charged for and billed separately. Such a structure would tend to allocate charges among customers on the basis of costs incurred on their behalf. To the extent that this might lead to a reduction of commission rates for customers who do not use these services, it could discourage practices resulting from the rigidity of the present schedule and encourage large block and volume customers to trade on the NYSE. In other words, this might be an alternative and broader approach to the question of providing special rate treatment for the latter category.

Still another approach to the problems discussed in the preceding pages, but even more far-reaching in its implications, would be to depart completely from the practice of setting minimum rates in favor of setting maximum rates or establishing minimum-maximum ranges, within which member firms could set their own rates with appropriate regard to services performed. Obviously so drastic a step could not be taken, or even proposed, without much more exhaustive examination of its potential advantages and disadvantages than could possibly have been undertaken by the Special Study, and the reference to it here is not intended as a suggestion for action but only as a course of further study. Yet it is appropriate to point out that many of the knottiest problems of rate structure and establishment of "reasonable" rates, as discussed in this part, might be enormously simplified if "reasonable" rates were not necessarily conceived of as minimum ones.

d. Commission rates related to round-lot value

One of the thorniest of the problems of the commission rate structure is the scaling of rates to the standard employed as the basis for the schedule, at present the dollar value of each round lot. The application of this principle under the present nonmember commission schedule is illustrated by the following examples of commissions payable on a round lot at various price levels:

TABLE VI–cc.—*NYSE nonmember commission per round lot*

Price per share	$10	$25	$40	$50	$75	$100	$150
Commission:							
Dollar amount	$17	$31.50	$39	$44	$46.50	$49	$54
As percent of principal	1.7	1.26	0.975	0.88	0.62	0.49	0.36

The $54 commission cost of a round-lot transaction in a $150 stock is little more than three times the $17 cost of a transaction in a $10 stock. But when expressed as a percent of total value of the transaction, the 0.36 percent factor of the $150 stock is roughly one-fifth the relative cost of the 1.7-percent commission on the $10 stock. Schedule is thus a compromise between a "pure" round-lot type schedule of the kind in effect on the Exchange from 1877 to 1919, and a strict percent-of-value type schedule relating the commission to the value of the total transaction.

Even as so adjusted, the commission schedule creates an incentive for the broker and his sales staff to sell lower-priced rather than higher-priced stocks. An investment of $15,000 in one round-lot of stock priced at $150 produces a commission of $54; the same investment in

15 round-lots of a $10 stock produces a commission of $255.[581] From this point of view, a direct relationship of commissions to dollars involved might be indicated. But in terms of the cost of the brokerage function, quite a different result might seem preferable. In the absence of actual cost figures, it may be assumed that the cost of executing and clearing a round-lot transaction in a $10 stock is substantially the same as it is for a $150 stock, and it might seem to follow from this fact that the number of units should control without substantial adjustment for dollars involved. Yet the present schedule imposes a substantially higher dollar commission rate on the high-priced stock than on the low.

There is thus a dilemma. Each of the two approaches avoids one of these two problems but aggravates the other. A percentage schedule would eliminate sales bias since the commission would be the same for a $15,000 transaction whether consisting of one round lot or 15, but the rate might then have only a remote relationship to underlying costs. A straight round-lot schedule would presumably relate the commission rate more closely to costs, but at the expense of a stronger sales bias.

Also, the problem is complicated by another consideration—the impact of the commission schedule on the small investor. Thus, one of the principal revisions to the 1958 schedule, recommended by the Commission in 1959 and accepted by the NYSE, was a reduction in the commission rate for transactions involving $100 to $2,400 in amount. This recommendation combines with the policy of inhibiting sales bias to hold down the commission rate on low-value transactions both in dollar amount and a percent of transaction value.

This dilemma in the rate structure was the second of the two major problems analyzed by the Exchange's 1953 special committee, the other being the graduated rate for volume transactions. As shown above, the committee's majority has sought to resolve both problems by a fundamentally new commission rate formula. It would have reduced the spread between round-lot transactions in high- and low-priced stocks, lowering the 1.5 percent charge on round-lot transactions in $10 stocks to 1.24 percent and raising the 0.33 percent for $150 stocks to 0.89 percent, so that the net difference would have been cut from more than 4½ times as great a charge on the $10 stock to less than 1½. The committee predicted that the narrowing of the spread would correct the "lack of incentive for salesman in higher-priced stocks," and that the reduced dollar rate at the lower end would "encourage the small investor to buy shares."

Perhaps in no area of the public commission rate schedule are the factors which have been referred to as the "social principles" of rate-making as influential as they are here. If a specific level of rates is assumed to be "reasonable" and the dollar value of the round lot is accepted as the basis for the rate structure, there is still an infinite number of possible schedules allocating a "fair" share of the burden between stocks of different prices. Present resolution of the problem appears to rest on the general acceptance of the principles that (1) investors dealing in high-priced stocks are able to pay a larger share of the cost than those dealing in low-priced stocks, at least on a single round-lot basis, (2) the rate schedule should discourage sales bias, and

[581] Cf. ch. III, pp. 253–261 (pt. 1).

(3) it should not discourage participation in the market by those who may be in the relatively least advantageous position to pay a pro rata share of the costs involved in that participation. The quantitative expression of these principles is obviously far more difficult than their statement as generalizations.

e. Odd-lot commission rates

The treatment of commission rates on odd-lot transactions, i.e., generally those involving less than 100 shares, has also been a vexing problem through the years. Special committees of the Exchange reviewed it at great length in 1938, 1942, and 1947, and it was the sole matter for Commission comment when the 1953 rate increase was permitted to become effective without objection.[582]

It should be explained preliminarily that the odd-lot customer is charged a so-called odd-lot differential in addition to the commission. Discussed fully in part E of this chapter, the odd-lot differential—12½ cents per share on shares priced up to $40, and 25 cents per share on shares priced at $40 or more—is, in the case of a purchase, added to a price determined by the next round-lot transaction and deducted from it in the case of a sale. The distinction between the commission and the differential is important to the members involved since the customer's broker earns the former while an odd-lot dealer realizes the latter. But to the customer, whether classed as commission or differential, the total of the two constitutes his cost of effecting an odd-lot transaction.

The Exchange's special committees in the early years expressed concern with the disproportion between the revenues produced by odd-lot transactions and the relative number of such transactions. It was a major issue in the 1937 report. Ten years later another special committee reported that odd lots contributed 19 cents of each commission dollar but incurred 38 cents of each expense dollar. Its remedy stemmed from its recommendation of a fundamental change in the public commission rate schedule from a charge per share to a charge on money involved per round lot, the basis today. The effect on odd-lot commissions may be seen in the increase for a 25-share transaction in a $50 stock from a $6.25 commission under the 1942 schedule to $16.25 under the schedule proposed by the 1947 committee.

The report of the 1953 special committee made no special reference to this question but provided a $2 discount for odd lots. While acquiescing in the proposed rate increase, the Commission entered a caveat as to odd-lot rates, but took no subsequent action to modify them either as proposed or as finally approved. The report of the 1958 special committee is also silent on this subject and, except for the $2 discount per transaction, odd-lot commission rates today are the same as round-lot rates.

The operation of the present schedule may be illustrated by a specific case. In a $3,750 transaction involving 75 shares of a $50 stock, the commission is $35.75 and the differential $18.75, for a total of $54.50. In comparison, the commission on a round-lot transaction in the same $50 stock is $44, while a round-lot transaction involving $3,750; i.e., 100 shares of a $37.50 stock, would involve a commission of $37.75.

[582] See sec. 4, below.

The combined effect of commission and differential may also be seen in the Exchange's Monthly Investment Plan, designed to permit small investors to purchase shares on a regular basis. An investor investing $60 a month pays a total charge, commission and differential, of 7.35 percent of the value of the security purchased in accumulating a $10 stock, or 6.53 percent for a $50 stock. This combined cost of commission and differential is less than the normal mutual fund loading charge, but the former covers only the purchase of shares and is duplicated on a sale, while the mutual fund load normally covers both purchase and redemption.[583]

The Special Study has not evaluated the level of these charges. Its purpose is, rather, to point to some considerations involved in setting fair charges for odd-lot transactions, taking into account these rates as an aspect of the commission rate structure and the odd-lot customer's payment as both a commission and a differential. One question relates to the scope of the service for which the broker receives the commission. In the ordinary round-lot transaction, the member must pay another member to perform the brokerage functions of executing and clearing the transaction, if he does not perform them himself. But in the case of the odd-lot transaction, the member pays no commission for execution of the transaction, which is performed by the odd-lot dealer. The $2 odd-lot discount is apparently intended to compensate for this lowered cost, but in the illustration given above, the member saves $2.89 in floor brokerage.

A further question relates to the method employed in analyzing the cost of odd-lot transactions for rate-setting purposes. Cost data on a transaction basis are generally lacking. The Exchange's Special Cost Study noted—

> * * * that implementation of the proposed income and expense report form would provide data which could be used to refine average functional unit cost information as it may pertain to odd lots, round lots, small value transactions, etc.[584]

Despite the absence of such data in 1947, the report of the special committee of that year justified a sizeable increase in odd-lot commission rates because of the disparity between the ratio of odd-lot transactions to all transactions and the ratio of odd-lot income to all income. Its recommendation was the subject of the following comment by a member firm:

> There is a serious fallacy, however, in such a method of cost accounting. Such reasoning implies that the elimination of odd-lot business would permit reductions in costs proportionate to the number of transactions handled. This simply would not happen. For November 1945 (5-week period) one of the months used in the association's study, [our firm] had a commission from odd lot transactions of $207,000. A firm of certified accountants in cooperation with our Internal Statistics Department, has estimated that [this member firm] could have eliminated less than $60,000 if we had handled no odd-lot business during that period. Consequently, had we eliminated odd-lot business and its related costs, our net profit would have been reduced $147,000.

The committee's rejoinder illustrates the importance of the pricing policy employed in creating a reasonable rate structure. In place

[583] See ch. XI.B.

[584] The Special Cost Study then qualified this statement by the assertion that "* * * determination of average transaction costs for representative transactions will always be of limited significance and then only after consideration of both long- and short-volume trends for the period being considered."

of the marginal cost approach employed by its critic, the committee emphasized the need for relying on average transaction cost: "Not to use a cost-per-transaction basis appears to us to ignore all fundamentals of cost accounting." Its view, of course, prevailed, and the commission rates in odd-lot transactions today appear to be based on their relationship to average cost and not to marginal cost.

There is no record of any study of the odd-lot commission in conjunction with the odd-lot differential; i.e., the total of commission and differential, to determine whether the cost of the transaction to the customer is reasonable. Rather, there appears to have been reliance upon the distinction between the costs in separate compartments. The discussion here and in part E of this chapter points to a need for further examination of the question and, at the least, a need for advice to the customer concerning the amount of the differential, as well as the commission, on each odd-lot transaction.

3. STRUCTURAL ASPECTS OF MEMBERS' RATE SCHEDULE

The description of the commission rate schedules in section 1 indicates how, in contrast to the unitary public schedule, the members' rate schedule establishes rate classifications distinguished by function, type and timing of activity. Since these rates seem to affect directly only members of the Exchange, there might be an inclination to conclude that they are of no concern to the Commission or the public, but such a conclusion would miss an important point. The rates charged by members to other members for the execution and clearance function are income to the member performing the functions and costs to the member for whom they are rendered. Thus, unreasonable rates can lead to unreasonably low or high earnings for the former, and have a corresponding effect on the costs and profits of the latter. Since the member who pays these "internal" rates generally requires the services in his capacity as an agent for the public, the price he pays becomes a cost of operation and ultimately affects the public commission rate schedule.

The public's interest in the members' schedule also stems from the method of its adoption. The votes of Exchange members on new commission rate schedules have consistently tended to be close, a circumstance mirroring the conflicting interests of floor brokers, specialists, floor traders, and commission houses, with the latter category further divided among large New York-based "wire" firms, smaller New York firms, and nonclearing, out-of-town firms. The analysis of the Exchange's membership in chapter XII reveals the relatively small proportion of members in firms whose primary business is with the public. Since there can be no assurance that the resolution of these different interests on the basis of relative strength in numbers will necessarily coincide with the public interest, the members' schedule must also be subject to regulatory review under the "reasonable" standard.

Setting and reviewing members' rates involves the determination of such questions as the reasonableness of member execution rates as compared to clearance rates; propriety of the specialist's receiving the entire floor brokerage when executing a limit order at the stipulated price rather than, as in the case of the Amex, use of a separate rate classification for this type of transaction; adequacy of the brokerage commission in respect of "not held" or discretionary orders;[585] justification of the differences between the rates paid by members for clearance of principal transactions and clearance of agency transactions; and reasonableness of present clearing charges generally in view of the economies which appear to have been achieved in the performance of this function.

Implicit in the existence of the members' rates is a "preference" for members over nonmembers. It is not necessary to challenge the validity of such a preference to consider the reasonableness of its amount. The relationship of member rates to cost was the Commission's major concern in the instance of the 1942 rate increase. The Commission determined at that time that—

> * * * the clearance fees and commissions established by the New York Stock Exchange applicable to trading by members should cover the costs of the services received by those members * * * [and] in the absence of specific information concerning the cost of such services, it [i.e., the Commission] would not now object to any action taken by the New York Stock Exchange consistent with this principle and * * * any increase in fees and commissions should be taken on the responsibility of the Exchange and * * * the Exchange should be advised that the Commission reserves all of its residual powers with respect thereto.

The "absence of specific information concerning the cost of such services" does not seem to have been corrected. A minimum prerequisite for review of member or internal rates in terms of the cost of performing the underlying functions would seem to be a floor members' annual report, similar to the Exchange's Income and Expense Report for members in the public commission business, setting forth income, cost, and profit attributable to the performance of these internal Exchange functions. Also desirable for an effective review of the structure of such rates and their relationship to nonmember rates would be an understanding of accurate unit transaction costs for each function.

4. DETERMINATION OF THE LEVEL OF RATES

As indicated at the beginning of this part, although commission rates are "rules" of the respective exchanges, the Special Study has not felt called upon to consider their "adequacy" in the sense of whether the rate levels reflected in the present rules are "reasonable" within the meaning of section 19(b) of the Exchange Act. The study has confined its review to the standards and methods used in arriving at given rate levels, and the following discussion should not be read as commenting in any way on the reasonableness of the dollar results at this time or at any time in the past.

It is important to reemphasize that, while the security commission business shares, with other businesses subject to rate regulation, the qualities of being "affected with the public interest" and of being limited to a standard of "reasonable" rates, the differences are perhaps more significant than the similarities, and the problem here is in many ways unique. Thus, the public utility normally possesses a franchise conferring upon it monopoly rights to furnish a service required by the public and also obligating it to furnish service to all who need it at reasonable prices. In contrast, though the auction market of the NYSE is a dominant unit in the structure of our capital markets,

[585] See pt. D of this chapter.

about 500 member firms compete with each other for the business of the public to be transacted on the NYSE within the confines of the same commission rate schedule.[586] Moreover, they compete with other investment media for the public's savings, and the Exchange itself competes as a marketplace with other markets, both for the listing of issues to be traded and for transactions in listed issues also traded on other exchanges (dually traded securities) or in the over-the-counter market.

There are other important economic differences. Public utilities generally are characterized by relatively high investment in fixed plant and equipment, while the security commission business is essentially a service business requiring relatively small capital investment but relatively high personnel costs. The income of utilities tends to be more stable than that of industry generally, while that of the security commission business fluctuates much more widely. These differences make it clear that the problem of "reasonable" rate level can be solved by no simple transfer of principles evolved in the field of utility regulation to the security commission business.

