030		
	Investment Advisors	0.992	1.002	0.971		
1.2-1.6	Banks	1.008	1.016	1.036		
	Investment Advisors	0.991	0.992	0.949		
Above 1.6	Banks	1.003	0.989	0.993		
	Investment Advisors	1.007	1.023	1.031		

TABLE 4

Ratio of Subsequent Returns on Gross Purchases to Returns on Gross Purchases of All Other Institutions by Beta Class

Beta Class	Institution Type	Subsequent Months				
		<u>1</u>	<u>2</u>	<u>3</u>	<u>6</u>	<u>12</u>
<u>A. 1968</u>						
0.4-0.8	Banks	0.995	0.990	0.990	1.005	0.988
	Invest. Advisors	1.004	1.010	0.998	0.998	1.018
0.8-1.2	Banks	0.996	1.006	0.992	1.003	1.028
	Invest. Advisors	1.005	0.991	1.003	0.969	0.969
1.2-1.6	Banks	0.990	0.986	0.990	0.990	0.994
	Invest. Advisors	1.006	1.007	1.005	1.010	1.010
Above 1.6	Banks	1.024	1.018	0.998	1.084	1.084
	Invest. Advisors	0.977	0.985	1.003	0.943	0.943
<u>B. 1969</u>						
0.4-0.8	Banks	0.997	0.995	1.027	0.973	
	Invest. Advisors	0.996	0.995	0.973		
0.8-1.2	Banks	1.010	1.026	1.035	0.946	
	Invest. Advisors	0.988	0.963	0.946		
1.2-1.6	Banks	1.020	1.032	1.091	0.903	
	Invest. Advisors	0.983	0.965	0.903		
Above 1.6	Banks	1.009	1.005	1.038	0.959	
	Invest. Advisors	0.990	0.986	0.959		



erage by other institutions. While similar results are obtained on a monthly basis, the differences are not statistically significant.

The results in Table 5 give a further insight into the trading behavior of banks, investment advisors, and others. The interpretation of the numbers in Table 5 becomes clear with an example: The first number in the left-hand corner is one percent. This figure means that one percent of the value of the net purchases of investment advisors were in those stocks in which banks had their largest net purchases and which together accounted for twenty percent of the value of banks' net purchases. The figure in the lower right-hand corner means that eighteen percent of the value of the net sales of banks were in those stocks in which investment advisors had their largest net sales and which together accounted for eighty percent of the value of investment advisors' net sales. Table 5 is actually a summary of monthly tables averaged in the same way as the previous tables.

It appears from Table 5 that it is more common for banks and investment advisors to be purchasing what the other is selling than both to be buying the same things. This conclusion follows from the fact that those stocks which account for the top eighty percent of the banks' net purchases represent only sixteen percent of the net purchases of investment advisors but forty-three percent of their net sales. A similar situation applies to the top eighty

TABLE 5

Measures of Trading Between Banks and Investment Advisors

for 1968 through 1969

Classifying Variable	Other Institution		Net Purchases by Other Institutions Grouped by Degree of Concentration <sup>1</sup> in Classifying Variable		Net Sales by Other Institutions Grouped by Degree of Concentration <sup>1</sup> in Classifying Variable				
	20%	40%	60%	80%	20%	40%	60%	80%	
Net Purchases - Banks	Investment Advisors	1%	5%	9%	16%	13%	20%	30%	43%
Net Purchases - Investment Advisors	Banks	3%	7%	11%	19%	10%	20%	30%	44%
Net Sales - Banks	Investment Advisors	5%	9%	14%	23%	2%	5%	8%	13%
Net Sales - Investment Advisors	Banks	12%	21%	33%	45%	3%	6%	9%	18%

<sup>1</sup>I.e., the proportion of net purchases or sales of other institutions (either investment advisors or banks) accounted for by the stocks representing the top 20%, 40%, 60% and 80% of net purchases or sales by the institutions designated by the classifying variable.

percent of investment advisors' net purchases.

The use of net sales as the classifying variable leads, as would be expected, to somewhat the same conclusion except that those stocks which account for the top eighty percent of the banks' net sales now only account for twenty-three percent of the net purchases of investment advisors. This exception would suggest that stocks that banks sell are sold to groups other than investment advisors more often than investment advisors sell to groups other than banks. One possible explanation is that banks received in connection with new trust business stocks which did not fit into investment advisors' or their investment philosophy and were sold to others or that banks were liquidating estates which contained similar types of stocks.

