

## THE EFFECT OF~ <br> THE ABSENCE OF FIXED RATES OF COMMISSIONS

(Pursuant to Section G(c) (3) of
the Securities Exchange Act of 1934).

December 1, 1975

President of the Senate
Speaker of the House of Representatives
Congress of the United States
Washington, D. C.
Dear Sirs:

Section $6(e)(3)$ of the Securities Exchange Act of 1934 (the Act), $1 /$ as amended by the Securities Acts Amendments of $1975,2 /$ requires the Commission, until December 31, 1976, to file with the Speaker of the House and the president of the Senate information concerning the effect on the public interest, protection of investors, and maintenance of fair and orderly markets of the absence of any schedule or fixed rates of commissions, allowances, discounts, or other fees to be charged by members of any national securities exchange for effecting transactions on such exchange. Section 6(e) (3) was inserted into the Act in light of the commission's adoption on January 23, 1975, of Rule 19b-3, prohibiting national securities exchanges from adopting or retaining any rule which required, or from otherwise requiring, their mrabers to charge any person any fixed rate of comission for transactions effected on, or effected by the use of the facilities of, such exchanges. That rule, which became effective May l, 1975 (except for certain floor brokerage rates), ended an exchange practice dating from 1792, 3/

The enclosed report represents a continuation of efforts by the Commission to monitor the impact of various changes on the securities markets consistent with its responsibilities under the Act to maintain fair and orderly markets for securities and to facilitate the establishment of a national market system. The report sets forth data collected by the Cominision through August 31,1975 , which indicates that, although comaission rates paid by institutions declined after May 1, 1975,
$1 / 15 \mathrm{U}+\mathrm{S} \cdot \mathrm{c} \cdot 7 \operatorname{se}(\mathrm{e})(3)$,
$2 /$ Pub. L. No. 94-29 (June 4, 1975).
3/ The 1975 Amendwents confirmed the Commission's conclugion, embodied in Rule $19 b-3$, that fixed commission rates should be eliminated, but recognized that, under certain circumstances, there might be reasons for the commission to detemine to permit the reintroduction of fixed rates.
the overall financial condition of broker-dealets remained sound and there was no noticeable impact on self-regulatory organizations, securities marketplaces or "market quality." 4/ In expressing that conclusion, the Commission wishes to make three observations.

First, substantial differences have become apparent between rates being paid by individual and institutional investors for the execution of securities transactions of similiar size. That development could well reflect the free play of competitive forces and the fact that institutional investors generally provide a continuing and substantial volume of transactions. Some fear, however, it may reflect imbalances in market power or uninformed pricing practices.

Second, certain broker-dealers, particularty those performing brokerage functions for, and offering research services to, institutional investors, have experienced sharply teduced levels of reventes and net income. A few such firms have elected to merge or terminate their business, and there appear to have been substantial shifts in personnel. This development may reflect a changing pattern for providing and paying for research services.

Third, during the period covered by the report, securities trading volume was high and securitigs prices were generally rising in relation to levels which prevailed in 1973 and 1974 - events which have a positive influence on brokerage industry revenues.

The following sections briefly sumarize the major points presented in the report.

RATE DATA

The rost striking development reported is the reduction in canmission rates paid by institutional investors - such as banks, insurance cotapanies, mutual funds and pension funds - during the period ended August 31, 1975. 5/

[^0]5/ Transactions were classified as institutional if they were handled on a "C.O.D." or "delivery against payment" basis.

In May, the first month after elimination of exchange rate schedules, all New York Stock Exchange members doing a public business received. 5.5 percent less in gruss commission revenues than it is estimated they would have received under the fixed schedules; that percentage was $8 . B$ percent in Junc and July and, in August, increased to 10.9 percent. The corresponding percentages for members heavily oriented toward sarvicing institutional investors are 16.3 percent in May, 23.2 percent in June, 21.5 percent in July and 23.5 percent in August.

With the exception of the comparisons noted above, the report does not attempt to relate experience with fully competitive rates to fomer minimum rate schedules. As there is increased experience with competitive commission rates, the Commission anticipates that the comparisons of rates charged under current practices with old rates will become increasingly less relevant. The report, insofar as it relates to commission revenues, presents calculations of comissions as a percentage of principal amount and in terms of cents per share for various size transactions for both institutional and individual customers. For institutions, commission rates had by August been reduced by 26 percent when calculated as a percent of principal amount and by 19 percent in terms of cents per share. 6/ The reductions in conmission revenues would appear to represent savings to investors who use institutional investment vehicles.

These reductions in institutional commission rates have prompted some observations that institutional investors have been obtaining undue advantages and a few suggestions that there is a need to return to some system of fixed rates. In light of prior experience under minimum commission rate schedules, changes in rate levels and structures were to be expected and, while the evolution in the rate structure will continue to need close observation, there do not appear to be grounds for contemplating any return to fixed comraissions.

The Commission bases this conclusion on the following: (1) There was reason to believe that prior rate levels for large institutional orders, particularly when viewed as simply a charge for the execution function, were higher than would be expected to prevail under a competitive regime, and were to that extent vulnerable. (2) As might have been expected, the advent of unfixed rates led to a period of experimentation, both on the part of individual brokerage firms and of individual institutional investors, with various combinations of services and of rates for those services. There is no reason to believe that this process of experimentation has been completed. (3) Competitive pressures to reduce rates did not develop as quiskly for individual investors who invest directly rather through institutions as they did for institutional investors, and, therefore, rates to individuals changed less rapidly. Particularly in the latter part of the period, however, there

[^1]developed indications of differentials in the rates charged to individual investors probably in response to perceptions by brokerage firms as to the .. relative profitability of different types of individual accounts. (4) There continues to be some uncertainty as to exactly what services should be included within the basic cominssion charge, and what services should be charged for separately. Further developments in this ares are to be expected. (5) As noted above, the period from May through August was generally one of relatively bigh volume and generally rising securities prices, and there is, therefore, a lack of experience to date with respect to the operation of competitive rates under less favorable conditions.

## BRORER-DEALE,R <br> FINANCIAL, CONDITION

New York Stock Exchange firms during the period January through August 1975 reported near record levels of revenue and income. With the exception of August, a month of low market activity, those firms have been profitable each month since September 1974. 7/ Although revenues were slightly higher for the four months following May ${ }^{-1}$, 1975 (May through August), than for the prior four months (Jantary tirough April), net income before taxes was about 23 percent lower ( $\$ 281.1$ million compared with $\$ 364.0$ ), reflecting higher levels of expenses. 8/ Furthermore, firms dealing principally with institutions experienced a $\overline{2} 4$ percent decline in commission revenues, a 17 percent decline in revenues overall, and a 46 percent deciine in net income, from the first four months to the second four months of this year.

The cotal capital of NYSE member fitms increased $\$ 197$ million between April and August 1975 , about 5.8 percent. This gain, most of which resulted from an increase in equity capital, is probably attributable to the overall profitability of the industry during this period.