Finally, the structural characteristics of commission rates, discussed in sections 2 and 3, above, themselves create distinctions from typical utility rates. The minimum commission rates are probably unique in the degree to which they cover the basic service, brokerage, and also a range of ancillary services which firms may decide to offer and for which they may decide to make no extra charge. This feature alone would serve to make the problem of fixing reasonable rates of commission a highly specialized one wholly apart from the special procedural problems created by the statutory scheme which vests ratemaking initiative in the exchanges and a residual, albeit continuing, responsibility of oversight in the Commission.

It is also important to point out that, despite the competitive aspects discussed above, members of the NYSE are important factors in the regional stock exchanges and the over-the-counter markets, other than those over-the-counter markets in listed securities from which such members are generally excluded.[587] On the other hand, trading in NYSE-listed securities is a major part of the business of most regional stock exchanges and is an increasingly important factor in over-the-counter markets.[588]

This section briefly reviews (a) the history of rate changes since 1934, (b) the criteria which have been enunciated and the data to which they have been applied, and (c) the Commission's role in the fixing of "reasonable" rates.

a. Rate changes since 1934

Since the enactment of the Exchange Act in 1934, the NYSE has amended its nonmember commission rates five times. Each of these primarily involved an increase in the general level of rates, although limited structural changes were involved in some instances. Each of the increases was recommended by a special committee of the Exchange in a formal report which became the basis of the Exchange's proposal.

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[586] For a discussion of variations among member firms engaged in a commission business, see pt. A of this chapter.
[587] See chs. VII.B and VIII.E.
[588] See chs. VIII.D and VIII.E.

1938 increase.—In June 1937, the Exchange submitted to the Commission the report of a special committee, which had been conducting hearings for over 2 years, recommending a general increase in commission rates. The report pointed out that the industry had incurred sharp increases in costs while volume of trading had been decreasing, so that the "establishment of new conditions in the brokerage profession in the past 3 years now warrant, we believe, measures to obtain a fair return on a prudent standard of capital, equipment, and services." The Exchange's volume at that point had dropped to 1,492,000 shares daily from a high of almost three times that figure in 1929 (table VI–90).

In December 1937, the Commission advised the Exchange that—

> Whether or not these increases are appropriate or adequate, the Commission does not feel itself prepared to say. The statute does not make our approval a prerequisite to adoption, although it does give us a power of suggesting and compelling specified changes in rules and practices of exchanges * * *.

It suggested the desirability of examining the entire question of "service charges" [589] with the statement that "this would necessarily entail a consideration of the financial situation of members of the Exchange with respect to the amount of capital invested, the risks incurred, the expenses of operation, and the profit or loss incurred." The Commission took no further action, however, and the increase became effective on January 3, 1938.

1942 increase.—After the 1938 increase, the Exchange engaged the engineering firm of Stevenson, Jordan & Harrison to study costs of operation in the security commission business. The first of many such studies, it set a pattern for the future by classifying 19 "representative" participating firms on the basis of size and status as clearing or nonclearing firms, and stating income, costs, and profit as a percentage of both gross commission revenues and transaction units. A second such study, this time of 25 firms, gave rise in March 1941 to the Exchange's second proposal to increase commission rates, based on the sharp increase in operating costs since the previous rate change. Share volume had continued to drop and at this time was averaging only 619,000 shares daily.[590]

The Commission advised the Exchange that it could not approve the proposal, which sought to change the basis of the rate schedule from share value to value per round lot.[591] The Commission then circulated to all members of the Exchange engaged in the security commission business a report form requiring a simple summary statement of income, expenses, and net profit or loss for the first 6 months of 1941. After analysis of the returns, the Commission decided not to interpose objection to the increase in nonmember rates but to recommend an increase in rates for trading by members, which it felt should cover the cost of the services. The Exchange accepted this recommendation, and the new rates became effective March 16, 1942.

1947 increase.—Five years later the Exchange recommended, on the basis of a cost study of 54 firms conducted by the Association of Stock Exchange Firms, a change based on increases in operating costs,

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[589] In context, the use of the term "service charges" may have referred to commission rates generally and not the special charges discussed above.
[590] See sec. 2.b, above.
[591] Table VI–90 which presents average daily volume figures for the years 1925 through 1962 is opposite to the discussion of all of the rate increases.

and submitted a new schedule employing the present value-per-round-lot base. Since the previous increase, volume had dropped to a low of 455,000 shares daily in 1942, risen to 1,422,000 shares daily in 1945, and settled back at 951,000 shares daily in 1947. The committee declared that:

> * * * If the Exchange is to grow and properly serve the public interest, the firms developing the commission business must receive a fair return. * * *

The Commission first favored a public conference on the proposed increase but then suggested that the Exchange consider a 6-month temporary increase to permit further study of the necessity of a long-term increase. This was not done. The Commission finally decided that it would interpose no objection to the increase but would make a study of the pertinent facts and "might request discontinuance of the increased rates thereafter." The increase became effective on November 3, 1947, and was not subsequently modified or rescinded.

1953 increase.—Early in 1952 the Commission was informed of the appointment of a special committee to study commission rates. After the committee had received the report of a cost study based on the operating results of 54 firms, the Exchange drew up a form of Income and Expense Report which, after minor modification pursuant to Commission suggestion, was circulated among member firms. The Exchange then compiled the results for 40 firms and, together with the earlier 1952 cost study, this summary became the basis for a proposal to increase rates submitted to the Commission on March 20, 1953. Volume had risen since 1947 to a high of 1,980,000 shares daily in 1950 but had relaxed to 1,296,000 shares daily in 1952. While the special Exchange committee concentrated on problems of rate structure, it set as one of its guiding principles that:

> * * * The rate structure should aim to foster a broader and more liquid auction market while simultaneously permitting members and member firms to render maximum public service at the lowest cost consistent with high quality and sound business practice.

The Commission authorized the staff tc advise the Exchange that it would not object to the increase but would continue to study the matter of rates in odd-lot transactions. The regional exchanges, however, did object to the "round turn" [592] and "graduated rate" provisions of the new schedule.[593] At about the time this problem was resolved, the NYSE membership defeated the proposed schedule. It approved a revised schedule in October of 1953, and the increase became effective on November 9 of that year.

The Exchange continued to employ the Income and Expense Report form in subsequent years as a basis for an annual survey which summarized income, costs, and profits for participating members as an overall group and by classification.

1958 increase.—These annual surveys constituted the basis for the most recent commission rate increase, which followed a quite different pattern from its predecessors. The Exchange was apparently then operating on the understanding that rule changes of any kind need not or should not be submitted in advance; the Commission was first notified of the proposed increase on March 13, 1958, when it was given a copy of a report of a special committee of the Exchange recom-

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[592] A special rate for purchase and sale of a security within a limited period of time.
[593] See sec. 2.b(4).

mending the increase. This report stated, at the outset, the following basic principles:

The strength and well-being of the Exchange community is dependent upon the ability of efficient members and member firms to earn, over the years, a sufficient return on their investment of capital and enterprise to insure not only the maintenance of their existing capital, but also the attraction of new capital. * * *

* * * Moreover, a revised rate structure must permit efficient members and member firms to earn a fair return from their Exchange security commission business.

The report then analyzed the cost and profit figures of the annual surveys to show that there had been—

[a] steady increase in the costs of conducting a security commission business, a rising break-even point and a falling rate of profit result[ing] in a profit-margin squeeze from which all business is suffering.

The committee also summarized the change in share volume, which had risen to 2,578,000 shares daily in 1955 but had settled back to 2,222,000 shares in 1957.

The board of governors submitted the proposed schedule to the membership, which approved the rates on April 3, to become effective on May 1. In the meantime, on April 14, the Commission announced an inquiry into the new rates. Several months after the rates had become effective, the Commission completed its study and then engaged in discussions with the Exchange which culminated with the announcement by the Commission on February 20, 1959 that the Exchange was adopting its suggestion to decrease certain of the Commission rates at the lower range of the scale by approximately 5 percent and to eliminate the "round turn" discount adopted in 1953. The Commission also reported:

* * * the initiation of further studies by the Exchange in collaboration with the Commission in respect to the rate structure and development of information concerning the costs incurred by the member firms in the securities commission business; and * * * establishment of revised procedures to provide the Commission and the public with greater advance notice in cases where the Exchange's board of governors is to consider proposed changes in commission rates * * *.

An Exchange committee will further study the use of a so-called volume or block discount for transactions involving multiple round-lot units. The Exchange also proposed to study the possibility of further developing its income and expense survey of members firms as a source of data in connection with the commission rates, and to work with the staff of the Commission and consultants employed by the Exchange to prepare an outline for the basis of a cost study to be made by the Exchange.[594]

Pursuant to this last recommendation, the Exchange engaged the accounting firm of Price, Waterhouse & Co. to conduct a cost study for the purpose of developing "where possible, objective cost incurrence bases for allocating expenses among security commission operations and other activities, thus providing a more realistic picture of the financial results of the security commission operations of each member firm carrying customer accounts." A 2-year study of the costs of six firms produced a report entitled "Special Cost Study" in which several basic changes in the Income and Expense Report employed by the Exchange since 1953 were proposed. These included:

(1) Clearer identification of costs with revenue producing activities and functional allocation of costs not capable of such specific identification;

(2) Revision of salary allowances for services of general partners and general stockholders;

[594] Exchange Act release No. 5889 (Feb. 20, 1959).

(3) Elimination of a charge for interest on capital employed in the security commission business as a deduction from income; and

(4) Provision for Federal income taxes at corporate rates before arriving at a net profit figure for the security commission business.

During the course of the Special Cost Study, representatives of the Exchange and the accounting firm conferred periodically with the Commission staff on the progress of the study and the revisions to the Income and Expense Report, and the report was submitted in final form in late 1961.[595] The revised report form was then used for the first time to make a survey of operating results for 1961. In October 1962, the Exchange issued a preliminary summary of that survey by presenting the figures of the first 150 participating firms whose reports were processed.

As the foregoing account indicates, the Exchange has articulated various standards and bases for its action; the Commission itself has never publicly articulated any views as to appropriate standards, except in the most limited respects.

b. The announced criteria and the data to which they are applied

(1) *Income, costs, and profit*

Although it has been pointed out that the review of commission rates differs in fundamental respects from the fixing of utility rates generally, one principle that seemingly has been taken over from the broad field of rate regulation, although with differences, is that costs of service are the most useful starting point in determining the reasonableness of rates. That is to say, the income generated by any existing or assumed level of rates is looked at in relation to the costs of generating such income, and the difference or "profit" then becomes the focal point of attention in assessing reasonableness. In the preceding section the review of past increases reveals the Exchange's preoccupation with income, costs, and profit as a basis for adjustments in rates, and the Commission's independent study in 1942 was based on the results of a questionnaire which elicited the same type of information.

The nature and accuracy of the income, costs, and profit data to be employed in determining and reviewing rates therefore becomes a matter of crucial importance, as in the case of rate regulation generally. The control of accounts has been described as:

> * * * one of the cornerstones on which the contemporary scheme of regulation is built * * *. In the regulation of rates, the first step is the analysis of income and expenditure * * *; at all steps in cost analysis and rate setting, the commission and the company are dependent largely on financial records.[596]

The multiplicity of firms in the public commission business, however, adds a dimension to the normal problem of analyzing income, costs, and profit. The various cost studies have sought to meet this condition by aggregating the experience of individual firms in samples, small or large. Moreover, in the case of the securities business, unlike most areas of rate regulation, there is no uniform system of accounts imposed by regulatory authority of the Exchange or the Commission. The nearest approach to this is the Income and Expense Report, introduced in 1952 and most recently revised in 1961, which provides a

[595] In general, but with at least one important exception, discussed below, the revisions were worked out with acquiescence of the Commission staff and to some extent reflected the latter's suggestions.

[596] Barnes, "The Economics of Public Utility Regulation," p. 242 (1942).

standard means of reporting to the Exchange for firms electing to participate in its annual surveys.

Certain aspects of the present methods of defining "income," "expense," and "profit" for the individual firm and for commission firms as a group are briefly described below.

(a) *Income.*—Since the "reasonable rates" of section 19(b) relate to commission rates on the particular exchange, it might be argued that only income received and expenses incurred in connection with business on that exchange are pertinent. Under the NYSE's revised Income and Expense Report, a firm's final profit (or loss) reflects its security commission operation as a whole and not solely that portion based on NYSE business.[597] This treatment, with which the Commission was in accord, was based on the view that the expenses of each segment of business are sufficiently in proportion to the income produced so that there would be no point in going through the complexities of complete segregation of income and costs.

A more important point is the exclusion of interest income earned on customers' debit balances in margin accounts from income in the Income and Expense Report. Such interest income is a substantial item: in 1961, for the 150 firms surveyed, it was equivalent to 27 percent of NYSE securities commission income.[598] Until the 1953 rate increase, the Exchange had consistently treated such interest income as a part of income for the purpose of determining the profitability of the securities commission business. In 1953 the Exchange reversed its policy, without explanation. The revised Income and Expense Report continued this position, apparently on the basis of the statement in the Special Cost Study that:

> * * * [W]e believe that the evaluation of the credit function and the income derived therefrom is a distinctly separate problem from the evaluation of the agency function and the commission income earned.[599]

In any event, when profit percentages are discussed below, it must be remembered that they exclude interest income on debit balances, contrary to the Exchange's own earlier theory and practice and the Commission staff's position.[600]

(b) *Costs.*—The Income and Expense Report contemplates the deduction, as an expense, of splits or give-ups to other firms of a portion of commissions received.[601] One type of give-ups is to another Exchange member and is therefore reflected as income on the latter's report—if he participates in the income and expense survey. In another type, the member gives up a portion of commissions received on transactions effected on a regional exchange or over the counter, so that the deduction appears on the member's report but the give-up is

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[597] Commission attributable to the NYSE is recorded as distinct from that attributable to such other sources as over-the-counter transactions, but costs are not similarly separated. Thirty percent of NYSE member firms' total commission income in 1961 was attributed to non-Exchange sources.

[598] See ch. III.D.

[599] An Exchange special committee in 1940 had distinguished between the two aspects of the business but for different reasons:

"Also it needs only to be stated to be obvious that margin business is more profitable than cash business because of the interest return on debit balances."

After so comparing profitability, that committee had included the full return from both types of business in measuring the reasonableness of commission rates.

[600] As noted above the revised Income and Expense Report was developed by independent accountants employed by the Exchange, who consulted with the Commission's staff. The latter disagreed with the proposed treatment on this point, but the position that prevailed, apparenly without presentation of the question to the Commission, was that interest income should be excluded.

[601] See sec. 2.b(2), above.

received by a nonmember. The give-up of a portion of the established rate thus tends to reduce the member's reported profit.