The last part of this section measures and compares the timing ability of banks and investment advisors. Table 6 contains the ratios of net purchases to net sales by beta class for each of those two institutional investors for each of several periods. The ratios for banks are with one exception greater than one which means that banks throughout the period from January 1968 through September 1969 were on balance accumulating stocks on balance, possibly from new money from pension funds or from a switch of old money from non-equities to equities. The ratios for investment advisors are sometimes less than one which means that they were disinvesting in these categories.

TABLE 6

Net Purchases and Net Sales of Banks and Investment Advisors by Beta Class

Period	Beta Class	BANKS				INVESTMENT ADVISORS				Ratio of Net Purchases to Net Sales
		Net Purchases (millions)	Net Sales (millions)	Net Purchases less Net Sales (millions)	Ratio of Net Purchases to Net Sales	Net Purchases (millions)	Net Sales (millions)	Net Purchases less Net Sales (millions)	Ratio of Net Purchases to Net Sales	
1/68-6/68	0.4-0.8	\$355	\$171	\$184	2.08	\$401	\$469	\$-68	0.86	
	0.8-1.2	435	343	92	1.27	673	785	-112	0.86	
	1.2-1.6	677	196	481	3.45	949	701	248	1.35	
	1.6 UP	207	86	121	2.41	790	406	384	1.95	
7/68-12/68	0.4-0.8	377	281	96	1.34	656	348	308	1.89	
	0.8-1.2	487	329	158	1.48	759	1022	-263	0.74	
	1.2-1.6	878	177	701	4.96	721	916	-195	0.79	
	1.6 UP	343	98	245	3.50	738	669	69	1.10	
1/69-6/69	0.4-0.8	350	306	44	1.14	769	325	444	2.37	
	0.8-1.2	501	349	152	1.44	789	692	97	1.14	
	1.2-1.6	662	237	425	2.79	633	923	-290	0.69	
	1.6-UP	315	94	221	3.35	482	748	-266	0.64	
7/69-9/69	0.4-0.8	227	161	66	1.41	245	292	-47	0.84	
	0.8-1.2	174	190	-16	0.92	300	179	121	1.68	
	1.2-1.6	173	140	33	1.24	238	238	0	1.00	
	1.6 UP	141	58	83	2.43	1.93	2.05	-12	0.94	

During the first half of 1968, Table 6 shows that investment advisors were selling on balance stocks with betas of less than 1.2 and buying stocks with extremely high betas. Banks were making net purchases of stocks with betas of greater than 1.2 at faster rates relative to their net sales in these stocks than for stocks of smaller betas. In dollars, they made their largest addition to equity in the 1.2 to 1.6 class. They were not as aggressive as investment advisors in equities with betas greater than 1.6. Since the market increased six percent in the last half of 1968, these timing decisions turned out to be correct, at least in a short-run perspective.

During the second half of 1968 and the first half of 1969, banks were continuing to build up their holdings of equities with betas of greater than 1.2 at a faster rate than equities of lower risk. Investment advisors reversed their investment pattern of the first half of 1968 and by the second half of 1969 were selling high beta stocks on balance and accumulating stocks of low betas. Since the market fell during 1969 by sixteen percent, the timing of investment advisors must be judged considerably better than that of banks, again in short-run perspective.

The figures for investment advisors for the second half of 1968 suggest that not all funds followed the same type of investment strategy. While the general tendency was to accumulate low beta stocks, there were still some funds which appear to be ac-

cumulating extremely high beta stocks. This heterogeneity implies that there might be substantial variations in the quality of the management ability of investment advisors.

The third quarter of 1969, exhibits only small differences in the relative rates of accumulations as between different beta classes. The exception is the highest beta class for banks. Here there is substantial accumulation which in retrospect worked out unfavorably.

To summarize, investment advisors on balance made correct timing decisions more often than banks during the twenty-one month period from January 1968 through September 1969, when investment advisors were able to change their timing strategy much more rapidly than banks. It is possible that investment advisors have a greater ability to time their shifts in portfolio strategy than the banks even though they do not appear to have any superior ability to select stocks relative to banks. Yet, another explanation of the relative success of the timing decision may lie both in a difference in time-perspective and in initial position of the two groups. Banks have always had a much lower risk exposure and a much longer investment horizon than the investment advisors, and over the past decade have been tending to increase somewhat the riskiness and activity of their overall portfolio.

#### IV. Other Institutional Investors

The paucity of data on property and liability insurance companies, life insurance companies, and self-administered portfolios precludes as thorough an analysis as was possible with banks and investment advisors. The summary of the ratios of subsequent returns or purchases to sales for these institutional investors is given in Table 7. There is no control for risk or cyclicity. On the basis of these data, no institutional group appears to have a substantially different pattern of investment performance from any other with the possible exception of foundations where there is some suggestion of below-average performance.