TRADING AND
MARKET ECONOMICS

The Commission's monitoring of trends in the distribution of trading of listed securities antong primary exchanges, secondary exchanges and the over-the-connter market indicates that trading in NYSE-1isted securities

has not undergone any major shifts since May 1 . All self-regulatory organzations have reported higher revenues and income so far in 1975 as compared with 1974, and their aggregate revenues for the four months ended August 31 , 1975, slightly exceeded those for the four months ended April 30, 1975...

## QUALITY OF

THE MARKET

Recognizing the difficulty in isolating variables so that a valid comparison can be made between a period with fixed rates and a period with competitive rates, and between periods with differing general levels of economic activity or investor confidence, the Commission undertook to review the best available date and andyze changes in spreads, liquidity and volatility before and after May 1,1975 . By these measures, the "quality of the market" appears to have improved during the period since May 1,1975 ; nevertheless, because of the statistical problems noted, it would not be appropriate to infer that the improvement resulted from the shift to competitive rates.

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The Commission intends to file additional reports on the effect of the absence of commission rates to the congress from time to time through December 31, 1976, pursuant to Section 6(e)(3) of the Act.

By the commission.


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# Components of Month1y Gross Reventes for NYSE Member Firus 

B
list of Preliminary Assignment of Firms to Categories

## INTRODCCTION

In announcing adoption of kule $196-3$ prohibiting exthanges
from fixing commission rates, the Commission reconnized the significant concern expressed by many responsible persons in the securities industry regarding the affect of competitive cominission tates. In response to this concern, it undertook:

To take steps to provide appropriatia increastd monitoring of the activities of brokers, and their financial condition and operatious as well as possibte shifts in patterns of trading for some period subsequent to May l, 1975, in order to assure that the objectives of the Act, including the protection of investors and the maintenarace of fair and orderly markets, are upheld during any transitional phase. $1 /$

Furthermore, the Congress has required the Comission to make reports on the impact of unfixing comission races. The Securities Acts Amendments required that:

Until December 31,1976 , the Commission, on a regular basis, shall file with the Speaker of that House and the President of the Senate information concerning the effect on the pablic interest, profection of investors, and maintenance of fair and orderly markets of the absemee of any schedule or fixed rates of commissions, allowances, discounts or other fees to be charged by members of any national securities exchange for effecting transactions on such exchange. 2/

1/ Securities Exchange Act Releass No. 11203 (January $23,197 \overline{5}$ ).
$2 /$ Securities Acts Amendments of 1975 . Public law No. 94-29 (Jure 4, 1975), Section 6(e)(3).

## I-2

The Commission invited cominent on its specific plans for moritoring in its relwast concerning Rule $17 a-20$ and in its staff discussion paper "Monitoring Trunds in Securitits Markuts, Tradinp. and Broker-Dealer Activities? Subsequent 1 y , the Commission has required certain broker-dealus to file revemue, rxpensu and relatid financial information: collected information on compission rates paid by individual and institutional investors from a sample of about too broker-deaters, and obcained monthly reports on financial condition of self-regulatory organizations, and other statisticai intormation on the operations of the securities markuts ist peneral.

This document sumari\%es fata collected to datw.

CONTENT OF
THE REPORT
In general, this documant follows the approach duscribed
in the monitoring, paper: Specifically, the document's 5 chapters,
21 rxhibits and 2 appundices indicatr change during ther period April-
August 1975 in securities commission rates, broker-deater finapeial
condition, self-rugulatory brganization financial condition, and
the: quality of the market.

37 The paper was issued in March 1975 and is available from the 0 feice of the Executive Director.

4/ In some cases, the format or analytical approach described thetr dors not Follow that proposed in the discussion paper. Where this occurs, it is for one of three reasons: fither the extensive public coments generated by tion discussion paper suggested superior alternative approaches, or further review developed improved approaches, or the necessary data elements were not yet available.

$$
\mathbf{i}-\mathbf{3}
$$

The format of the exhibits and the contert of the natrative sections attempt to place the information presented in perspective by comparison against prior periods. Tha stafe is continaing to rifine both format and content and invites comment on altertative approaches.

## SECURITIES COMMISSION RATES SINGE APRII. 1975


#### Abstract

Exhibits 1 through 5 and the accompanying text sumarize information obtained from a monthly survey of 70 fims represmonting 50 to 60 percent of aggregate commission revenues of New York Stock Exchange members, during the period of April through August


 1975.```
The exhibits report information in these areas:
1. Changes in overall reported commission
rates (Exhibit b).
2. Commissions"paid as a percentage of primeipal
amount (Exhibit 2).
3. Conmissions paid in cents per share (Exhibit 7)
4. Estimated revenue foregone by the industry
overall since elimination of fixed comanission rates
(Exhibit 4),
5. Estimated revenue foregone by type of securities ficm (Exhibit 5).
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Exhibir 1
EFFECTIVE COMPISS:ONRATES SINCE APRIL 1975






Exhibit 1 shows the overall average commission rate paid by instifutions and individuals to the sample firms since April 1/
1975. The exnibit looks at commission rates two ways: first, as a percent of principal and, second, in tems of commission cents per share, Both measures, however, are affected by a wide range of variables such as order size and principal price.

In terms of commissions as a percent of principal value, the exhibit shows that institutions paid an average of 0.84 percent overall in April and 0,62 percent in August, a drop of about 26 percent. Conversely, individuals paid 1.73 percent in April and 1. 69 percent in August, a drop of about 2.3 percent. Changes in cents per share show a similar patternt institutions paid an average of 26 eents per share overall in April and $2 l$ cents per share in August, a drop of about 19 percent; individuals paid 30 cents per share in April and 29.5 cents per share in Aldgust, a drop of about 2 percent.

Although average daily volume on the New York Stock Exchange for August dropped to 13.5 million shares from 20 million shares per day in June and July, the sample firms showed no substantial drop in August from June and July discount levels for rates paid by either individuals or institutions.

[^2]





Exhibit 2 expands upon Exhibit 1 by showing the commissions paid as a percent of principal by individuals and institutions on Brders of various gizes.

Rates paid by institutions are lower for each order size category, deciining about 15 percent for small orders and about 28 percent for the largest orders. Most of the drop in rates occurred in May and June with July and August representing only an additional 3 - 5 percent decrease, except that for orders of 10,000 or more shares, two-thirds of the 28 percent decline occurred in May and June and the remaining one-third occurred in July and August.

In contrast, rates paid by individuals have changed relatively little. Only for the very largest orders have rates declined substantially below April levels, with almost half of the decline occurring in August. For orders up to 10,000 shares, rates have remained approximately the same, although August has shown a slight decline.

COMMISSIONS PAID IN
TERMS OF CENTS PER SHARE

Exhibit 3 illustrates the second measure, commissions paid in terms of cents pert share by individuals and institutions on orders of various sizes. Treprls in changes in commissions calculated on this basis are similar to those calculated on the percent of principal




basis. Institutional changes have ranged from a 10 to 25 percent decline with the largest decreases for the medium-size orders. On the average, orders of less than 200 shares are down 10 percent (6 cents per share) while those of 10,000 or more shares are down 20 percent ( 3 cents per share).