Another point to be noted is the method of accounting for compensation to general partners and stockholders. The Special Cost Study evolved "more realistic salary allowances" for services performed by these persons, the reasonableness of which is not here in question. The new Income and Expense Report follows past practice by deducting such compensation from income before arriving at profit. In terms of the actual payment involved, of course, it is immaterial whether such deduction is made. A partner receives a share of the firm's profits and, whether designated "salary" or "profit," the amount is not different.[602] For rate purposes, however, the distinction has importance, since accounting for such compensation as a deduction prior to the statement of net profit would seem to leave no room for the same factor as a component of return.[603]

Prior to the Special Cost Study, the amount remaining after deduction from income of expenses, including partners' compensation, constituted the profit or loss of the individual firm. That study introduced a new adjustment in the form of a provision for Federal income taxes at corporate rates before arriving at profit or loss. As was true of the items just discussed, the form of presentation is without effect on the amount received by each partner or voting stockholder before and after taxes, but the accounting treatment affects the elements includible under "profit" or return. Moreover, the psychological effect of the choice of method may be quite significant when profit is expressed, as is the Exchange's practice, as a percentage of commission income. For example, the survey for 1961 shows a "profit" of 5.8 percent of security commission income, whereas the percentage of commission income constituting profit before deduction of partners' compensation and income tax at corporate rates was 18.2.[604]

The new Income and Expense Report treats a somewhat similar problem in contrary fashion. Prior to 1961, interest on capital invested in the business had been deducted from income before arriving at profit. While the methods of computing capital and interest rate for this purpose varied, the principle was applied consistently through the years. The Special Cost Study explicitly recognized the need of funds for working capital, furniture and fixtures, and Exchange seats but then concluded that "* * * because we believe that interest on capital employed is not and cannot be a meaningful measure of performance in a service business such as the security commission business, we have omitted any charge for interest on capital." Once again the problem involves relative quantities and not absolutes: the propriety of a return on capital investment is not subject to argument; the only question is whether it should take the form of a deduction as interest expense before computing profit, or whether it is to be included as an element of return or profit. Previous cost studies, having included this item as a cost, would appear to have understated profit by present

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[602] In the same way, a voting stockholder of a member corporation may receive a return in the form of salary, dividends, or increase in equity, and the distinction in classification does not affect the total, although (unlike the case of the partner) it does affect the taxable status of the income of a voting stockholder.

[603] The question of "return" is considered below.

[604] The 1962 annual report of the Exchange simply states (p. 9): "after estimated Federal income taxes, the aggregate net profit on the security commission business of the 150 organizations was 5.8 percent in 1961," without any explanation that partners' compensation has been deducted (or that interest income on customers' debit balances is not included).

standards. Under the present treatment, in any case, interest on invested capital would seem clearly an appropriate item to be recovered in return or profit, after deduction of costs.[605]

A wholly distinct aspect of cost is the practice of treating all costs actually incurred and reported as being relevant, as distinguished from applying a standard of reasonableness or prudence in recognizing costs, as in ordinary ratemaking. This topic may more appropriately be left, however, to later discussion in connection with the special problems of determining uniform rates for a multiplicity of firms.

(c) *Profit and "fair return."*—It is clear that, starting on the level of the individual firm, "profit" can be interpreted only in terms of its content and exclusions. Quite clearly, too, profit figures for different years can be compared only after making the adjustments necessary to place them on a parity. Thus, the Special Cost Study reported that its changes in the Income and Expense Report indicated that profit in 1960 for six test firms had been overstated by approximately 60 percent under the old form.

It has been seen that, under the present Income and Expense Report, deductions are made under expenses, before profit, for partners' compensation and for income taxes at corporate rates, but not for interest on invested capital. The resulting dollar profit is regularly expressed by the Exchange as a percentage of total commission income and the question arises as to the significance to be attributed to the profit percentage in determining reasonableness of rates. Clearly the percentage is completely different from the customary percentage of "return" in ordinary utility ratemaking, since the latter is a percentage of return on the rate base, however defined, whereas the precentage here is merely the percent of total income remaining after deducting costs. Since interest on capital has not, since 1961, been deducted as a cost, the profit percentage must cover cost of capital, with appropriate regard for the risks and needs of the particular business, including attraction of new capital.[606] Neither the Commission nor the Exchange has articulated what principles apply in relating the profit percentage to return on capital, whether the former is the sole or primary element remaining to be measured,[607] or whether other elements are encompassed.

Nor is it clear, assuming that the profit percentage is deemed to have broader coverage than return on capital, exactly what relationship it is thought to bear to the general statutory standard of reasonableness, i.e., whether any particular percentage of profit is indicative of the reasonableness or unreasonableness of any particular level of rates. The special committee's report in support of the increase proposed in 1958 stressed the fact that—

> [F]rom 1954 through 1956, out of each dollar of securities commission income, profit, before taxes and after standard allowances for partners' compensation and interest on capital, decreased from 16.9 cents to 10.1 cents.

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[605] It must be noted, however, that, unlike the earlier report form, the revised one makes no provision for statement of the capital investment on which interest or the return is to be computed, so that computation of profit as a percent of capital now requires the submission of information additional to that supplied in the report form.

[606] The 1958 Exchange Committee expressed the standard as one which would enable "efficient members * * * to earn a sufficient return to insure the maintenance of their existing capital, but also the attraction of new capital."

[607] When the special committee in 1958 justified the proposed rate of increase of that year by a drop in industry profit to 10.1 percent of commission income in 1956, it was suggested by an opponent of the increase that profit might also be measured as "a return on capital of 33.6 percent for the clearing firms and 28 percent for the nonclearing firms."

On the other hand, a special committee in 1942 had stated that the increase proposed for that year should "provide for a 10 percent profit." The 1952 Cost Study showed a profit of 3.8 percent of commission income after partners' compensation and interest on capital, and this became a basis for the rate increase, subsequently described as an 18-percent increase, of the following year. For reasons already indicated, these percentage figures are not directly comparable, but in no instance has any particular percentage or range of percentages been identified or explained by the Exchange or the Commission in relation to section 19(b)'s "reasonable" standard or the concept of "fair return" as used by the 1942, 1947, and 1958 Exchange committees (and possibly others). Again, such usage of the latter concept in this context has not been distinguished from its quite different and more familiar connotation in relation to an established rate base.

The point here made is not that any particular amounts of profits or profit percentages were or are inappropriate under any measure of reasonableness; as stated above, the Special Study has made no effort to determine an appropriate measure or to appraise the reasonableness of past or existing rates. The significant point is that, despite the Exchange's numerous references to a profit percentage and its several mentions of "fair return" as seemingly the ultimate criterion of "reasonable" rates, there seems never to have been any clear articulation of the significance of the amount or percentage of profits, or of any other quantitative standard, as a measure of a fair return or of the reasonableness of a particular rate schedule.

(2) *The multiplicity of firms*

The preceding subsection treats some questions encountered in determining income, cost, profit, and "fair return" as if only a single firm were involved. Further complexities arise when figures and results are considered not for a single firm but for all member firms.

Practice in the past has been to tabulate the results of individual firms in a cost survey to obtain an average of their experience. The assumption originally underlying this method of compiling data for the industry appears to have been that member firms enjoy some reasonable equivalence in cost experience. The first Exchange special committee to employ a cost study (1940) as a basis for a commission rate increase stated the point in this way:

> The committee had determined that if there were wide variations in cost between the various firms reporting, the study would be thrown out as inconclusive, but that if in these varying types and classes the study showed a reasonable uniformity, it would be fair to accept these costs as reliable.

In that instance, the committee found that "the similarity has, in fact, been remarkable." But this could hardly have been the conclusion in 1952 when the cost study of 40 firms showed the following range in profit for 4 groups of firms:

	High	Low
	Percent	*Percent*
Group 1 (clearing)	+10.6	−34.7
Group 2 (clearing)	+18.3	−21.7
Group 3 (clearing)	+17.9	−25.8
Group 4 (out of town) (nonclearing)	+24.0	−16.4

This point is highlighted by the Exchange's summary, issued late in 1962, of 1961 Income and Expense Reports for 150 firms. By dividing the reporting firms into 10 groups, the summary attains a degree of classification which promises a minimum of variation among members of each group; actually, there are wide disparities. For Group 1,[608] 21 clearing firms grossing commission income of $5 million or over, the spread between the high and low firm in each category of costs was as follows:

[In percent]

Category of costs	High firm	Low firm
Variable costs paid to others	40.5	4.7
Variable costs paid to registered representatives	31.5	3.6
Clerical and administrative costs	31.0	16.7
Communication costs	13.5	4.4
Occupancy and equipment costs	7.9	3.5
Promotional costs	4.1	.6
Other expenses	13.1	3.4
Total expenses (before "partners' " compensation)	98.1	69.8

"Total expenses" figures are also for two actual firms, both engaged in the same class of the security commission business. The firm whose expenses aggregated 69.8 percent had income of 30.2 percent, before partners' compensation of 7.4 percent; the other firm with expenses of 98.1 percent had income of 1.9 percent before partners' compensation of 7.5 percent. The dispersion is much wider in some of the other groups.[609] This lack of "reasonable uniformity" (such as the committee report of 1940 considered essential) is an indication of the caution needed in aggregating data for all firms voluntarily participating in a survey to measure profitability of the commission business as a whole. The fact that participation remains voluntary—there is no positive requirement of the Exchange or Commission for any particular firm to supply figures—must be borne in mind in connection with the discussion below.

(a) *Size and composition of the sample.*—It is obvious from the above examples that the size and composition of the sample may be vitally important. The point may be further illustrated by another kind of example. In 1952 the Exchange included 40 firms in a cost study, but an exhibit showing high and low rates of profit in four groups of firms eliminated a single firm, the largest, and reduced the sample to 39. This lowered the high rate of profit for firms in the particular group from 18 to 8 percent.

It has been shown that the Exchange's early cost studies were based on data of a small number of "representative" firms, varying from 19 to 54.[610] Since 1954, the Exchange's report forms have been sent to each member firm in the public commission business, and 185 to 375 firms appear to have participated in the surveys.[611]

(b) *"Efficient" firms.*—The special committee which proposed the 1958 increase announced its standards in terms of "efficient members

[608] The figures for this group are selected because they represent the largest firms; figures for other groups show similarly wide spreads.

[609] See also the discussion of varying characteristics of firms doing a commission business in pt. A of this chapter.

[610] The Commission's own survey in 1942 reached 561 firms, including 428 engaged primarily in the public commission business as well as floor traders and specialists.

[611] Because of complications in using a new form, the survey for 1961 (published in 1962) covered only the first 150 firms whose reports were processed by the Exchange.

and member firms," but its report made no attempt to select or define the efficient members or to state the return earned by such group. Instead, it highlighted the fact that, while the entire group of 285 member firms earned 10.1 percent on gross commissions in 1956, "a major segment—some 47 percent—operated their security business at a loss or were unable to eke out a net income of more than 5 cents of each dollar of gross." The report thus did not rely on the performance of "efficient" firms or even of the average firm but emphasized the plight of the 47 percent which had been unable to retain more than 5 percent of commission income after partners' compensation.

The possibilities for variation may be further seen in the data supplied in support of the 1958 increase. There had been an industry-wide (i.e., industry-sample-wide) drop in profit from 16.9 percent of security commission income in 1954 to 10.1 percent in 1956 and 6.5 percent in 1957.[612] Yet at the time that the industry profit was 6.5 percent of commission income, some firms were earning as high as 35 percent, and in one case 46.4 percent, while 29 were earning over 20 percent on commission income. Other firms, of course, were showing much lower percentages of profit or even substantial percentages of loss based on the yardstick used, but in any event it is clear that the averages are not of firms of "reasonable uniformity" and that inefficient firms as well as efficient ones are included. Even if the concept of efficiency were liberally applied, it seems obvious that excluding the least efficient firms from the averages might produce a significantly different measure of income, expense, and profit for the determination of "reasonable" rates. This appears to be one of several areas where expressions of standards deemed applicable have not been reflected in actual presentation of data, at least in part because of lack of definition and lack of selectivity of pertinent data.

(c) *Prudence of expenditures and quality of services.*—Two other considerations, related to the question of efficiency, are the questions of prudence of expenditures and quality of service.[613] Variations among member firms in respect of these factors, as well as that of efficiency, may be substantial, and the interaction of all three considerations is among the more perplexing aspects of fixing uniform, minimum rates for some 500 separate firms. A broad and undoubtedly oversimplified statement of the interaction of these factors might be this: given any rate level and any assumed standard of service, the more efficient firms presumably would operate with a higher profit margin than others, simply because they would get more for each dollar of costs. On the other hand, the rate level for all firms would tend to be higher to the extent that prudence of expenditures by any or all firms was disregarded as a factor in arriving at cost averages. But again, standards of service might be debased, contrary to the public interest as well as the firms' own interest, if necessary expenditures to achieve an acceptable quality of services were required to be held down under a too restrictive definition of efficiency or prudence.

That these interrelated factors are difficult to apply in appropriate equilibrium in the fixing of commission rates—more difficult even than in other contexts of rate regulation because of the multiplicity

[612] Preliminary figure for 1957.

[613] The concepts of efficiency, prudence, and quality would all seem to be embodied in the expression of principles of the 1953 Exchange committee, quoted in sec. 4.a, above.

of firms—does not mean that they are irrelevant. But a more searching examination of their significance and application would seem to be needed than is reflected in the past history of rate changes.

Of the three, quality of service is by no means of least significance in the fixing of rates. Elsewhere in this report are discussions of training and supervision of personnel of securities firms and of the need to improve the quality and standards of sales and research effort; [614] these are some of the important ingredients of quality of service which neither Exchange policy nor public policy should discourage, and obviously the commission rate structure should not be niggardly in allowing recovery of costs incurred to achieve genuine quality. The perplexing aspect, however, is that all firms operate under the same minimum schedule whether their training or supervision programs or their standards of selling or research are of the highest quality or otherwise, and the actual cost experience of only those who actually file an Income and Expense Report enters into the averages in measuring "reasonable" rate levels. Similarly, as shown above, ancillary services of various kinds and quality may be provided by individual firms within the minimum rate structure or outside of it, but these distinctions are not recognized in the compilation of cost figures.

The concept of prudent costs is a familiar one in ordinary rate regulation, but in respect of commission rate regulation it appears to have had explicit recognition only occasionally and obliquely, as in the 1937 Exchange report's reference to "a prudent standard of capital, equipment, and services." In practice, in any case, it appears not to have been given any effect. However large the expenditures of some firms as compared to others, for such items as business promotion, entertainment, contributions or bonuses, or perhaps to maintain improvidently opened branch offices, the actual reported costs of the firms filing the Income and Expense Report become the basis of the averages that are taken into account in fixing "reasonable" rates. Neither the Commission nor the Exchange has defined any limits or made any exclusions in the name of prudence.

There has been a steep rise in recent years in what the Exchange describes as the "break-even" point of its member firms. In 1958, the Exchange's special committee pointed to an increase in the estimated break-even point from 1,438,000 shares daily in 1953 to 1,900,000 shares in 1957. By 1960 the figure had reached 2,500,000 shares daily and, in 1961, under the revised Income and Expense Report, it was 3,100,000 shares daily. The Exchange describes this increase as "an indication of rising operating costs," but it is not known to what extent the reference is to rising costs in the general economy, cost attributable to seeking higher quality of service, or simply imprudent costs or those incurred as a result of inefficiency, since, as already stated, there has been no attempt in the rate regulatory process to differentiate or define the various factors.

(3) *The factor of volume*

No less difficult to cope with under the "reasonable" standard than the variations among firms in the foregoing respects are variations in volume over periods of time. It is characteristic of ratemaking and review generally that data as to revenues and costs must be appropri-

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[614] Chs. II and III.

ately related to each other in terms of experienced or assumed volumes of business. The correlation is particularly important and particularly difficult in respect of the securities commission business as compared with the typical public utility.

To cite one example: the special Exchange committee of 1947 based its report on a study of 54 member firms, comparing operating results for the last 3 months of 1942 with the equivalent quarters of 1945 and 1946. The report placed particular emphasis on the profit of the single month of October 1946, although the preceding month had shown a 400-percent greater profit and the quarter as a whole had shown a 100-percent greater profit and had actually exceeded the profitability of the 1942 base period. The startling differences in result were due, of course, to sharp changes in volume; volume in September 1946 had been 29 percent greater than in October.