TABLE 7

Ratio of Subsequent Returns on Gross Purchases to Returns on Gross Sales for Other Institutions

	<u>Institution Type</u>	<u>Subsequent Months</u>				
		<u>1</u>	<u>2</u>	<u>6</u>	<u>12</u>	
A.	<u>1968</u>					
	All					
	Property & Liability	1.013	1.000	0.994	0.963	
	Life Insurance	1.004	1.009	1.006	1.005	
	Pension Plans	0.994	0.973	0.995	0.997	
	Foundations	0.979	0.956	0.900	0.885	
	Educational Endowments	1.003	1.000	0.982	0.969	
B.	<u>1969</u>					
	All					
	Property & Liability	1.002	1.003	1.024		
	Life Insurance	1.011	1.021	1.034		
	Pension Plans	1.011	1.052	1.107		
	Foundations	0.996	1.022	0.992		
	Educational Endowments	0.999	0.999	1.049		
C.	<u>Both Years</u>					
	Property & Liability	1.007	1.001	1.003	0.963	
	Life Insurance	1.007	1.014	1.013	1.005	
	Pension Plans	1.002	1.004	1.020	0.997	
	Foundations	0.988	0.985	0.928	0.885	
	Educational Endowments	1.001	1.000	1.000	0.969	



## V. Conclusion

At least until better data are available, it must be concluded that there are no sizable differences among the investment performances of various institutional groups or between the investment performance of these groups and that of the market as a whole. Both the commercial banks (administering pension and personal trust funds) and investment advisors (managing mutual and related funds and individual discretionary accounts) performed in their equity investments pretty much like the market as a whole over the period covered. The evidence though weaker suggests that the same is true of other institutional investors as well. These conclusions are based upon averages; there may be specific institutions which consistently outperform the averages.

The new data in this paper provide some indication that, as compared with mutual funds, commercial banks may have exhibited superior ability to select individual stocks within a given risk class during the 1968-69 period covered. However, there is even stronger evidence that the mutual funds exhibited superior timing strategy in shifting their net purchases between higher risk and lower risk stocks in anticipation of market movements. These two tendencies seem to offset each other in their effect on investment performance.

The results of this analysis confirm once again, for a

broader spectrum of institutional investors, the apparent inability of professional management as a group to outperform the market significantly. A more interesting subject for future research is to ascertain whether specific managers can consistently do better than the average and to identify them.

FOOTNOTES

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<sup>1</sup> Irwin Friend, Marshall Blume and Jean Crockett, Mutual Funds and Other Institutional Investors: A New Perspective, A Twentieth Century Fund Study, McGraw-Hill, 1970.

<sup>2</sup> Friend, Blume and Crockett, op. cit.

<sup>3</sup> Ibid.

<sup>4</sup> Peter O. Dietz, Evaluating the Investment Performance of Noninsured Pension Funds, Doctoral Dissertation, Columbia University, 1965.

<sup>5</sup> Edwin W. Hanezaryk, Bank Trusts: Investments and Performance, Office of the Comptroller of the Currency, 1970.

<sup>6</sup> See Irwin Friend and Marshall Blume, "Measurement of Portfolio Performance Under Uncertainty," American Economic Review, September 1970, and Fischer Black, Michael Jensen and Myron Scholes, "The Capital Asset Pricing Model," forthcoming, for criticisms of the Jensen measure used by the Institutional Investor Study.

<sup>7</sup> Irwin Friend, Marshall Blume and Jean Crockett, Mutual Funds and Other Institutional Investors: A New Perspective, McGraw Hill, 1970, shows that even holding the usual measures of risk constant, a value-weighted market index over 1965-69 performed much worse than an equally-weighted market index (with each stock receiving an equal weight rather than a weight proportional to the amount outstanding). Since mutual funds tend to have a higher proportion of their portfolios in smaller **issues** than inherent in a value-weighted market index, they would be expected during this period to have realized the higher returns.

<sup>8</sup>These data are contained in the first and as yet the only public type of data from the Institutional Investor Study made available for analysis by the SEC.

<sup>9</sup>For a complete description of the sample, the reader is referred to the Institutional Investor Study.

<sup>10</sup>Data for individual institutions, though on an unidentified basis, will hopefully be available at a later date.

<sup>11</sup>This limitation can easily be removed at a later date when more detailed data collected by the Institutional Investor Study are made available publicly.

<sup>12</sup>Similar summaries were prepared using as weights the minimum of the purchases or sales. The resulting conclusions were quite similar.