Changes in rates paid by individuals are also parallel to those of the previous exhibit. Rates remain relatively stable except on the very largest orders. Rates have increased on small orders by about 4 percent (two cents per share) and rates are down almost 44 percent (4 cents per share, half of which occurred in August) for orders of 10,000 or more shares. However, due to the small number of individual orders in this order size group, the commissions per share is a very volatile number.

Comparison of Exlibits 2 and 3 shows that while institutions pay substantially lower commissions as a percentage of principal than individuals, individuals pay fewer cents per share on orders of each size. This difference appears to be caused by the fact that higher comissions, in cents per share, are generally paid on higher prited shares. As the table below shows, the price of the average share traded by individuals has been well below the price of shares traded by institutions in each order size category.

| Order Size_Range | Average Share Price |  |
| :--- | :---: | :---: |
|  | Individuals | Institutions |
| Less than $\$ 200$ | $\$ 24.65$ | $\$ 40.72$ |
| $\$ 200-\$ 999$ | $\$ 17.42$ | $\$ 35.30$ |
| $\$ 1,000-\$ 9,999$ | $\$ 13.96$ | $\$ 33.56$ |
| $\$ 10,000$ or more | $\$ 11.42$ | $\$ 26.77$ |
| All | $\$ 17.07$ | $\$ 31.38$ | FOR ALL NYSE FIAMS, MAY-AUGUST 1975

All Markets
(Millions of Dollars)


ESTIMATED REVENUES FOREGONE<br>BY THE INDUSTRY OVERALL<br>SINCE THE ELIMINATION OF<br>FLXED COMMISSION RATES

To provide some additional perspective on the impact af negotiated rates, a number of individual firms, the New York Stock Exchange, and the Comission's Office of Economic Research have made estimates of the difference between comission revente dollars actually paid to firms and what would have been paid if negotiated rates had not been introduced, None of such estimatns have attempted to calculate the degree to which offsetting reductions in expenses. occurred. The results of the Commission's analysis are shown in Exhibit 4.

The figures in Exhibit 4 were estimated by applying statigtical techniques to the data filed by the 70 NYSE survey firms to approximate comission rate levels for all NYSE member firms. Based on this research, overall revenues foregone, without making any allowance for offsetting reductions in expenses, appear to have been SI7.5 million in May, $\$ 24.5$ million in Jtme, $\$ 26.0$ million in July and $\$ 2 \mathrm{l} .6 \mathrm{million}$ in August or $\$ 89.6$ millian for the fourmonth period. In absolute dollars, the largest revende decrease appears to have been for orders in the $\$ 2,000$ to $\$ 300,000$ range, which accounted for between $55-60$ percent of all orders. In percentage terms, the larsest dechine appears to have been for orders over $\$ 300,000$, which accounted tor less than one percent of all orders.
$\underline{2} f^{\prime}$ The SEC estimaters of revenies Figured in May are-lawer than ${ }^{\circ}$ those made by the New York Stock Exchange because of differences in data collection and sampling. Those interested in more detail on the estimating procedure or the difference from the NYSE estimate may contact James Burgess in the Directorate of Economic and Policy Research.

Exhibi1 5

## ESTIAATED REVENUES FOREGONE DUE TO GONPETITVE COMMISSION RATES BY TYPF OF FIRIM. MAY-AIFGUST 1975 -

(Milions of Dollars $\mid$


NRI AvAl! aHLE

## 7上-6

## COMMISSION RATE CHANGES <br> BY TYPE OF FIRM


#### Abstract

$3 /$ The 70 sample fims were placed into five categories developed to assigt in estimating the impact of unfixing commission rates on different types of firms:


o National Full-1ine Firms

- Regional and Local Full-line Firms
o Underwiters and General Dealers
o Institutional Fims
- Regional and Local Commission Firms

Exhibit $S$ shows that discounts have been the largest percentage of gross revenues, by far, for firms classified as doing an institutional business. Using the published minimum commission rates on April 30,1975 as a basis for comparison, estimated disconnts for these firms ranged from 16.3 - 23.5 percent. Estimated commissions foregone (without offsets for reduced expenses) by thesp firms due to discounts increased [rom 24.3 percent of gross revenues in June to 27,3 percent in August. On that basis, total commissions foregone are estimated at $\$ 13.0$ million on securities commission revenues of about $\$ 33.0 \mathrm{million} \mathrm{(a} 19.7$ percent discount).

[^3]UNCONSOLIOAYEO REVENUES. EXPENSES AND INCOME


In addition to looking at changes in commission rates, the Comaission is monitoring the financial condition of the securities industry overall and by firm type. Becallse of the monthly variabitity of securities commission income and overall broker-dealer revenues and expenses, both short-term and long-term comparisons of changes are made. The short-term comparison shows changes between the four months. from January to April 1975, and the four months from May to August 1975. The long-tert comparison shows changes between the eight months of January to August 1975 and the same eight-month periods in previous years.

The major aress reported on are:

1. broker-dealer revenves and income (Exhibits 6 and 7);
2. broker-dealer revenues, expenses, and income by type
. of firm (Exhibits 8, 9, and 10);
3. changes in broker-dealer capital (Exhibit 1l); and
4. measures of broker-dealer profitability (Exhibit 12).

BRORER-DEALER
REVENUES AND INCOME

The top part of Exhibit 6 shows gross revenues and total expenses on a month-by-month basis since January 1972 for NYSE member firms doing a public business. It indicates that revenues have been relatively high

Fxhubit 7

for each month in 1975, setting a new record in May. With the exception of August 1975, a period of sustained profitable performance has existed. among NYSE member firms since September 1974.

The middle section of txhibit 6 compares five types of revenue for the first eight months of 1975 with the same periods for each of the last three year's. Totals for 1975 are well above those of 1973 and 1974 and slightly higher than 1972. The slight decrease in 1975 from 1972 levels of securities commissiong is more than made up for by the intrease in Other Revenue. The three non-commission components of revenue are practically the same in 1975 as in 1972. The steady growth of the Other Revenue category is due to growth in commodities and mutual fund commissions, investment advisory fees, and dividends on firm investment accounts.

Finally, as shown by the bottom part of Exhibit 6 , net income in 1975 is up sharply from the net losses of 1973 and 1974 and is about $\$ 25$ million higher than 1972.