Two conditions of the security commission business operate to magnify the effects of volume changes. One, as pointed out by the independent accountants retained by the Exchange to develop the currently used Income and Expense Report, is the characteristic of "a relatively high proportion of fixed costs." These presumably include, in addition to such routinely inelastic items as rentals for office space and costs of data processing equipment, the item of relatively fixed personnel costs that is more peculiar to the public commission business. The second condition is the erratic and uncontrollable nature of volume of trading (table VI–90). Promotional methods and selling practices will affect each firm's share of total business, and the selling methods and commission schedule of the industry may influence the total amount of such business available, but even more significant is the attitude of the public as a whole, a factor depending on world conditions, state of the economy, and a legion of other extraneous conditions.

The combination of high fixed costs and sharp, unpredictable changes in volume can obviously result in acute differences in operating figures. Firms earning a profit at one volume level may earn much more or less, in terms of dollars and percents, as volume increases or decreases.[615]

The Exchange explicitly recognized the significance of volume in its proposals for the earlier commission rate increases. The 1937 special committee analyzed the conditions affecting volume and concluded that these would lead to a "substantial reduction" in level of trading "compared to a few years ago." The 1940 committee declared that "a substantial increase of commissions is, in our opinion, unavoidable until such time, if ever, as there is a long-sustained increased volume of trading." By the time of the 1947 increase, volume of trading had increased materially over its low point in 1942 so that, while still discussed in other connections, existing volume was not cited as a basis for increased rates. Instead, higher rates were recommended on the theory that the industry could not assume the continuance of a high-volume level. The 1958 special report adverted to the effect of volume in still another way. A 50-percent increase in trading volume between

[615] It is possible that part of the explanation for the widely varying cost-and-profit experience of firms within the same Exchange classification, as reflected in subsection b(2), above, is simply the relative accuracy of their forecasting and planning for future volumes.

1953 and 1957 was said to have been nullified by a parallel increase in costs.

On the other hand, even quite sharp increases in volume have never led to a downward revision of commission rates. Thus, the 1958 increase was based on operating figures for 1956 and 1957 when the volume of trading on the NYSE had been 556 and 560 million shares respectively. By 1961 the annual total had risen to over 1 billion shares, but the same commission rates remained effective. As indicated above, the "break-even" point calculated by the Exchange had risen sharply in the same years, but the factors accounting for the rise have not been identified.

As in other aspects of fixing of reasonable commission rates, new perspectives may be required here. In recent years the Exchange has attempted to project volume as a tool for members' planning, but has apparently avoided any use of such forecasts for rate-setting purposes. Even statements of assumptions or estimates which prove erroneous in retrospect would seem preferable to none at all, since they would provide an explicit basis for comparison and correction which is now lacking. The development and constantly increasing use of electronic computing and data processing equipment may suggest other methods of adjusting "automatically" for significant volume fluctuations in some circumstances.

c. The Commission's role

That public commission rates are adopted as minimum rates by vote of members gives special meaning and importance to the Commission's responsibility of review under section 19(b). While the Commission's jurisdiction may be assumed for present purposes to obviate the antitrust problem that might otherwise arise from Exchange rate-setting without appropriate governmental sanction,[616] the Commission's exercise of this jurisdiction as part of its general responsibility for the protection of investors would seem to require its having adequate data, established criteria, and workable procedures. Although improvements have been accomplished in the first and third respects in recent years, there remains room for improvement in all three respects.

(1) *Underlying data*

The underlying data used by the Commission in reviewing each rate change have essentially been those which the NYSE has supplied at the time of its proposal, except that in 1942, as already noted, the Commission made its own survey of member firms. The data supplied by the Exchange have been limited by the scope of its samples and the contents of its report forms. In both respects there has been a definite betterment over the years, especially in the revised Income and Expense Report adopted in 1961 which is undoubtedly a more useful instrument than has ever been available before. From the Commission's viewpoint, however, this report's ultimate usefulness will necessarily depend on how well adapted it proves to be in relation to concepts and criteria that remain to be more clearly articulated. It is to be expected that changes dictated by experience or the development of standards will be effected as they become necessary.

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[616] Cf., *Silver* v. *New York Stock Exchange*, 31 U.S.L. Week 4452 (U.S., May 20, 1963).

At the present time the usefulness of the report form is limited by the incompleteness and possible randomness of any sample resulting from merely voluntary submission of data by member firms. In turn, the degree of response by these firms has apparently been limited as a practical matter by the sheer difficulty of translating data from the firms' books and records to the standard form, although the Exchange has sought to facilitate and encourage response. While the passage of time may tend to cure this difficulty, a more direct approach would be the establishment of a uniform system of accounts coupled with mandatory filing of the Income and Expense Report.[617] From this base the determination of particular matters, such as the identification of "efficient" firms, could proceed with greater assurance. It should also be possible, and would seem highly desirable, to carry through a suggestion advanced in the Special Cost Study for the formulation of unit cost information for various functions involved in the security commission business.

In broader and longer range terms, the Commission's role would seem to require more continuous attention to the economics of the brokerage business. It has already been pointed out that rate regulation in this area is quite different from other forms, and it is also clear that it cannot be an exact, mathematical exercise. If the necessary judgment is to be applied to specific current data, the broader economic picture must supply the background. This is particularly true in light of factors previously mentioned: the relation of the security commission business to other aspects of the securities business and to competing businesses, and the complexities caused by changing volumes of business.

(2) *Criteria of reasonableness*

The statute imposes the general standard of reasonableness, without further definition. It is the kind of general standard that needs to be given specific content in the course of administration; yet after nearly 30 years there has been no comprehensive and consistent public articulation, on the part of the Exchange or the Commission, of the principles or criteria to be applied in interpreting the standard. The concept of "fair return" recurs over the years in the reports of Exchange committees, but with different modifiers and without real explanation of how fairness of return is measured. Likewise there are references to concepts of efficiency, prudence and quality, but their particular significance in fixing of commission rates has never been spelled out and they have never been related to the actual compilation of data. Thus even to the limited extent that criteria have been articulated, it is difficult to see where or how they have been made specifically operative.

Ratemaking and reviewing in this area must be concrete and practical, but still must be reasoned and systematic. Between the felt need for an increase, however will founded, and the conclusion that a new rate level will be "reasonable," it should be possible to apply clearer concepts than are now in evidence, both as to the criteria of reasonableness and the data and computations relevant to those criteria. Moreover, the needed formulations and definitions should be the Com-

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[617] It is the study's understanding that mandatory filing is contemplated by the Exchange as member firms adjust their accounting systems.

mission's and should be publicly expressed. They would necessarily be subject to change, but at any given time the general public as well as the exchanges and their members are entitled to have a clear understanding of the factors which the Commission deems pertinent in applying the broad statutory standard. On the basis of its own formulations of critera, in turn, the Commission must, of course, be satisfied that report forms and other sources of necessary data are suitable for its needs.

(3) *Procedural aspects*

The recital in section 1 of the relevant portion of section 19(b) of the Exchange Act indicates the somewhat circuitous route necessary for exercise of the Commission's power over commission rates. The first step is that an exchange adopts rules fixing rates of commission. If changes are deemed necessary or appropriate, the Commission is to present an "appropriate request" in writing for specified changes. Compliance by the exchange presumably ends the matter, but if the exchange does not accede, the Commission is empowered, after appropriate notice and opportunity for hearing, "by rules of regulations or by order to alter or supplement the rules of such exchange (insofar as necessary or appropriate to effect such changes) in respect of * * * (9) the fixing of "reasonable" rates of commission * * *."

The same procedural apparatus is applicable, of course, to all types of exchange rules, ranging from items as relatively uncomplicated as "hours of trading" to something as delicate as "the fixing of reasonable rates of commission." It has been formally employed only once in the Commission's history, and then in an area other than commission rates.[618] The Commission's statutory function in respect of rates has apparently been discharged entirely under informal procedures, which were not significantly changed until 1958.

Thus, the Exchange notified the Commission of its first proposal to increase rates in June 1937, and it placed the rates in effect early the following year only after the Commission had indicated that it would not object to the change. In the same way the Commission received ample time—almost a year in fact—to study the proposals which led to the 1942 increase. It indicated its displeasure with one proposal and recommended a change in another, without need to invoke section 19(b). In 1947, the Exchange served notice on the Commission in May of its purpose to change rates. The Commission originally indicated a position of something less than approval, suggesting first a public conference and the promulgation of the rates on an "experimental basis," but it finally permitted the rates to become effective in November of that year without resort to its rule-changing power under section 19(b). Prior to the 1953 increase the Exchange first notified the Commission of its intention to examine rates in February 1952, and obtained the Commission's approval of its new Income and Expense Report before conducting the study on which the proposal for increase was based. It then awaited the Commission's conclusion not to object to the rates before placing them into effect months later, after a delay not attributable to the Commission.

The 1958 increase followed a totally different pattern. The Commission learned of the Exchange's intention to increase rates on March

[618] See pt. E of ch. VIII.

13 of that year, when it received a copy of the report recommending the new schedule. In accordance with an understanding apparently reached with the Commission several years previously as to the role of the Commission in regard to rule changes generally, the Exchange's board of governors voted on March 21 to submit the schedule to the membership for approval, without waiting for Commission reaction. The remaining steps preliminary to promulgation of the new schedule followed fast: the membership approved the rates on April 3, and they went into effect on May 1 despite the Commission's announcement of its intention to study their reasonableness. The Commission's study resulted in discussions with the Exchange in late 1958 and early 1959, culminating in a release of February 20, 1959, which has already been summarized earlier in this section.

The consequence of this chronology was that the Exchange's original schedule remained in effect almost 11 months before the revisions recommended by the Commission became operative. In this instance, the recommended revisions affected some relatively minor aspects of the complete schedule and entailed little problem. Modification or replacement of an entire schedule, however, after it had been in force for a period of time, could cause substantially more hardship and might well induce investors to complain of "overcharges" in the interim period of the nonreviewed commission rates.

In this connection, the Commission's release of February 20, 1959, advising of steps to be taken by the Exchange in conjunction with the rate increases of the previous year, announced—

> * * * establishment of revised procedures to provide the Commission and the public with greater notice in cases where the Exchange's board of governors is to consider proposed changes in commission rates.

Two such procedures have been established. One, formal, consists of an Exchange rule which provides as follows:

> When a proposed amendment to article XV of the constitution relating to rates of commissions or other charges, has been presented to the board, the text of such amendment shall be posted on the bulletin board, distributed to the membership, and publicly announced at least 30 days before action thereon is taken by the board of governors.[619]

The other, informal, appears in a letter of the Exchange to the Commission's staff:

> The Exchange will promptly advise the Commission's staff, in confidence, of any step taken by the board of governors or any committee of the Exchange looking toward any amendment to article XV of the constitution relating to rates of commission, or any proposed rule under section 9 of that article, relating to other charges, and will continue to keep the Commission's staff informed, in confidence, of developments in such matters. When such a committee is prepared to make any recommendations relating to such matters, and the board of governors has been advised thereof, the Exchange will inform the Commission staff, in confidence, of such recommendations at least 30 days (or such shorter period as may be agreeable to the Commission staff) before any such recommendations are formally submitted to the board of governors for action. In addition, in any case in which the Commission's staff advises the Exchange that any such proposal is complex or controversial, on request of the Commission's staff the board will postpone consideration of any such proposal for an additional 30-day period with a view to agreeing on a mutually acceptable time schedule.

This statement assures the Commission of notice of proposed action with respect to rates apparently from the beginning of such action,

[619] NYSE rule 26.

but stresses that it shall be "in confidence." In any case, it is not clear that the letter or the rule assures an adequate interval of time for the Commission to review the specific forms of a proposed change before it may become effective.

The need for a more adequate procedure to allow an orderly review of commission rates presumably can be met without statutory amendment, by the Exchange's exercise of its original powers to adopt rules governing commission rates or by the Commission's exercise of its secondary power to compel the adoption of such rules by appropriate order under section 19(b). Of prime importance would be a rule assuring the Commission of more ample notice before institution of a specific change of rates. In addition, consideration should be given to the feasibility of a rule providing for the refund or adjustment by Exchange members of any interim "excess" payments if a rate increase is to be put into effect before the Commission formally acquiesces.

Whether the time permitted for review of specific rate changes is measured in weeks or months, however, a further prerequisite for full discharge of the Commission's reviewing functions in the future would be that the Commission's staff include qualified persons with the responsibility of keeping abreast of relevant data and advising the Commission of changing conditions or needs. In light of changes that have occurred in the past and may be expected in the future in respect of the general economics of the business, the methods of doing business, and the costs of performing particular functions, income, cost-and-profit relationships may also be expected to undergo change from time to time. The whole subject is too complex for occasional, ad hoc attention at the time of a proposal to change a rate schedule. A program of continuous compilation and analysis of data is essential.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Stock exchange commission rates—the fees paid to a member of an exchange for effecting transactions on the exchange—are established by rules of the respective exchanges, subject to review by the Commission. Section 19(b) of the Exchange Act authorizes the Commission to review, and—if "necessary or appropriate for the protection of investors or to insure fair dealing in securities traded in upon such exchange or to insure fair administration of such exchange"—to alter or supplement, the rules of registered exchanges with respect to the "fixing of reasonable rates of commission * * *." In examining the subject of commission rates the Special Study has been concerned, first, with the structure of rates and the impact of that structure on the securities markets generally and, second, with the procedures and standards involved in the setting and review of rate levels. It has not considered or evaluated specific commission rates, past or present.

The NYSE nonmember rate schedule has been followed, with few variations, by the Amex and the regional exchanges. Since 1947 commission rates have been based on the money involved per round lot. The amount of the commission per round lot varies with the value of the stock, but the schedule omits other possible differentiations: all nonmembers, whether or not professionals in the securities business, pay the same public commission rate (the Amex and some of the regionals provide important exceptions here); the rate per round lot is the same regardless of the number of round lots involved in a transaction; and the rates include the cost of various services provided by members to customers, ancillary to the basic brokerage function.

Among the consequences of these characteristics have been the establishment of a variety of ad hoc practices designed to temper the rigidity of the schedule without violating the letter of the NYSE's rule prohibiting members from granting commission rebates to nonmembers. Some are aimed at special treatment of nonmember professionals. Most important are the reciprocal arrangements between NYSE members and nonmembers who are regional exchange members (i.e., sole members) which permit NYSE members to reciprocate for commission business given them by the nonmember by referring other commission business (often for stocks traded on both the NYSE and the regional exchange) on an agreed ratio, for transactions by the nonmember on the regional exchange. Of the 447 sole members of the 4 largest regional exchanges who reported to the study, 298 participated in such arrangements, 175 attributing a minimum of 20 percent of their income to this source. Nonmember professionals forwarding business to NYSE members may also receive substantial special services, extending beyond the usual services performed by Exchange members for their public customers.

The absence of a block or volume discount in the schedule has given rise to similar arrangements between NYSE members and some of their larger customers, generally institutions. Members also perform a wide variety of special services for such customers; these include special research projects, installation and maintenance of wires, and the development of sales and promotional services for mutual funds. In addition to these services, block and volume investors—chiefly mutual funds (see also ch. XI.C)—are permitted to direct reciprocal give-ups of commissions. This practice allows the mutual fund to instruct its broker to give up a portion of the commission to another broker in return for services which it has rendered to the fund or, more usually, its underwriter or adviser. The regional exchanges have been employed to channel such give-ups of commissions to their members and, in the cases of three of the regionals, to certain classes of nonmembers who are members of the NASD.

The various practices designed to ameliorate or avoid the impact of the Exchange's commission schedule have produced a variety of questionable consequences. They have greatly complicated the administration of the commission schedule, requiring subtle and shifting lines of distinction between prohibited rebates and permissible arrangements. They have involved not only the NYSE's regulation of the practices of its own members but also its relationship to other exchanges. They have, to some extent, clouded the cost data used to support changes in commission rates. Two of these practices, the reciprocal commission arrangements and the give-ups of commissions, have created delicate conflict-of-interest questions. Despite these consequences, the practices have not fully met the underlying needs, and their failure to do so has spurred a diversion of trading volume from the NYSE to other markets.[620]

Another structural characteristic of the NYSE's nonmember commission schedule is its coverage of services performed by brokers in addition to the execution and clearance of transactions. Such ancil-

[620] See ch. VIII, pts. D and E.

lary services are generally not charged separately, and their cost is included in the basic commission rate. The practice encourages competition among brokerage firms in the area of service, but it also aggravates the impact upon institutional investors of the absence of a volume or block discount since they often do not require ancilliary services provided by brokers to other public customers.

From time to time the NYSE has considered possible solutions to these major problems of rate structure but has rejected them. In 1953 a thorough overhaul of the rate structure proposed by a special Exchange committee was repudiated by the membership (after revision by the Exchange's board of governors). In 1959 the Commission announced that the Exchange had agreed to initiate study of a block or volume discount, but the latter study was not commenced until late 1962. It is essential that studies of the rate structure proceed with dispatch and that attention be given to the many facets of the problem affecting competitive markets as well as the Exchange, not from the limited view of the Exchange (or groups of its members) but of the greater public interest involved.

Review of the level of commission rates presents at least equally complex problems as those of rate structure. The unique character of the security commission business precludes any blanket adoption of standards employed in reviewing rates in other industries. Factors shaping that character include (1) the multiplicity of firms (even though the total is limited), (2) an erratic and largely uncontrollable volume factor, and (3) competition with other markets and other media of investment.

The various changes in commission rate level which have taken place since enactment of the Exchange Act have been explained on the basis of a relationship, variously stated, between commission rates on the one hand and income, costs, and profits on the other. Important questions are presented at every stage of the determination. Thus, the basic operating data for the individual firm are reported on an Income and Expense Report, which was revised in 1961 as a result of a cost study undertaken by the Exchange at the instance of the Commission 2 years earlier. The present form is a notable improvement over its predecessor but its ultimate usefulness in the review of rates will depend on its being supplied by all firms rather than on a voluntary basis and also on its adaptability in relation to criteria and standards that remain to be more clearly articulated.

While the "profit" of the member firm from its security commission business, as derived from the Income and Expense Report, has been considered relevant to the setting of "reasonable" rates, its significance has not been made clear: changes in the content of the term (for example, including or excluding interest earned on customers' debit balances in margin accounts) have given it different meaning at different times, and dollar amounts have been converted to percents of commission income without an indication of the significance of the result in relation to professed objectives of "fair return" or the statutory standard of reasonableness.

The multiplicity of firms complicates the determination of "reasonable" rates in relation to income, cost, and profit data. One type of question relates to whether data are to be combined in respect of all firms, "efficient" ones (however that term may be defined), or any other grouping. Another relates to the types and amounts of costs to be recognized, in a context of competition among firms and with other markets and in light of the public interest in promoting a high level of performance in the securities commission business. Further, characteristic fluctuations of volume and the relatively high proportion of fixed costs in the securities commission business add complexities to the determination of "reasonable" rates applicable to a multiplicity of firms.

Both the nature of the problem of arriving at "reasonable" rates and the manner in which the rates are initially set by exchange rule point to the importance of the Commission's role of oversight to protect the public interest in this area. Improvements appear to be called for in three respects. First, there is need for more complete data to be gathered on a continuous basis, relating not alone to the securities commission operation but to its place in the economics of the securities business generally. Unit cost and transaction data would be useful for a proper understanding and evaluation of the rate structure. The Income and Expense Report should generally provide the information necessary for application of such criteria of reasonableness as may be adopted.

The second major desideratum is the public articulation by the Commission of such criteria. This appears to be one of those "basic matters" which calls for the "need of a more carefully articulated enunciation of * * * views * * * in the interest of clarifying policy not only to outsiders but to the Commission itself." [621] The goal is not to strive for exactitude in satisfying a specific rate formula, but to adjust divergent interests in accordance with reasonable, objective standards. A clear articulation and public expression of such standards by the Commission must be considered a major objective.

Finally, the procedure for the review of commission rates requires strengthening. Under section 19(b) of the Exchange Act, which defines the relationship of the Commission and exchanges in this area, it is possible for the Commission to be confronted by a commission rate change, without previous notice, as an accomplished fact. This has been ameliorated by agreement after the 1958 increase, but the importance and complexity of the Commission's role require strengthening of procedural arrangements with the exchanges and of the Commission's internal arrangements for fulfilling its role.

The Special Study concludes and recommends:

1. The present nonmember commission schedule of the New York Stock Exchange does not take account of important distinctions such as (*a*) whether the nonmember is or is not a professional in the securities business, (*b*) the effect of volume of a particular customer's business (whether measured by size of single orders or volume of orders over periods of time) on the cost of serving that customer, and (*c*) a particular customer's use or nonuse of ancillary services covered by the commission rate. Each of these aspects is far too complex in its own right and too involved with other complex questions to be the subject of specific recommendations of the study—indeed they are probably not capable of simple answers after longer study. The broad conclusion can be

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[621] 3–B Sharfman, "The Interstate Commerce Commission," p. 764 (1931–37), quoted in Friendly, "The Federal Administrative Agencies," p. 142 (1962).

reached, however, that they involve important questions of public policy to which the Commission should address more positive and continuous attention than it has heretofore given.

2. Under the present rate structure of the New York Stock Exchange, members are required to charge the same minimum commissions to all nonmembers including nonmember broker-dealers, with the result that a nonmember broker-dealer has no incentive to bring business to the Exchange except by resorting to one of several complicated, and often artificial, devices that have been created to provide indirect compensation. The Amex and various regional exchanges, on the other hand, have forms of associate memberships or special commission rates for specified categories of nonmembers (including non-broker-dealers in some instances); and the availability of these measures on regional exchanges has been the basis of some forms of reciprocity and the source of some business on such exchanges. The advantages and disadvantages of associate memberships and/or special nonmember commission rates, from the viewpoint of the NYSE and its members and of the public interest, should be a subject of joint Commission-Exchange study, particularly with reference to problems of competition, depth of markets, and reciprocity.

3. The absence of any volume discount in the commission rate structure of the NYSE has had the effect, among others, of inducing mutual funds and their brokers to adopt various arrangements to channel a portion of commissions paid by them for portfolio transactions to other members and nonmember broker-dealers as extra compensation for selling mutual fund shares. The Commission announced in 1959, in connection with its consideration of other aspects of NYSE commission rates, that the Exchange had agreed to undertake a study of a volume discount, but it appears that such study was not begun until late in 1962. In view of the public importance of the subject and the complexity of the issues involved, the Commission itself should undertake a broad study with the aid of or in conjunction with the exchanges and other affected institutions and parties.

4. The present nonmember commission rate of the NYSE does not provide any reduction in commission for customers not desiring or using the ancillary services usually included under the commission schedule and thus gives added incentive to various forms of reciprocity. As part of its general and longer range studies in respect of commission rates, with the aid or in conjunction with the Exchange and other interested parties, the Commission should consider the feasibility and desirability of (1) a separate schedule of rates for the basic brokerage function and for ancillary services, or alternatively (2) a schedule of maximum rates, or minimum-maximum rates, covering all services.

5. In relation to the brokerage business—a service business—the term "reasonable rates" cannot have the same meaning as in utility rate regulation involving a property base, yet there have been no official expressions of its significance in the present context. While the determination of "reasonable" rates of commission is an extremely complex matter at best, objective standards for measuring reasonableness could and should be more clearly

enunciated by the Commission. Among other questions in need of clarification and definition of policy are: the extent to which cost and income experience of more efficient firms, as distinguished from "representative" firms, should be the basis of fixing "reasonable" rates; the treatment of commission splitting or "give-ups," when not compensating for services in connection with brokerage transactions on the exchange; the inclusion or exclusion of interest income on customers' debit balances; the concept of "fair return" and, in relation thereto, the appropriate treatment of invested capital and of partners' or stockholders' compensation.

6. The Income and Expense Report form of the NYSE in its present form or as revised from time to time should be required to be filed by all member firms doing a public commission business and, with appropriate modification, by other categories of member firms deriving income from member or nonmember commissions. Similar reporting should be instituted by the other principal exchanges. The Commission should regularly receive copies of such reports (with or without identification of firms) and through this means and otherwise should keep advised of the economics of the securities business insofar as relevant to the fixing of reasonable rates of commission. Since volume of trading has important bearing on profitability and therefore on reasonableness of commission rates, the Commission in conjunction with the exchanges should seek to develop improved standards and procedures to take account of significant changes in volume from time to time. Consideration should also be given to the feasibility of establishing unit costs for various components of the brokerage function and ancillary services, as a further guide in applying the "reasonable" standard on a continuing basis.

7. To place rate review by the Commission on a more orderly and efficient basis, existing procedures should be modified to assure that proposed changes in rates will be submitted to the Commission adequately in advance of their proposed effectiveness; and consideration should be given to the feasibility of providing that, where an increase becomes effective pending the Commission's review, refund or adjustment will be made in respect of any part of the increase not ultimately approved.

8. While the odd-lot differential is theoretically an adjustment of the price charged the customer's broker rather than a commission, in practical effect to the customer it is another element of the cost of effecting a stock exchange transaction. Customers' confirmations of odd-lot transactions should be required to show separately the odd-lot differential and the brokerage commission.

J. Automation—Its Needs and Possibilities

In various places in this chapter and elsewhere in the report, reference has been made to the needs and possibilities for the utilization of modern data processing techniques in various exchange procedures and mechanisms. In this part some additional factual matter is presented and some general observations are made with respect to the present usage of these techniques, and the need for integrated progress in the area.

In viewing accomplishments of the exchange markets in the field of automation, the overall impression is one of unevenness; on the one hand some highly advanced electronic equipment has been installed, while on the other, procedures are employed which have not progressed significantly since the telegraph and telephone came to the floor of the NYSE around the beginning of the century. Thus, the NYSE clearing corporation has introduced important automated techniques. Also, some member firms have taken advantage of computer technology to implement their programs for internal surveillance and supervision, and to integrate transmission of orders to the floor and reports of execution with the back office work necessary to close transactions. Finally, the Exchange has announced plans to automate certain aspects of its quotation and sales information system. Yet, as great as the progress has been, many opportunities for further progress remain, including areas still relatively untouched by technological progress.

1. THE INTERESTS IN AUTOMATION

The actual and potential uses of electronic data processing systems in connection with the exchange markets are of importance in many ways. Member firms and their customers are affected in that automated procedures may have a large impact on the efficiency and costs of transacting business, the quality of supervision, and the extent and reliability of available information. A clear example of the first point is discussed in part E of this chapter in connection with the odd-lot systems; the second is shown by examples in chapter III.B in which broker-dealers' automated surveillance of branch office activity is discussed; and the third is illustrated by the fact that during the hectic markets at the end of May 1962 it was impossible for many investors to obtain fresh and accurate information about either the market or the status of their own orders (see ch. XIII).

The exchanges themselves have an interest in this area not only to aid in their ordinary operations and to facilitate the convenience of their members and the public, but also to discharge effectively their responsibilities for surveillance and enforcement. This point is very clearly illustrated by the New York Stock Exchange's "stock watch" program. As described in chapter XII and elsewhere, this program depends in part on the computers utilized in the stock clearing operation. In a recent case the Exchange was able, through the use of its sophisticated equipment, swiftly to identify and remedy a situation involving an improper purchase of securities by an allied member of the Exchange.

Modern data processing techniques are of particular importance to the Commission in the conduct of its surveillance and enforcement programs and in the discharge of its other responsibilities under the Exchange Act. Only through quick and efficient mechanisms can the necessary amount of disaggregated market information be accumulated and evaluated. The discussion in chapter XIII of the 1962 market decline illustrates the difficulties faced by the Commission under present procedures for the accumulation of needed information in times of severe market stress. Moreover, the slow but highly important currents of change in market patterns that are described in chapter VIII call for more complete and continuous accumulation of data that can be efficiently processed only with computer equipment.

2. THE TRADING PROCESS

One of the most important sectors of the securities markets upon which the impact of modern technology should be assessed is that of trading on the floor of the stock exchanges, in particular the NYSE.[622] The Exchange floor is also the area where the problems involved are the most complex, not so much in the technical sense as from the point of view of the ramifications involved in altering the structure of a marketplace whose members and employees' livelihoods are intimately connected with present procedures.

In spite of its importance, the floor of the NYSE has been untouched by most of the technological developments of the 20th century. A critic of the NYSE's progress in technological innovation has said that the basic organization of the Exchange's floor has not changed since the "period in which the institution solidified—slightly before the telephone." [623] While the Special Study should not be understood as espousing the proposals made by this commentator, there is undoubtedly some merit in his analysis. Aside from recent developments in methods of transmitting orders to the floor, noted above, and various innovations and proposed innovations with respect to the reporting of transactions discussed in part E above, there has been no basic change in the methods of executing orders since the NYSE floor took its present form. Except for firms utilizing teletype devices, orders reach the Exchange by telephone and are written down on slips by clerks. From that point, orders are transmitted manually by brokers, or through tubes, to the trading post. Orders given to specialists are again transcribed by hand onto the specialists' books.[624] At present there is no internal means of assuring that quotations announced on the floor of the Exchange are the same as those disseminated to the public. Even after the Exchange automates its off-floor quotation service such assurance will not be provided.[625]

The mere fact that the Exchange floor has not changed substantially over the years is not of itself proof that the Exchange has been laggard in utilizing the resources of modern technology in the trading process. It is obvious that very fundamental issues, going beyond mere technology, are raised by the suggestion that orders be executed by intricately programed computers,[626] thereby removing all brokerage skill and judgment from the marketplace and possibly even eliminating the role of the specialist. But many intermediate possibilities between the present system and total automation of market facilities can be envisaged. Although in theory all orders on the floor receive personal attention, the floor broker frequently has no choice but to execute a customer's order in a mechanical fashion against the existing quote. The question arises whether it is really necessary that such orders be personally executed by the floor broker at the post rather than from

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[622] See pt. B of this chapter for a description of the present trading mechanics on the floor of the NYSE.

[623] William S. Morris, as quoted in "Electronic Finance?" in Forbes, May 1, 1963, p. 37.

[624] See the recommendation contained in ch. VI.D that techniques be devised to preserve the specialist's book, which is at present an ephemeral record.

[625] Since there seemingly is no technical problem in connecting post indicators to the automated system, the question arises as to whether there is any justification for permitting the possibility to exist of different quotations being given on the floor of the Exchange and to investors. Thus, the Exchange's proposal illustrates the Commission's interest in matters such as automation from a regulatory standpoint apart from achieving efficient market mechanisms.

[626] See "Electronic Finance?" Forbes, May 1, 1963, p. 36.

the office of a member firm enjoying instantaneous connection with the post by television or other means. Any such system would, of course, have to be limited to situations for which it was clearly appropriate. For other situations, a firm might choose to utilize the services of what would be a limited number of floor members.

This discussion is not a recommendation that any particular kind or degree of change be adopted or even seriously considered for adoption at this time—it may well be that other possibilities yet undeveloped would be superior. Yet modern technological capabilities are such that these matters are no longer in the realm of science fiction. What is pointed out here is the necessity for continuous awareness and exploration of the possibilities of automation—not merely on the part of the NYSE and the other exchanges [627] but also by the Commission itself. The entire question is of particular importance and immediacy in the case of the NYSE in view of its intention to move its quarters to a new building which will include a new trading floor and ancillary facilities.