The top part of Exhibit 7 shows the five types of revenue for January - April 1975 and May - August 1975. Totals for the two periods are nearly equal, as are levels of securities comminsion revenues. The largest difference is the drop in trading revenue which is offset by

[^4]the inctease in investment banking reyenue. In the absence of unfixed rates, securities commission revemaes earned during the May - Alpust period would have been somewhat higher. Although share volume was about the same between the two four-month periods (2,244.9 million shares and 2,232.5 million shares, respectively), average share price rose (from $\$ 23.28$ to $\$ 26.00$, resulting in a higher dollar volume of market trading,

The bottom part of the exhibit shows a decline in aggregate profitability of $\$ 82.9$ million, or 23 percent, between the two periods even though revenues were about the same. The sharp earnings decrease restulted from an $\$ 86.6$ million increase ( $5.2 \%$ ) in broker-dealer expenses. Changes in the categories of compensation to registered representatives and to partners and officers, along with higher clerical and administrative expenses accounted for almost 60 percent of the increase, while higher communication and interest expenses accounted for another 25 percent. This caused net income before tax as a percentage of gross revenues to drof from 17.8 percent in January - April to 13.7 percent in May - August.

REVENUES, EXPENSES AND
INCOME BY TYPE OF FIRM
To improve its understanding both of the causes of changes in reventles and income and of the impact of unfixing commission rates on different types of broker-dealers, the staff grouped broker-dealer firms into categories which correspond generally to a common-sense understanding of the business. Further, the staff has endeavored to develop accurate historical financial data by firm category,

Considerable difficulty has been experjenced in developing satisfactory categories and in assigning firms to them. Therefore, the staff viets the findings developed to date as preliminary. However, it also views the topic as sufficiently important and the findings to date sufficiently interesting. to warrant publishing preliminary results.

After considerable effort on finm categorization, the staff tentatively grouped New York Stock Exchange member firms into seven preliminary $2 /$
firm categories. - These are:
o National Full-line Firms

- Regional and Local Ful1-line Firms
- Underwtiters and General Dealers
o Institutional Firms
- Regional and Local Commission Business Firms
- Traders and Market-Makers
- Commission Introducing Firms

Having established these categories, the staff worked with historical firm income statement and balance sheet data to attempt to make the categories comparable over time. Historical data for firms which have since combined were restated to account, to the greatest extent possible, for significant mergers and combinations which occurred between 1972 and 1975. As a result, the seven categories of "classified" firms now consist of 366 firms whose

[^5]REVENUES \& REVENLIE CHANGES BY F\{RD TYPE*
January to Augusi 1975 compared winh 1972
(bitlions al Dellats)

total revenues of $\$ 3949.2$ million for the first eight months of 1975 account. for 96.6 percent of the revenues of the New York Stock Exchange members 3/ doing a public business. ${ }^{-1}$ For 1972, che 366 firms and their predecessors gccounted for 87 percent of revenues of member firms doing a public business.

Exhibit 8 provides preliminary information on the relative growth of revenues by firm category, broken into five revenue sources, during the period of January - August 1975 for each firm type. The percent change from reverues earned by these same firms for the same period in 1972 is also shown. As a group, the classified firms experienced a 12 percent increase in total revenues since 1972 , contrasted with revonue growth of only 0.1 percent for all New York member firms doing a public business. This reflects some increased concentration in New York members as does the decrease by about 80 in the number of members doing a public business.

The exhibit shows substantially different patteras of revenue changes by firm type, and by revenue type within finn type. For example, securities commissions have risen 8 percent overall since 1972 with changes ranging from an 18 percent increase for Institukional firms (over 1972) to a 7 percent decline for Traders and Market Makers. Simitarky, "Other Revenue" increased 52 percent overall with increases ranging from 230 percent for Traders and Market Makers to 3 percent for Regional and hocal Full-1ine finms.

[^6]Exhubil 9
REVENUES \& REVENUE CHANGES GY FIRM TYPE* لanuary 10 Agril 1975 compared with May to Augusi 1975 - (millions ol derlase)


These statistics suggest, among other things, that Regional and Local Full-Line fims have had well below average revenue growth, showing an overall decrease of 2 percent below levels in 1972 , while Regional and Local Commission Eusiness Firms, Institutional Firms, and Underwriters have had above average growch. Total revenues for Inseitutional firms increased 13 percent over 1972 levels duc mainly to the 18 percent increase in securities comissions (almost $\$ 21.4$ million).

Exhibit 9 contrasts thesc longer-texm revenur prowth patterns with more recent experience by indicating revenues earned by the classified finns during May - August $1 y 75$ and the percentage thange from January April 1975. Total revenue for all firms was essentially the same between the two periods, but widely varying patterns of change are apparent by type of revenue and typo of firm. securities commission revenues changes ranged fron a 3 percent increase for National Full-tine firms to a 24 percent decline for Institutional firms. All firm categories experienced higher underwriting revenues and lower trading revenues. Institutional, Trading, and Introdmeing firms experictex sharp drops in overall revenues, while other categories showed small increases.

Finally, Exhibit 10 provides additional insight fnto the $23 \%$ net income drop referred to above by showing revenues, expenses, and net income before taxes for each of the seven categories of classified firms and for the unclassified firms for the two periods. The three categories of firms with substantial retail commission business (National Full-line, Regional and Local Full-Line, and Regional and Local Commission Business) showed small revenue increases, but their larger perecntage increases in expenses reduced net income

Exhibit 10
CHANGES IN REVENUES, EXPENSES, AND NET INCOME BY FIRM TYPE* January lo April 1975 Compared with May to August 1975
(millianse ol doltars)

| type Of Fiam | hevenues |  | rXPTNSES |  | NET INCOME BEFORF TAXES |  | NUMEEA of f:thw |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | may-Aug | in Charlige Mren Jan Thru Aproll |  | 5 Charcya Prom ${ }^{\text {Lin }}$ TbruAprit | may-Aug | $\begin{aligned} & \text { 天 Chismpe } \\ & \text { iron Jan } \\ & \text { Thiru Aprial } \end{aligned}$ |  |
| National Full-Line | 202.9 | 4 | 692.1 | 7 | 110.8 | -10 | 14 |
| Regional and Local Full-Line | 178.4 | 4 | 155.8 | 6 | 22.6 | $-10$ | 51 |
| Regional and Local Gommission Business | 86.9 | 1 | 78.3 | 5 | 8.6 | -27 | 39 |
| Underwriters | 609.4 | 5 | 516.3 | 7 | 93.1 | - 5 | 89 |
| Institutional | 98.4 | -18 | 87.3 | -11 | 11.1 | -46 | 29 |
| Traders \& Markel Makers | 191.4 | $-17$ | 172.2 | 3 | 19.2 | -69 | 76 |
| Introducing | 37.2 | -14 | 31.2 | -4 | 6.0 | -44 | 68 |
| Olher | 42.2 | 9 | 32.5 | 29 | 9.7 | -27 | 48-56 |
| TOTAL | 2046.8 | 0 | 1765.7 | 5 | 281.1 | -23 | 414-422 |

* For NYSE Momber Firn Doing a Public Business.

CHANGES IN CAPITAL 1972.1975*



#### Abstract

by 10 to 27 percent. The two categories which include large numbers of institutionally oriented firms (Institutional and Introducing) showed substantial revenue declines which were not matched by expense declines, reducing net income by 46 and 44 percent. The two remaining categories, which are dealer oriented, showed mixed results. Traders and Market-Makers experienced a sharp decline in revenues and an increase in expenses which resulted in a 69 percent drop in net income. On the other hand, Underwriters and Ceneral Dealers showed a small increase in revenues and a slightly larger increase in expenses, rosulting in a drop in net income of 5 percent the smallest loss for any category.


Summarizing, the comparison suggests that firms classified as institutional have shown the largest percentage revenue decreases since May due to sharply lower commission and trading revenues, and Traders and Market-Makers the greatest decline in net income before taxes due mainly to losses in trading and investment accounts.

## LEVELS OF BROKER- <br> DEALER CAPITAL

To be aware of the amount of capital resources available to the securities industry, and to allow the calculation of trends in profitability measured in terms of return on those resources, the Commission is monitoring changes in capital resources of reporting broker-dealers.

Exhibit 11 includes the total capital of NYSE member firms daing a public business in August of each of the years 1972 through 1975 and in April 1975. It segregates total capital into three pieces: capital of "tnclassified" firms; equity of the 366 "classified" member firms doing a public business at the end of August 1975 which were also in business
in August 1972; and subordinated debt of this latter group of rlassified fims. Overall, total capital dropped $\$ 968$ million (22.6 percent) from August 1972 to Ausust 1974 . By April 1975 total capital had recovered $\$ 89$ million (2.2 percent) and during the first four months of unfixed tates recovered an additional $\$ 197$ mililion (about 4.6 percent). As a result, total capital as of August 1975 was 16.0 percent below the August 1972 Figure. However, the rise Erom April indicates the that anfiximg of rates does not appear to have affected substantialty the rebuilding of NYSE member firm capital.

The table below provides some initial insights into the reasons for longer-term tapital shifts by showing the changes in capital for the 366 classified firms, the firms on which detailed information is available, as well as some details on the sources and uses of dinity capital. The top tazlf of the table shows that the overall decline of

SOUACES AND USES OF BROKER-DEALER CAPITAL 1972-1975

|  |  | $\begin{aligned} & \text { Sept } 72- \\ & \text { Aluy } 73 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Sept } 73- \\ & \text { hus } 74 \\ & \hline \end{aligned}$ | Sept 74- <br> Aug 75 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Change in <br> Total Gapital | -376,0 | -198.9 | $+323.3$ | -25:.6 |
| CAPITAL SHIFTS | Change in Subordinated Debt | $+233.2$ | - 65.1 | - 80.8 | $+87.3$ |
|  | Change in Equity Capital | -609. 2 | -133.8 | T404. 1 | $-338.9$ |
|  | Net Income | - 31.6 | $+78.2$ | $+565.3$ | $+6.11 .9$ |
| SOLRCES \& USES OF EQUITY | Dividends Paid | - 36.0 | - 36.4 | - 35.0 (e) | $-107.4$ |
|  | Change in Seat Prices | - 63.0 | -6.3 | +34.3 | - 35.0 |
|  | All Other | -478.6 | -169.3 | $\cdot-160.5$ | -808.4 |

[^7]MEASURES OF BROKEA-DEALER PROFITABILITY*


## III-9


#### Abstract

$\$ 338$ million in equity from September 1972 to August 1975 :was made up of a major drop from September 1972 to Augist 1973, a smaller drop to August 1974 and a significant increase in the last period. The reasons for the changes in equity capital aro partially explained by the data in the lower half of the exhibit. For the total three-year period, dividends paid used $\$ 107$ million, changes in seat prices accounted for $\$ 35$ million, net income provided $\$ 612$ million and "all other" used $\$ 808$ million.


The "All Other" category includes a number of items: partnership draws and distributions, net capital contributions and withdrawals, net stock issued and retired, and assorted less significant iters. Although no breakdown of "All Other' is available for the August 1972 to August 1975 time period, some information is provided by the brokers' 1973 and 1974 anmal reports to the SEf. These reports show that 'All Other' capital declined in these two years by nearly $\$ 600$ million. Of this decline, 69 percent was pertnership draws, 25 percent was net of capital additions and withdrawals, and 6 percent was stock tetitement.

In sumary, both total capital and equity capital of the 366 firms lave frown since the unfixing of comanssion rates and are at higher levels than any time since 1972 .

## MEASURES OF PROFITABILITY

Finally, the staff combined elements of the income and capital information discussed above to monitor the performance of the industry in terms of some common profitability measures: profit margin, return on equity, and return op capital. Exhibit 12 shows these measures for the

366 classified NYSE nember firms for the first eight months of 1972 1975 (the solid lines) and for the individual months of Aptil to August 1975 (the doted lines). The definitions of the three measures also appear on the exhibit.

Although the calculation of the measures for 1972 and 1973 required some assumptions (primarily because monthly information was not available to cteate eight-month figures), the patterns appear clear. Each of the three measures shows relatively high profitability in 1972 declining to significant losses in 1973 and continued losses in 1974.

Finally, while the averages for the eight months of 1975 are relatively high, at or near the levels of 1972, all show significant declines since June. In May and June, the first two months of negotiated rates, profits and returns were above the overall eight-month average for 1975. However, July showed a decline on all measures and August, s loss.


#### Abstract

The third atea that the Commission has bexn monitoring is trading. and marketplace economics. Monthly data has been collected on selfrequlatory organization revenues and expenses, and on the distribution of trading activity in NYSE-listed sectrities.


The major aress monitored are:

1. Distribution of trading among the NYSE, regional rxchanges and the third market (Exhibits 13 and 14).
2. Seif-regulatory organization reventes and net incont (Exhibits 15 and 16).

GLSTREBUTYON OF TRADING IN
NYSE-LISTED SFCURITYES

To monitor shifts in trading patterns of NYSE-listed securities, the Commission has collected trading information from the registered exchanges gad the NASD on aggregate share and dollar volume as well as data on selected individual stocks. The information from January 1974 June 1975 is from data filed with the Commission while the July - September 1975 data is unedited preliminary information provided by the Consolidated Tape Association.


## TV-2

Exhibit 13 presents the information on distribution of exchange trading. It shows the share and dollar volume on the New York Stock Exchange, on the regional exchanges, and in the over-che-counter market For each quarter since January 1974, using an index systerm.

If trading on regional exchanges is the same percentage of New York Stock Exhange trading in listed stocks as in the past, then parallel changes in trading volume between Now York and the regionals would indicate that there has not been a dramatic sfift in distribution ol listed security trading between those two market centers. The rahibit shows this to have bern the case. Likewise, for the over-the-cotmert parallel patterus again lead to the conctusion that there have berib no dramatic shifts.

Although the NYSE accounts for 85 percent of trading in all NYSElisted securitites, it often accounts for only $70-75$ percent of trading in highte volume securities. Accordingly, changes in thi trading patterns of the:se stocks are of particular interest.