3. ACCUMULATION OF MARKET DATA

a. Periodic reports

More obvious and immediate possibilities for the introduction of data processing techniques lie in the realm of accumulation of market data, where both needs and potentials seem substantial. One of the sources of market data of different kinds is a variety of reports submitted by members and member firms to the exchanges and by the exchanges to the Commission. At present there are about 20 such reports being filed on a daily, weekly, or other periodic basis with the NYSE.[628] They cover a host of matters and contain valuable data which could be utilized to construct a comprehensive picture of market developments. However, each of these reports was developed for a specific end use and is usually analyzed only for that single purpose; e.g., floor traders' reports are used for surveillance of floor trading activity, while reports on underwriting commitments are used primarily as a check on member capital positions. Because the design of these reports and the reporting cycles differ, it is difficult, and in some cases impossible, to integrate the information contain in them. For example, while one report shows short positions in individual stocks as of the 15th of each month, another provides information on daily aggregate short sales of all stocks combined.[629] Furthermore, the processing of many of these reports is done laboriously by hand.[630] There may be a considerable timelag between the filing and availability of the data even for the particular end use for which the report is designed. Thus, the monthly report of customers' debit and credit balances, as well as the weekly report on members' principal transactions, are available only after a timelag of 2 weeks.

It seems clear that the whole area of periodic reporting by members should be reviewed, first, for the adequacy of each report, and second, with a view of meshing the data contained on each report with other data so as to give a continuing, comprehensive market pic-

[627] As mentioned below, the NYSE established a department of operational planning and development in 1960, and the Amex is currently studying various aspects of automation.

[628] A tabulation of the forms received by the NYSE from members is provided in table VI-91.

[629] See pt. H of this chapter.

[630] See ch. XII for a discussion of the processing of floor trading data.

ture. Although such a goal could not have been achieved a few years ago because of the sheer mass of information, such data can now be processed expeditiously through the use of modern techniques. This is an area which is particularly appropriate for a cooperative effort by the various exchanges and the Commission to simplify the reporting burden on members while increasing the usefulness of the whole product to all concerned.

b. Daily market information

The foundation of any system for the accumulation of market data for regulatory or informational purposes is an accurate and reliable report on each individual transaction. This might seem to be the simplest information to accumulate, but in fact under present procedures it is extremely difficult to gather. This section does not purport to present a comprehensive assessment of either the problems or the remedies but merely points to certain areas of difficulty and suggests general approaches for further study and action.

Any attempt to study what is happening in the market as a whole or in specific stocks must start with prices, volumes, and an identification, at least by class of investor, of who is buying and selling particular stocks. In the course of the Special Study's investigation, a considerable amount of such data was collected. It has been the study's uniform experience that with present techniques, and even with the fullest cooperation of the exchanges and broker-dealer firms, accurate information is extremely difficult to obtain.

There are two major difficulties in securing accurate market information on a daily basis, aside from the mechanical problems presented by handling masses of data. First, there is no reliable and expeditious means of tracing an order back from the point of its execution to its source, nor of reconstructing the sequence of transactions for any period of time. Any market study or surveillance must consequently rely on varied secondary sources. This difficulty is connected with the second problem—that the data so recovered are not complete, a fact that may not become apparent until the information is used for purposes other than those originally intended.

At present there are only two major sources of market transaction data for individual stocks: the exchange tape and clearinghouse reports. The tape is prepared from the reporter's notation at the post of each transaction he observes or about which he is informed. Clearinghouse data originate from member reports of executions only on transactions which are cleared, and there is no requirement that all transactions go through the clearinghouse.

Tape data, generally known as "reported volume," are not comprehensive for various reasons, such as human error and limitations in reporting requirements.[631] Whatever the reasons for such omissions, it seems apparent that reported volume is not a wholly reliable source of market data.

For surveillance or market study purposes there are other problems in the use of reported volume. The reporter's notation does not re-

[631] Members of the NYSE are not required to report certain kinds of transactions in "stopped" stock. According to the NYSE, such transactions amount to about 5 percent of volume and constitute the major source of omissions. However, on a sample day examined by the Special Study, only 14 percent of the omissions from the tape were accounted for by stopped transactions. See pt. D of this chapter and tables VI-47 and VI-48.

flect the identity of the firms participating, the time of the transaction or whether the sales are long or short. To determine the names of participating firms clearinghouse data must be used; to determine the time of each transaction the Exchange resorts to the odd-lot firms' records of the tape time of each transaction.[632] However, the fact that these records show tape time makes it difficult to match transactions on the tape with floor trading or specialist reports, which use the actual time of the transaction. Integrating all the data merely to determine buying and selling firms and time of each transaction is a difficult process because of the disparate sources used.[633] The more active the market the more difficult the task of market reconstruction becomes; the task of assigning times from one source to transactions from a second source and names garnered from a third source makes the whole process uncertain. And, as already noted, even the successful conclusion of this process yields only a sequence of transactions without providing such elementary data as the amount of short selling; at this point the firms involved must be contacted for further information.

The NYSE's projected system of automation will not materially improve this situation. These plans will still rely on the reporter's notation of a transaction, although the form of the notation will be different. Little more information will be captured than at present and there is no reason to believe that there will be fewer omitted transactions.[634] The identification of member firms, short sales and floor members' transactions will still depend on methods presently used.

A reporting approach which captured information at the point of execution and from the members involved would permit the introduction of an integrated system of data processing. Under such a system, which is being increasingly used by business firms, an original document becomes the basis for accounting and planning operations. Development of such a program of integrated data processing would probably cut costs and add greatly to the reliability of the resulting reports. Through storing the record of each transaction in a computer, improvements could result not only in surveillance and other market studies, but also in the whole clearing process.

One impediment to development in the area of automation is an apparent reluctance on the part of the NYSE to impose different reporting duties on floor members than they now assume. This reluctance is understandable, but with other changes in mechanisms the balance of convenience and inconvenience may be rapidly shifting. Moreover, a program which has as its goals the maximum utilization of available information and its reporting by those who have the greatest incentive to provide accurate data (the Exchange members) may be worth the added inconvenience, if any. In view of the important potential advantages for all concerned, the subject of automation clearly warrants examination now and periodic reexamination in the future.

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[632] See pt. E of this chapter for a description of the records maintained by the odd-lot firms.

[633] Complicating the picture is the fact that an analysis of NYSE floor trader reports, which purport to include time, price, and amount, shows omissions of varying importance. The use of these reports for market reconstruction purposes adds to the uncertainty of the resulting picture. See ch. XII for a discussion of floor trading reports.

[634] See the recommendation in pt. D of this chapter that the NYSE require that all transactions be reported on the tape.

4. OTHER EXCHANGE USES OF AUTOMATION

Thus far, comment has been directed to the events which occur at the time of an order's execution and thereafter. However, it should be noted that the impact of automation is not restricted to the floor of the exchanges. It has been mentioned that some firms use electronic equipment to transmit an order to the floor and at the same time to commence back office work in connection with it, as well as for internal surveillance and supervision. In chapter VIII, it is noted that the Midwest Stock Exchange utilizes data processing techniques to provide comprehensive back office services for its members. By so doing, that Exchange has managed to cut costs for its members, both large and small, to a level which may be significantly below those of many large and efficient NYSE member firms. The NYSE Clearing Corp. is a further example of how cooperative effort can dramatically reduce costs and improve efficiency. However, its history may also serve as a lesson—it was only after several years and in the face of determined opposition to innovation by some members of the Exchange community that the venture was established.

The creation by the NYSE in 1960 of a department of operational planning and development to study ways of improving the Exchange's own operations was a basic step in the direction of keeping Exchange mechanics abreast of technological developments. Until recently, the Commission paid little attention to the subject of automation, either as involving the exchanges and other markets or as it might concern its own operations and responsibilities. It would also seem that the Commission, as the statutory representative of the public interest, must give prompt consideration to immediately available uses and to keeping itself informed of progress in this area generally, so that possibilities for automation that may exist now or in the future are not lost sight of.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Technological innovations have been utilized increasingly in the exchange markets. Some member firms have used automated techniques to transmit orders from the point of origin to the floor of the NYSE as well as in their own back office operations and in supervision. The clearinghouse of the NYSE uses electronic equipment to great advantage and the Exchange's unique "stock watch" procedures rely on these devices for surveillance purposes. The Midwest Stock Exchange has pioneered in the development of centralized bookkeeping for its members.

However, despite the NYSE's interest in automation, as signified by the establishment of its department of operational planning and development in 1960, progress with respect to exchanges' trading mechanisms has not been impressive. The possibilities of modern technology may go beyond mechanical arrangements and involve such functional matters as the execution of some orders from off the floor. This does not mean that possible changes of this kind are necessarily desirable but it suggests that they ought to be objectively explored and evaluated. The public, through the Commission, has an interest in such exploration.

Other possibilities for the fruitful use of automated techniques may lie in the accumulation of reliable, comprehensive and current market data. At present the Exchange and member firms file many periodic reports on a variety of subjects, each of which is designed for a specific purpose. The processing of these reports does not make use in any susbtantial degree of modern data processing techniques. Also, since the reports cover different periods and are differently designed, the information they contain cannot be integrated to present a comprehensive picture of market trends or current transactions.

As a particular problem, improvement is needed in the reliability and completeness of volume data. Various studies have shown that such data are unreliable and incomplete under the present reporting systems. Furthermore, much information is lost at the time orders are executed which would be valuable for market surveillance and other purposes. The automated reporting procedures recently announced by the NYSE will not result in more accurate reporting or the preservation of more data than under the present system.

The Special Study concludes and recommends:

1. Automation, in the form of electronic communicating and data processing devices, seems certain to have an increasingly important impact on exchanges as trading markets and as self-regulatory agencies in various ways. For example, in connection with the handling of odd lots, reference is made to the discussion and recommendations of part E of this chapter; and in connection with surveillance of specialists' activities, reference is made to the discussion and recommendations of part D of this chapter. The potential impact of automation in these and other respects is affected with a public interest and the Commission has a present and continuing responsibility to be informed of developments and potential developments in this area.

2. The NYSE should promptly undertake to revise its floor reporting procedures so that volume data will be complete and accurate. In this connection the Exchange's recently announced automation procedures should be restudied with the view to obtaining and preserving more market data at the time orders are executed than is presently the case.

3. The Commission and each of the major exchanges should jointly undertake studies of the periodic reports filed by member firms with the respective exchanges and by the latter with the Commission, with a view to simplifying and coordinating the reports and maximizing their usefulness. Also, they should jointly consider possibilities for developing and coordinating their automation programs in such a manner as to fulfill the needs of each with maximum effectiveness and minimum burdens, duplication, and expense.

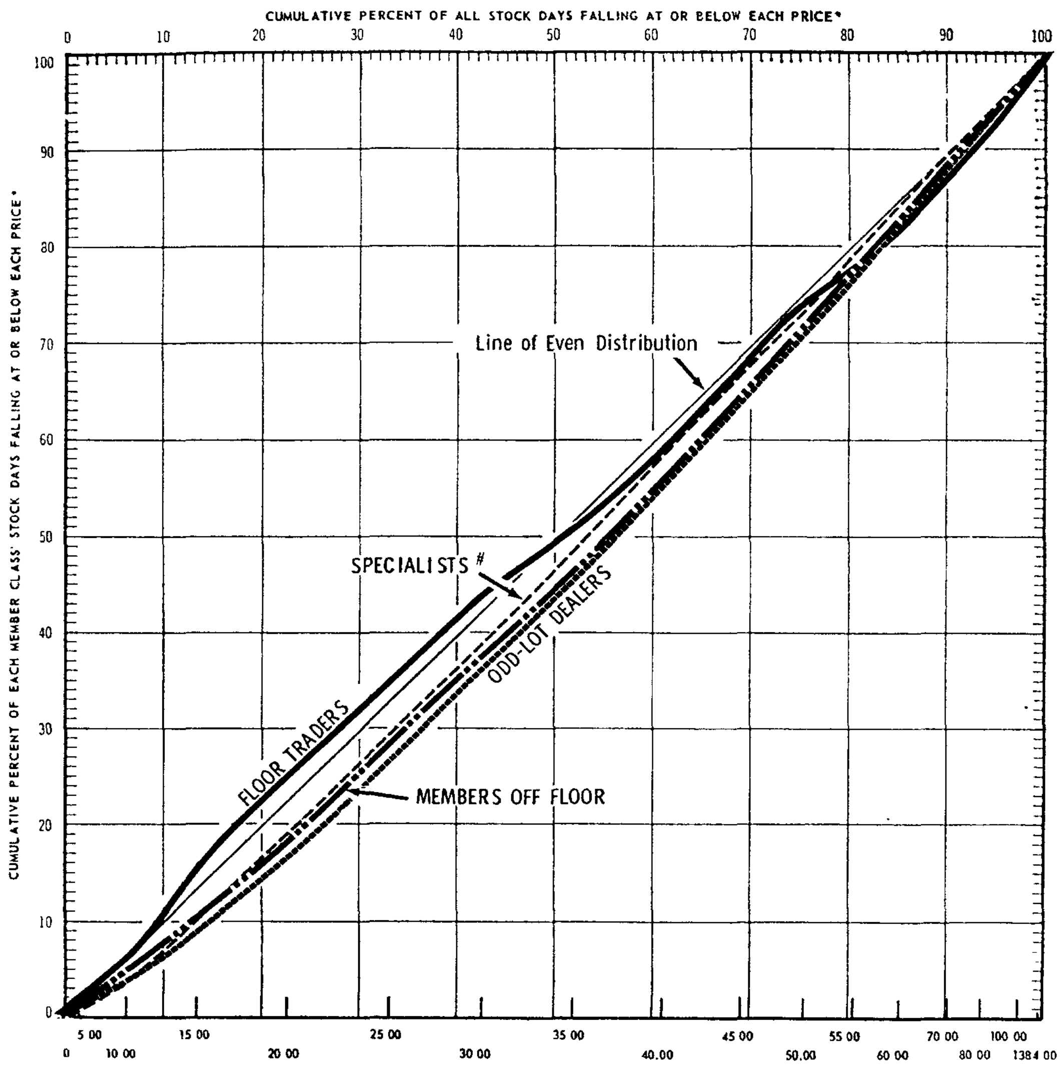
Chart VI-1

NEW YORK STOCK EXCHANGE

MEMBER TRADING BY PRICE:

DISTRIBUTION BY PRICE OF STOCK DAYS IN WHICH MEMBERS PARTICIPATED
COMPARED WITH PRICE DISTRIBUTION OF ALL STOCK DAYS

During the Weeks Ended January 27, March 24, and June 16, 1961



NOTE The price used is the closing price of each stock day.

* Stock days are based on common stocks only. During the three weeks there was a total of 16,174 stock days. One or more members participated in 14,970 of this total. Member classes participated in the following number:

Specialists	12 825
Odd-Lot Dealers	10,175
Floor Traders	2 274
Members Off Floor	6 728

\# Specialist data excludes 644 stock days of competing specialists. This exclusion does not materially affect the specialist distribution curve.