Exhibit 14 indicates the distribution of trading volume for thtee trading centers of the ten NYSE-listed stocks with the highest L/ six-monch valume. The NYSE marktit share in January - March ranges from 76.9 percent for southern Company to 70.4 percent for Gulf Dil . The April - June market shace range is 84.1 percent also for Southern Company to 68.8 percent for citicorp.

[^8]CHANGE IN TRADING DISTRIBUTION
OF SELECTED NYSE-LISTED STOCKS
(Percent of Total Trading)

|  |  | NYSE | REGIONAL | OTC |
| :---: | :---: | :---: | :---: | :---: |
| . . American Tel \& Tel | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apt"Jun } \end{aligned}$ | $\begin{aligned} & 71.6 \% \\ & 76.4 \% \end{aligned}$ | $\begin{aligned} & 19.6 \% \\ & 18.4 \% \end{aligned}$ | $\begin{aligned} & 8.8 \% \\ & 5.2 \% \end{aligned}$ |
| Giticorp | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jun } \end{aligned}$ | $\begin{aligned} & 73.5 \% \\ & 68.8 \% \end{aligned}$ | $\begin{aligned} & 14.5 \% \\ & 14.4 \% \end{aligned}$ | $\begin{aligned} & 12.0 \% \\ & 16.8 \% \end{aligned}$ |
| : General Electric | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apx-Jun } \end{aligned}$ | $\begin{aligned} & 72.2 \% \\ & 72.7 \% \end{aligned}$ | $\begin{aligned} & 19.5 \% \\ & 16.1 \% \end{aligned}$ | $\begin{array}{r} 8.3 \% \\ 11.2 \% \end{array}$ |
| General Motors | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jur } \end{aligned}$ | $\begin{aligned} & 73.2 \% \\ & 70.8 \% \end{aligned}$ | $\begin{aligned} & 19.4 \% \\ & 19.3 \% \end{aligned}$ | $\begin{aligned} & 7.4 \% \\ & 9.9 \% \end{aligned}$ |
| Gulf Oil | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jun } \end{aligned}$ | $\begin{aligned} & 70.4 \% \\ & 72.2 \% \end{aligned}$ | $\begin{aligned} & 19.8 \% \\ & 19.8 \% \end{aligned}$ | $\begin{aligned} & 9.8 \% \\ & 8.0 \% \end{aligned}$ |
| Incernational Tel \& Tel | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jun } \end{aligned}$ | $\begin{aligned} & 72.5 \% \\ & 79.2 \% \end{aligned}$ | $\begin{aligned} & 24.1 \% \\ & 19.07 \end{aligned}$ | $\begin{aligned} & 3.4 \% \\ & 1.8 \% \end{aligned}$ |
| Kresge | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jun } \end{aligned}$ | $\begin{aligned} & 72.7 \% \\ & 71.5 \% \end{aligned}$ | $\begin{aligned} & 18.7 \% \\ & 17.0 \% \end{aligned}$ | $\begin{array}{r} 8.6 \% \\ 1.5 \% \end{array}$ |
| Southerr Co | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr }+J u n \end{aligned}$ | $\begin{aligned} & 76.9 \% \\ & 84.1 \% \end{aligned}$ | $\begin{aligned} & 19.2 \% \\ & 12.9 \% \end{aligned}$ | $\begin{aligned} & 3.97 \\ & 3.0 \% \end{aligned}$ |
| Texaco | $\begin{aligned} & \text { Jan-Mar } \\ & \text { Apr-Jan } \end{aligned}$ | $\begin{aligned} & 72.4 \% \\ & 77.8 \% \end{aligned}$ | $\begin{aligned} & 21.6 \% \\ & 16.4 \% \end{aligned}$ | $\begin{aligned} & 6.0 \% \\ & 5.8 \% \end{aligned}$ |
| Westinghouge | $\begin{aligned} & \text { Jan-ifar } \\ & \text { Apr-Jun } \end{aligned}$ | $\begin{aligned} & 74.0 \% \\ & 81.0 \% \end{aligned}$ | $\begin{aligned} & 20.9 \% \\ & 16.8 \% \end{aligned}$ | $\begin{aligned} & 5.1 \% \\ & 2.2 \% \end{aligned}$ |

$\square$

## SELF－REGULATOAY ORGANIZATION REVENUES

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|  | SelE－Reg＇datary Orpanization＊ |  |  |  |  |  | ESE． | Jocs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H5SY | AHEL | MSF． | 认 ${ }^{\text {c }}$ |  | F64 |  |  |  |
| Tutnl Riweraen |  |  |  |  |  |  |  |  |  |
| 1\％75 ．incaida 1） | 76． 194 | 16．195 | $16.85\rangle$ | 12，613 | 0，129 | $2.06 t$ | 2，546 | 134，81） |  |
| P．AT： 1974 | 122 | $17 \%$ | $11 \div 2$ | 107\％ | $1151$ | 1＞5． | :7s | $2206$ |  |
| 1974 | 97．695 | 19．750 | 19．473 | 20，26？ | 13．731 | J． 266 | 2， 236 | 149．245 |  |
| 1932 | 98，002 | 26，011 | 18．813 | 20，255 | 9.985 | 4．15s | 2，023 | $17 \times 245$ |  |
| Tratatectars Iors |  |  |  |  |  |  |  |  |  |
| 1975 Jer－nica ！ 1 | 15，220 | 2.836 | 1.026 | －－ | 679 | 665 | 24.8 | 20，433 |  |
| Matao $\underline{Z}^{\prime}$ | 134 | 105\％ | $13 \%$ | －－ | 1917 | ［64\％ | 599x | 1192 |  |
| 1974 | 17，026 | 2，302 | 1.173 | －－ | 896 | 453 | 187 | 22，001 |  |
| 1972 | 19，474 | 3，986 | 1.404 | －－ | 1.492 | 647 | 208 | 29，21d |  |
| Llaring Fomm |  |  |  |  |  |  |  |  |  |
| 1975 San－hte ＇$^{\prime}$ | 14， 713 | ${ }^{1} 25118$ | 14 | 1．731 | 565 | 180 | 82 | 20．71］ |  |
| Raters ？ | 11） | 1182 | $156 \pm$ | $204 \%$ | 1325 | 1048 | 1162 | 1222 |  |
| 1974 | 18，918 | 5.162 | 330 | 1.235 | 335 | 106 | 80 | 2：3，40］ |  |
| 1972 | 20，053 | 3，1e］ | 422 | －－ | 022 | 3 | 65 | 26,46 |  |
| Comointiatione Imes |  |  |  |  |  |  |  |  |  |
| 1975 Janch－k $1 /$ | 6， 992 | B，\＄8， | 2.253 | －－ | －－ | －－ | －－ | 16，12\％ |  |
| גation ${ }^{5}$ | 1722 | 2132 | 932 | －－ | －－ | －－ | －－ | 1172 |  |
| 1934 | 3.855 | 9.904 | 1，553 | －－ | －－ | －－ | －－ | 29,712 |  |
| 1912 | 8． 399 | 6.982 | 1，226 | －＊ | ＊＊ | ＊＊ | －－ | 18， 391 |  |
| Gifarthg tece |  |  |  |  |  |  |  |  |  |
| 3atio ${ }^{\text {d }}{ }^{\prime}$ | 1275 | 1722 | 1680 | 1102 | เ．33\％ | 1013 | 1 1） | 17\％2 |  |
| 1974 | 13，775 | 1，776 | 1，629 | 7.638 | 2，19］ | 2， 25 ？ | 98.8 | 70， 018 |  |
| 1972 | 15，464 | 2，876 | 1，022 | 7.62 L | 1，412 | 2，853 | 998 | 76， 36 F |  |
| Deporthory Fied |  |  |  |  |  |  |  |  |  |
| katlo $\underline{y s}^{\prime}$ | 1278 | －－ | 917 | －－ | 1567 | ＊ | －－ | 12 V |  |
| 1974 | 20.738 | －－ | 1.716 | －－ | $74 ?$ | ＊＊ | －－ | 22，696 |  |
| 1972 | 19.275 | －－ | 0 | －－ | 19 | － | －－ | 19，469 |  |
| Tabalatilan s－ruicry ． |  |  |  |  |  |  |  |  |  |
|  | －－ | 254 | 6．026 | －－ | 2．468 | －－ | 460 $149 \%$ | 5,952 1198 |  |
| 1974 － | －－ | 13 | 8， 367 | －－ | 7，650 | －－ | 454 | 11；268． | ． |
| 1932 | －－ | 16 | 9.130 | －－ | $2, \$ 15$ | － | 7 | 12，014 |  |
| All Other Reverwes |  |  |  |  |  |  |  |  |  |
| 1975 3min－kct ！ | 9.858 | 1.660 | 2，472 | 7.015 | 1，4月6． |  |  |  |  |
| 成为的行 | 9］k | 1172 | 1137 | 935\％ | 32：， | 2927 | 95\％ | $952$ |  |
| 17ヶ4 | 15．866 | 7.213 | 3，276 | 11．354 | 3，0日5 | 450 | 847 | 33.102 |  |
| 1932 | 15， 136 | 2.969 | 3，624 | 12．434 | 1，448 | $5{ }^{5} 4$ | 304 | －37，489． | － |







The NYSE market share increased in the second quarter for seven of the ten stocks, and decreased far three. Of the seven stocks where NYSE market share increased, no consistent pattern of either the regional or the over-the-counter markets losing volume was apparent.

SELE-REGULATORY ORGANIZATION REVENUES AND NET I NCOME

Exhibit 15 indicates the revenues of the seven self-regulatory organizations having 1972 revenues of $\$ 1$ million or mote. Total revenues and the six major revenue items (those coman to most of the organizations) are shown for the full years 1972 and 1974, as well as for January-August 1975. In addition the ratio of 1975 gight-month revenues to those estimated in 1974 is shown.

As shown by the last column of the exhibit, total revenues for all organizations are nearly 20 percent higher than for the similar period last year. In almost all individual categories, revenues are ahead of 1974 levels, and in many cases shead of 1972 levels as well.

Exhibit 16 compares aggregate revenues for 1972, 1973, 1974 and each month of 1975 to aggregate expenses for the same periods. Total expenses E or all organizations increased from $\$ 160$ milion in 1972 to $\$ 170$ milition in 1974 , while total revenues dropped from about $\$ 179$ million to $\$ 169$ million, causing a loss of approximately $\$ 1$ million in 1974 compared to a net income of $\$ 19$ million in 1972.





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#### Abstract

IV-4

Thet 1975 figures show substantial profits were experienced for the group during the months of Jansary through JuIy. However, August showed only marginal net incone; even though August revenues were near those of January and February 1975, expenses were §l million higher.


## QLALITY OF THE MARKET

As indicated in the stafe discassion paper, "Monitorine

Trends in Securities Markets, Trading and Broker-Dealer Activity", the Commission has befn evaluating the impact of competitive rates on the "quality of the market" even though it views quality of the market as difficult to define and even more difficult to measure. Staff efforts have concentrated on attempting to develop meaningful mosures of spreads, price volatility, azd liquidity - the factors Which are most comionly discussed as being important to market quality,

## SECURITY <br> SPREADS

As suggested in the nonitoring paper, changes in spreads appear to be one of the most important elements to monitor. However, isolating the specific impact of competitive rates for of any other single regulatory change) on spreads is particularly difficult hecause so little knowledge is available about what variables alfect spreads abd huw those variables of significance cause spreads to be what they are.

Since the stafl's review of the academic research indicated that share price, share volume, and institutional interest in a stock are among the major determinants of spreads, the initial plan was to asc these factors to define categorias of "sionilar" stocks, and compare changes in spreads for slocks having about the same prices, share volume and institutional interest in one ferind as in the next.

[^9]CHANGE IN AVERAGE SPREAD BY STOCK CATEGORY


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Exhibit 17 illustrates the results of this approach. Each stock was placed in one of 27 categories defined by price, volume, and institutional interest. Spreads as a percent of security prices were computed for every stock traded for each month Janusry-June 1975. The average of the spreads for all the stocks in each category for each month was then calculated.

The exhibit shows the percentage changes in average spreads in each category between March and June 1975. (Other month-to-month comparisons are possible; this was selected as being representative.) Only two categories show wider average spreads; all other categories of stocks show narrower spreads, often by targe percentages. The largest chamges occurred for bigh volumte stocks with low prices and low institutionsl interest where average spreads dropped a litele over 14 percent.

Although some insights were provided by the analysis leading to Exhibit 17 , spreads did not manifest the relationship which would seem to be suggested by the research. The assumption was that spreads for stocks in the same category would be much the same, but different from the typical spresds in other categories; in fact, the range of spreads for stocks in many categories was quite large, and it was difficult to distinguish adjacent categories.

For these reasons, the staff decided to augnent the analysis with a second approach. The average (mean) spread for each stock was calculated for the 12 weeks prior to May 1 and for 10 weeks following May 1. Each stock was then placed in a category (slightly different from

those for texhibit 17 due to samaling requirements) and the number of stocks in rach catryory for which the average spread changed or stayed the same betwaen the two periods was counted.

Exhibit 18 shows the results of this approach, overall and by category of stock. For each category, it indicates the number of stocks whose averagh spreads increased, decrrastd or stayed the same. In six of the mine categories, the majority of the stocks hat marrower spreads after Hay ist. In three categoribs (stocks having both low volume and low or medium pricts), spreads widened more often than narrowed. Dverall, about as many stocks had wider spteads (764) as had nar rower or unchanged spreads (776).

Although work to date iudicates that no inajor changes have occurred in spreads, it is cluar that to obtain a precise understanding of why changes in spreads occur and to what extent they are attributable to changes in repulatory proctutures or market dynamics, considerable additional work must be done.
stock Price
VOLATILITY

To measure volatility (the second of the annotmed quality of market measures) the staff revised measures proposed in the monitoring paper for both of the variables of interest: overall market volatility and $2 /$ volatility by stock category.