DS. 4434

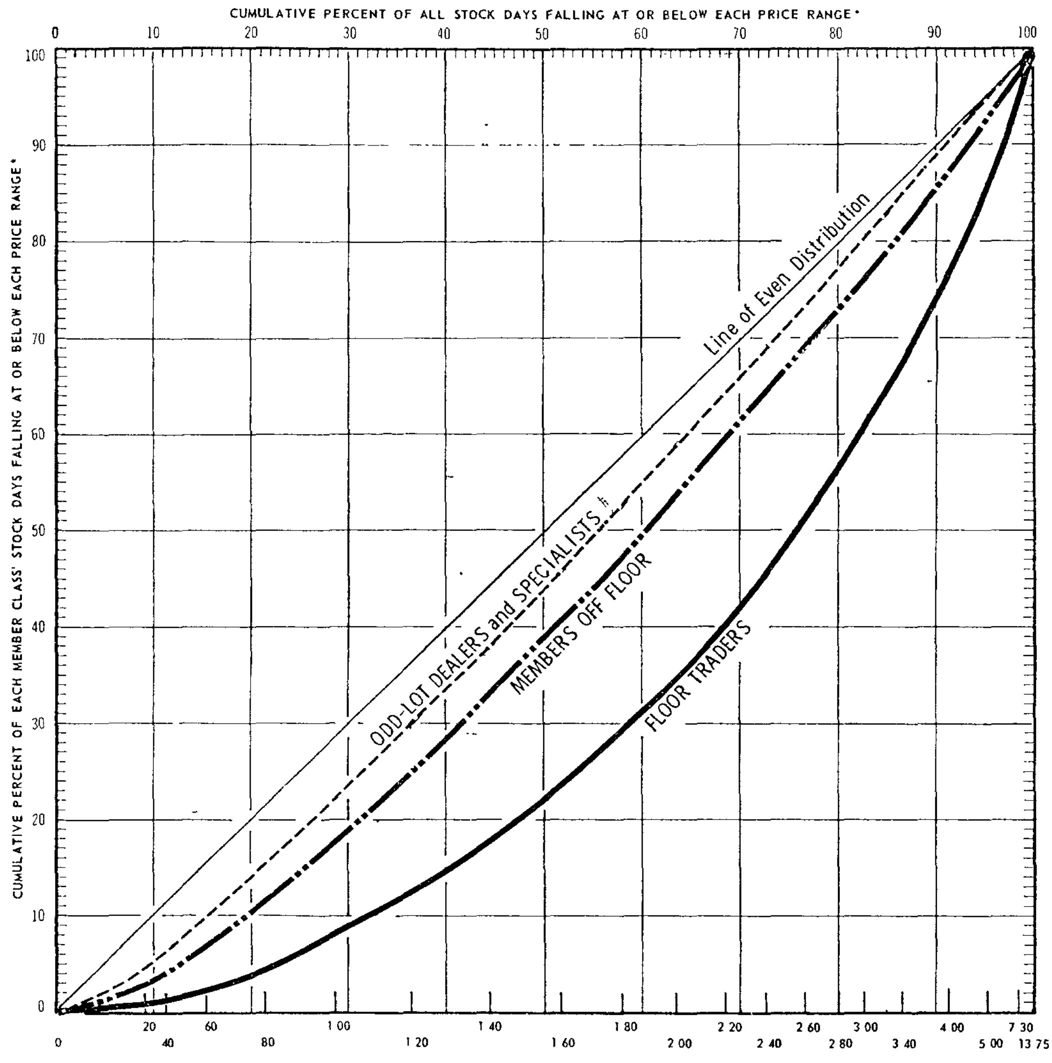
Chart VI-2

NEW YORK STOCK EXCHANGE

MEMBER TRADING BY PRICE RANGE:

DISTRIBUTION BY PRICE RANGE OF STOCK DAYS IN WHICH MEMBERS PARTICIPATED COMPARED WITH PRICE RANGE DISTRIBUTION OF ALL STOCK DAYS

During the Weeks Ended January 27, March 24, and June 16, 1961



NOTE: Price range is expressed as a percent of the closing price on each stock day

* Stock days are based on common stocks only During the three weeks there was a total of 16,174 stock days One or more members participated in 14,970 of this total Member classes participated in the following number:

Specialists	12,825
Odd-Lot Dealers	10,175
Floor Traders	2,274
Members Off Floor	6,728

\# On this chart Odd-Lot Dealers and Specialists have almost identical distribution curves, and therefore only one line is used for both Specialist data excludes 644 stock days of competing specialists This exclusion does not materially affect the specialist distribution curve.

DS-4465

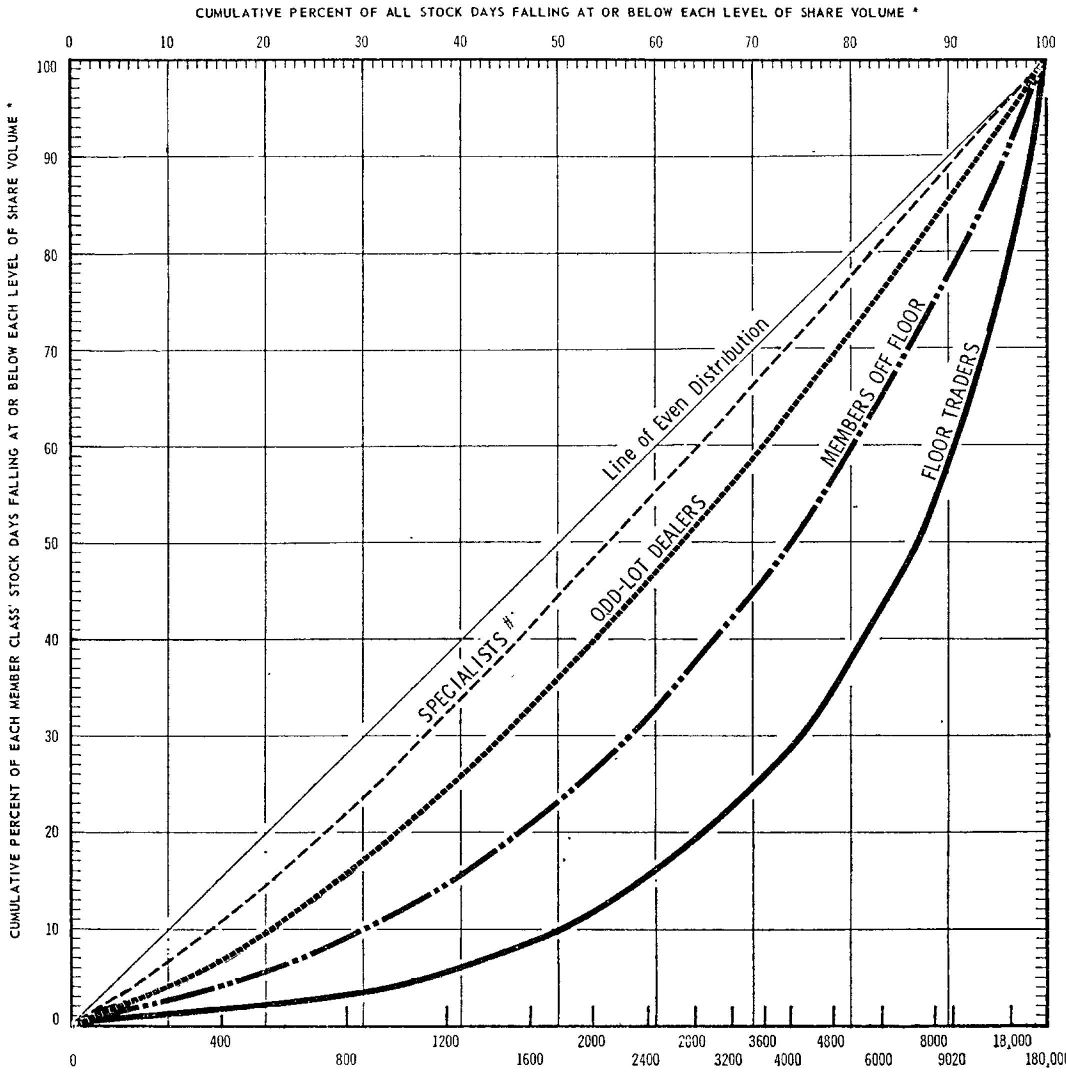
Chart VI-3

NEW YORK STOCK EXCHANGE

MEMBER TRADING BY SHARE VOLUME:

DISTRIBUTION BY SHARE VOLUME OF STOCK DAYS IN WHICH MEMBERS PARTICIPATED
COMPARED WITH SHARE VOLUME DISTRIBUTION OF ALL STOCK DAYS

During the Weeks Ended January 27, March 24, and June 16, 1961



* Stock days are based on common stocks only. During the three weeks there was a total of 16,174 stock days. One or more members participated in 14,970 of this total. Member classes participated in the following number:

Specialists	12,825
Odd-Lot Dealers	10,175
Floor Traders	2,274
Members Off Floor	6,728

\# Specialist data excludes 644 stock days of competing specialists. This exclusion does not materially affect the specialist distribution curve.

DS-4466

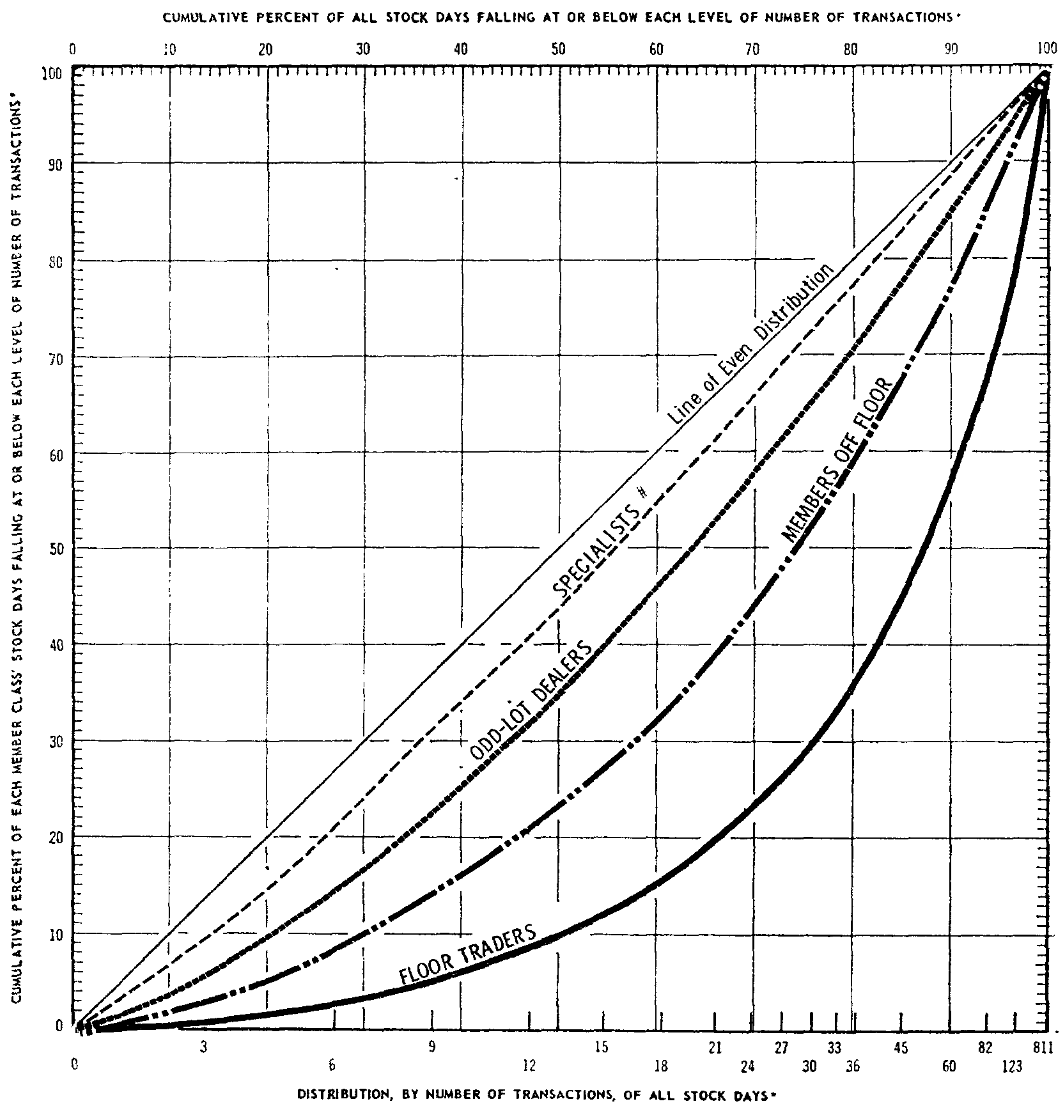
Chart VI-4

NEW YORK STOCK EXCHANGE

MEMBER TRADING BY NUMBER OF TRANSACTIONS:

DISTRIBUTION BY NUMBER OF TRANSACTIONS OF STOCK DAYS IN WHICH MEMBERS PARTICIPATED COMPARED WITH DISTRIBUTION BY NUMBER OF TRANSACTIONS OF ALL STOCK DAYS

During the Weeks Ended January 27, March 24, and June 16, 1961



* Stock days are based on common stocks only. During the three weeks there was a total of 16,174 stock days. One or more members participated in 14,970 of this total. Member classes participated in the following number:

Specialists	12,825
Odd-Lot Dealers	10,175
Floor Traders	2,274
Members Off Floor	6,728

\# Specialist data excludes 644 stock days of competing specialists. This exclusion does not materially affect the specialist distribution curve.

DS-4467

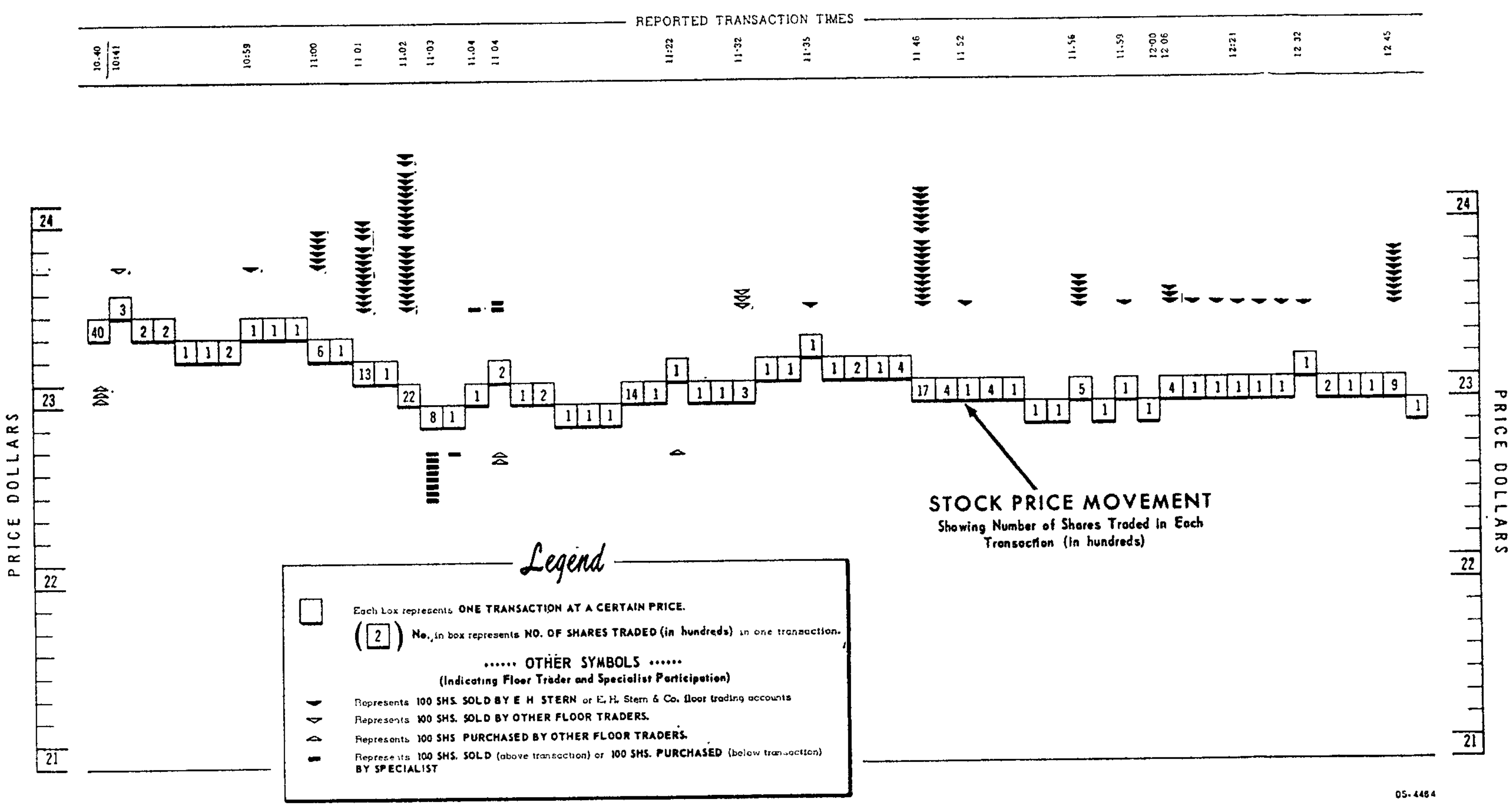
Chart VI-5

New York Stock Exchange

TRADING IN SPERRY RAND CORPORATION, January 25, 1961

Part I

(PART II continued on next page)