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V-4
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Exhibit 19 shows the results of the analysis of aggregate volatility, in which recent volatility of the market is compared with both short-and long-term trends. As a messure of aggregate volatility, the monthly interquartile range of daily percent changes in the standata $3 /$ and Poor's Composite Index was used.

The top of Exilibit 19 shows the interquartile range, centefed on zero, for tach month since 1928, Stocks were quite volatike in . the period 1928 - $19 / 40$ and then setted down with occasiatial Peaks from 1940-1972. In 1973 and 1974, the years immediately prior to unfixed rates, the number and magnitude of highly volatile months and the sizt of the shifts increased significantly, representing relative. high points in volatility which had not been exceeded since 1946. (For comparative reference the middit portion of kxhibit 19 shows monthly closes, on a ratio scale, of the $S$ \& $P$ Composite.)

The bottom of Exhibit Ig highlights volatility since the unfixing of comaission rates, (Tlue vertical ine represents May 1975.) From relatively low levels in 1972 volatility increased in 1973, peaked in December

[^11]Exhibi: 20



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V-5
$$

1973, and sustained significantly high levels during 1974. Levels in 1975 are well below the 12 highest months of 1973-1974, and are lower on balance since the beginning of May,

To measure the volatility of different categories of stocks, the percentage of trades within a category which differed in price from the previous trade was calculated. Exhibit 20 shows the difference frort the last trade for nine categories of stocks (based on tradith volume and trade size) in the period Janosay - April 1975 and the differences for the same stocks in the period May - July 1975 . Higher volatility would be indicated by more trades Eurther away from the Jast tracte.

The exhibit shows that very little change otcurred in any of the percentages itrespective of the size of trade or the daily voltme ith che stocks. for example, 13.3 percent of the 100 -share trades in low volume securities were made at one-quarter or more away from the last trade ptior to May 1 compared to 13.5 percent following stay 18 trades per day more). Similarly prior to May $1,9.1$ percent of all 600 -share or more trades in high volume securities were made at ono-quatter or sore away from the last trade, compared to 8.5 percent following May 1 ( 25 less trades per day).

Thus, both the aggregate and individual measures of price volatility indicate very little change follawing the introduction of negotiated rates. Volatility seems to have decreased relative to levels existing in most of 1973-1974, and the number of trades close to the last trade has remained nearly the same,

Exhabil 21


## MARKET <br> LIQUIDITY

To monitor liquidity, the thitd quality of the market factor, the staff again used measures different from those discussed in the monitoring paper.

Aggregate market liquidity was measured by comparing price
$\square$ changes in the NYSE composite index and NYSE volume. Exhitit 21 indicates the monthly liquidity of the market since January 1972, in terms of an index derived from this comparison. Liquidity fluctuated in a narrow range in 1972, and then declined steadily in 1973 and 1974 reaching a low point about September 1974. Liquidity improved sharply during the first two months of 1975 and rose steadily through July. A drop in August occurred, but liquidity was up again through October. Overall, liquidity before May was not statistically different than after May, and negotiated rates appear to have had no impact on the liquidity of the market overall.

To measure the liquidity changes $i n$ particular categories of stocks, the staff used the measure of price changes between trades, previously discussed as measure of volatility (Exhibit 20). Since liquidity is a measure of the ability of the market to absorb large trades with

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V-7
$$
little change in price, changes in liquidity could be measured by shifts in the percentage of large trades which did or did not cause major prict movements. (To account for the possibility that what has changed is liquidity rather than volatility, it is also important to check the relationship between large and small trades at one-quarter or more away from the last trade.)

Looked at in this context, Exhibit 20 shows that the number of large trades done at ent-quarter or more away from the last trade increased after May 1,1975 by about 0.7 percent for low volume stocks and by only 0.2 percent for medinm volume stocks, For high valume stocks, there was a decrease of 0.6 percent. The relationship between large and small trades onequarter or mare away from thi last trade has also remained very stable for all three eategories of stocks, decreasing slightly for low volume storks, increasing slightiy for medium voltane stocks and remaining the same for high volume stocks.

Simmarizing then, iquidity semem unaffected either in the afgregate or on individual stack category basis by the introduction of negotiated rates.




[^0]:    4 The enclosed report relates only to the period ended August 31, 1975, due to the lead time involved in collecting, processing, and analyzing data from different surveys and reports. Some elements of data are available for the post August $31 s t$ period indicating modest continuation of the trends observed through August.

[^1]:    6/ Discussions with industry officials, reports in the press, and data Which have been developed through informal surveys suggest that rates have deciined further since Alugust.

[^2]:    17 The sec has also collected information on rates paid to a sample of non-NYSE member firms which shows that rates paid to these firms parallels very close those paid to NYSE members.

[^3]:    3/ These categories are a combination of categories on which the SEC has been working to represent widely different modes of doing business. A detailed presentation of the method of classification is described in a memorandum by Jeffrey L. Davis and Forrest E. Meyers enticled "Preliminary Report on Broker-Dealer Classification Scheme," This memorandum is available from the Directorate of Economic and Policy Research.

[^4]:    I7 Information on the five components of gross revenue on a month by month basis is presented in Appendix A.

[^5]:    27 A detailed presentation of the method of classification is described in $\bar{a}$ memorandum by Jeffrey L. Davis and Forrest E. Meyers entitled "Preliminary Report on Broker-Dealer Classification Scheme." Anyone interested in the memorandum or additianal information on the categories ean obtain it from the Directorate of Economic and Policy Research at the SEC.

[^6]:    $3 /$ Some classified firms could not be included in Exhibit 8 because of Incomplete data. Such firms are included in all the other analyses.

[^7]:    

[^8]:    I7 Volume is compared For the periods lanuary - March and April - June. Precise data which would allow comparison after May 1 is not available.

[^9]:    If $n$ addition, available infotmation on spreads reftects imit orders on the book as well as specialists dealing for their obn accounts. Changes in spreads, therefore, may be affected by changes in the flow of limit orders.

[^10]:    27 A paper describing the market measurt in detail is avallable from Raymond Marcotte of the SEC's Directorate of Econonic and Policy Research.

[^11]:    37 The monthly interquartile range was obtained by ranking the daily changes for a given month from smallest to largest and finding the daily change value at the 75 ch percentile and the 25 th percentile. (For example, if 100 valuts were ranked from (the smallest) to 100 (the largest), the value at rank 75 was the 75 th percentile and the value at rank 25 was the 25 th percentile. The daily change at the 7 Sth percentile minus the daily change at the 25 th percentile was the interquartile rangt.)

[^12]:    $4 /$ After testing several different formulations, Peter Martin of the SEC's Directorate of Economic and Policy Research used the change in the price index squared divided by the volume which was shown to be a statistically reliable measure. His paper is available upon request.