Part II

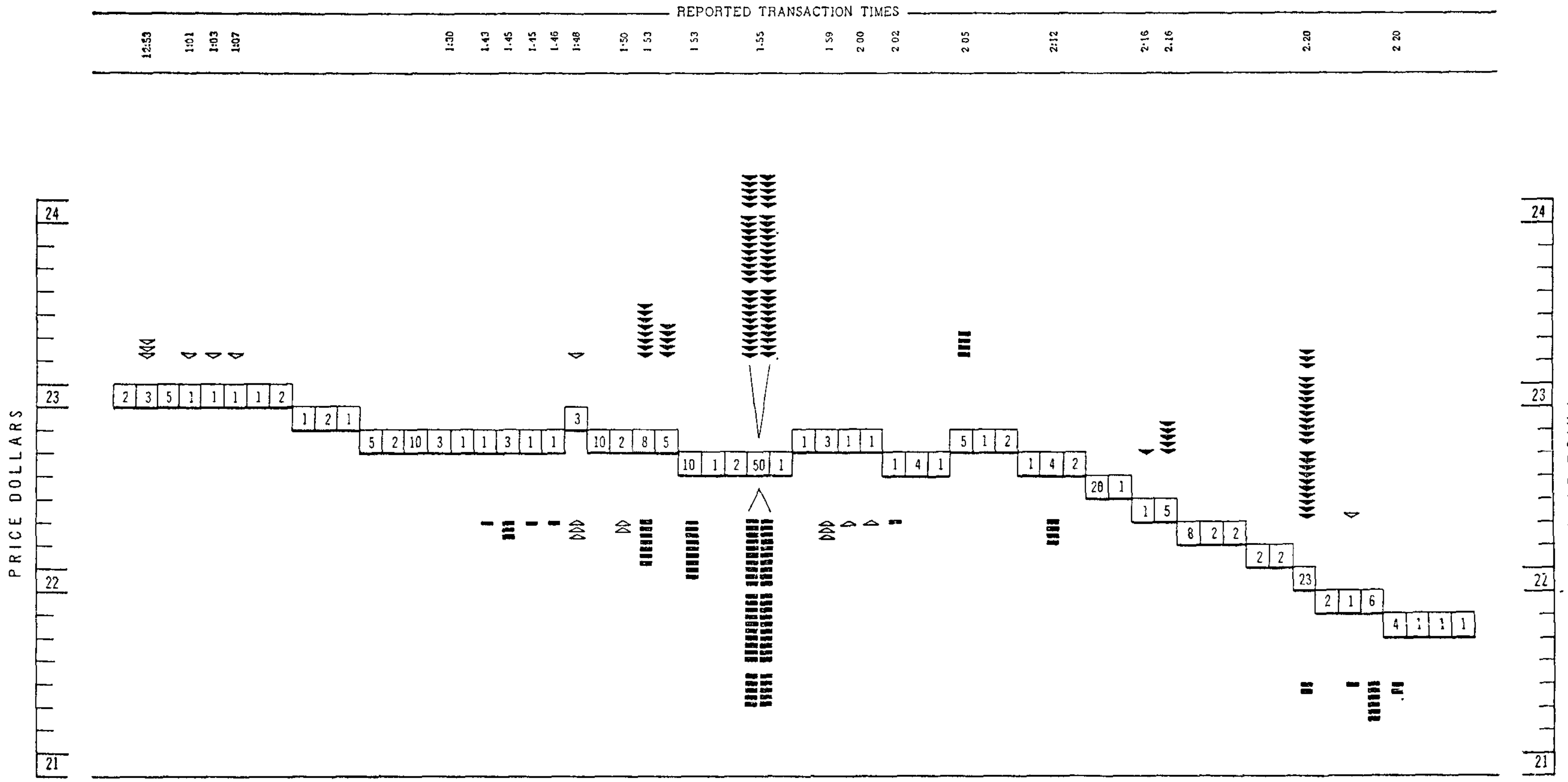
(PART III continued on next page)

Chart VI - 5

New York Stock Exchange

TRADING IN SPERRY RAND CORPORATION, January 25, 1961

(Continued from preceding page)



DS-4484 A

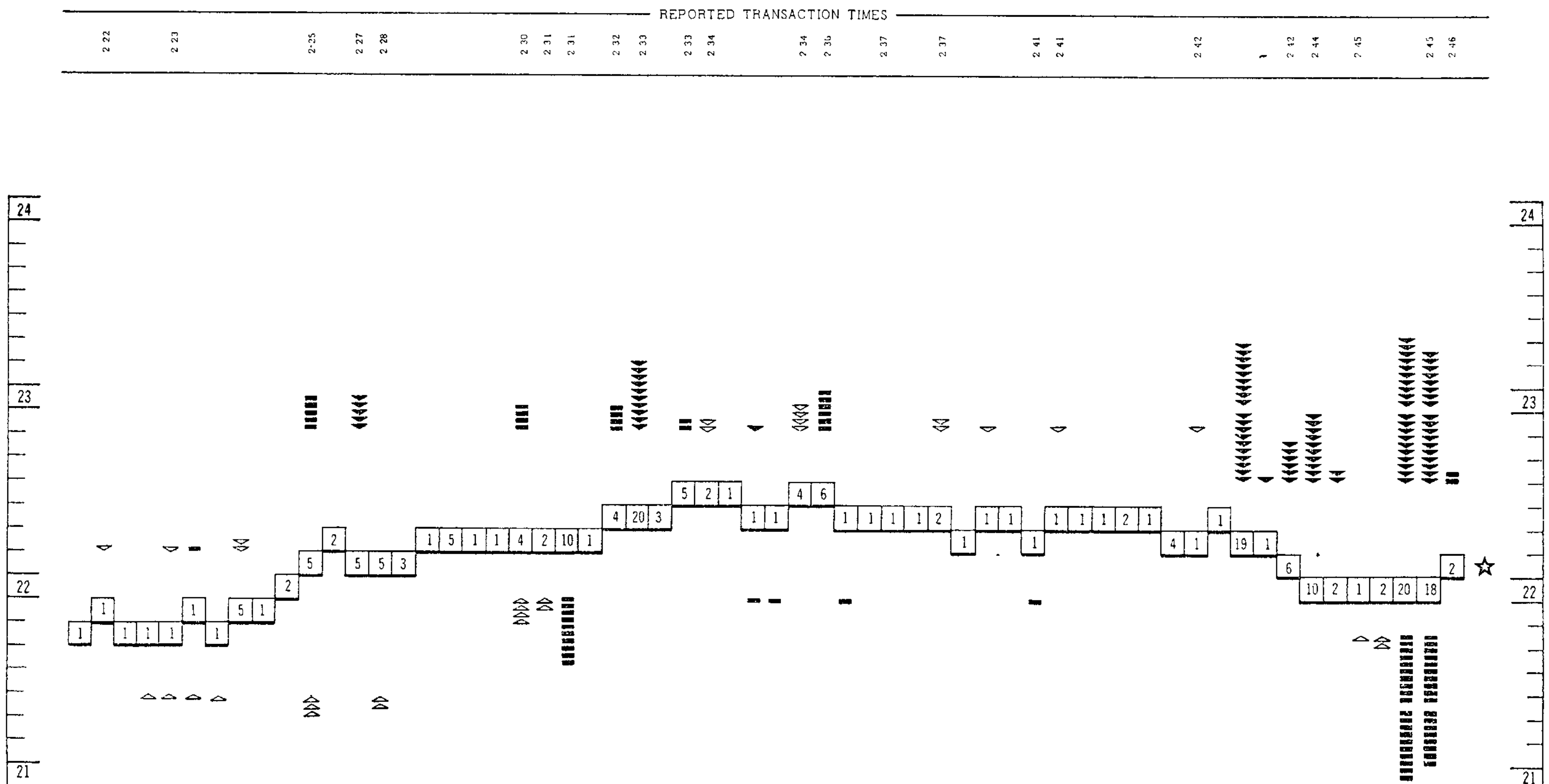
Part III

Chart VI-5

New York Stock Exchange

TRADING IN SPERRY RAND CORPORATION, January 25, 1961

(Continued from preceding page)



☆ FROM 2 46 P M TO THE CLOSE, volume was 30,600 shares on a total of 135 transactions During this period Floor Traders purchased 800 shares and sold 800 and the price fell ½ point from 22 1/8 to 21 5/8.

	Open	High	Low	Close
Price during period	22 1/8	22 1/8	21 5/8	21 5/8

DS 4484a

TABLE VI-1.—*New York Stock Exchange: Members' and nonmembers' round-lot purchases and sales (1937–61)*

[Shares in thousands]

Year	Total round-lot purchases and sales (shares)	Specialists' purchases and sales		Odd-lot dealers' round-lot purchases and sales		Floor traders' purchases and sales		Members' off floor purchases and sales		Total members' purchases and sales		Nonmembers' purchases and sales	
		Shares	Percent of total purchases and sales	Shares	Percent of total purchases and sales	Shares	Percent of total purchases and sales	Shares	Percent of total purchases and sales	Shares	Percent of total purchases and sales	Shares	Percent of total purchases and sales
1937	897, 246	83, 916	9. 4	29, 172	3. 2	60, 966	6. 8	39, 983	4. 5	214, 037	23. 9	683, 209	76. 1
1938	652, 534	64, 223	9. 8	19, 710	3. 0	44, 127	6. 8	23, 512	3. 6	151, 572	23. 2	500, 962	76. 8
1939	572, 272	61, 946	10. 8	15, 483	2. 7	35, 457	6. 2	19, 419	3. 4	132, 305	23. 1	439, 967	76. 9
1940	450, 314	44, 263	9. 8	12, 830	2. 8	29, 936	6. 6	14, 436	3. 2	101, 465	22. 4	348, 849	77. 6
1941	367, 070	30, 225	8. 2	11, 908	3. 2	16, 969	4. 6	11, 142	3. 1	70, 244	19. 1	296, 826	80. 9
1942	267, 762	20, 753	7. 8	9, 196	3. 4	11, 280	4. 2	7, 948	3. 0	49, 177	18. 4	218, 585	81. 6
1943	610, 052	50, 188	8. 2	15, 069	2. 5	30, 172	4. 9	18, 952	3. 1	114, 381	18. 7	495, 671	81. 3
1944	570, 838	46, 280	8. 1	16, 308	2. 9	30, 745	5. 4	16, 605	2. 9	109, 938	19. 3	460, 900	80. 7
1945	835, 318	68, 773	8. 2	22, 544	2. 7	25, 845	3. 1	25, 775	3. 1	142, 937	17. 1	692, 381	82. 9
1946	803, 718	83, 879	10. 4	28, 632	3. 6	14, 927	1. 8	31, 238	3. 9	158, 676	19. 7	645, 042	80. 3
1947	541, 154	57, 304	10. 6	21, 671	4. 0	14, 561	2. 7	21, 464	4. 0	115, 000	21. 3	426, 154	78. 7
1948	647, 724	63, 692	9. 8	22, 524	3. 5	16, 539	2. 6	26, 647	4. 1	129, 402	20. 0	518, 322	80. 0
1949	596, 472	48, 946	8. 2	20, 789	3. 5	15, 321	2. 6	36, 225	6. 1	121, 281	20. 4	475, 191	79. 6
1950	1, 130, 130	105, 675	9. 3	31, 755	2. 8	35, 768	3. 2	49, 504	4. 4	222, 702	19. 7	907, 428	80. 3
1951	959, 908	98, 050	10. 2	30, 668	3. 2	25, 896	2. 7	42, 614	4. 4	197, 228	20. 5	762, 680	79. 5
1952	724, 736	71, 767	9. 9	25, 986	3. 6	17, 473	2. 4	31, 989	4. 4	147, 215	20. 3	577, 521	79. 7
1953	748, 692	75, 782	10. 1	24, 938	3. 3	20, 071	2. 7	31, 185	4. 2	151, 976	20. 3	596, 716	79. 7
1954	1, 199, 764	132, 249	11. 0	33, 517	2. 8	38, 712	3. 2	49, 414	4. 2	253, 892	21. 2	945, 872	78. 8
1955	1, 375, 940	169, 269	12. 3	39, 247	2. 8	35, 674	2. 6	68, 573	5. 0	312, 763	22. 7	1, 063, 177	77. 3
1956	1, 170, 690	151, 093	12. 9	39, 781	3. 4	31, 245	2. 7	62, 462	5. 3	284, 581	24. 3	886, 109	75. 7
1957	1, 190, 620	152, 323	12. 8	41, 208	3. 5	32, 579	2. 7	58, 001	4. 9	284, 111	23. 9	906, 509	76. 1
1958	1, 577, 880	200, 840	12. 7	44, 929	2. 8	49, 899	3. 2	77, 568	4. 9	373, 236	23. 6	1, 204, 644	76. 4
1959	1, 716, 402	252, 425	14. 7	55, 812	3. 2	45, 697	2. 7	86, 817	5. 1	440, 751	25. 7	1, 275, 651	74. 3
1960	1, 586, 670	236, 632	14. 9	53, 022	3. 3	38, 880	2. 4	77, 901	4. 9	406, 435	25. 5	1, 180, 235	74. 5
1961	2, 128, 930	312, 190	14. 7	64, 826	3. 0	44, 686	2. 1	102, 825	4. 8	524, 527	24. 6	1, 604, 403	75. 4

Source: NYSE Fact Book (1962), p. 45.

Table VI-2

New York Stock Exchange
DISTRIBUTION OF MEMBER STOCK DAYS BY PERCENT OF TOTAL STOCK DAY VOLUME

During the Weeks Ended January 27, March 24 and June 16, 1961

(1) Member Purchases and Sales as a Percent of Total Stock Day Volume 1/	(2) Cumulative Percent of Member Stock Days Which Fell At or Below Each Participation Rate Level in Column (1)				
	Single Specialist	Floor Traders	Odd-Lot Dealers	Members Off Floor	All Members
1.50 or less		7.56		3.39	
2.25 or less		14.73		7.92	
3.00 or less		22.38	11.23	13.21	
4.50 or less		34.34		23.20	
5.00 or less	2.67		26.60		.87
6.00 or less		45.25	33.11	33.13	
6.75 or less		49.47			
7.50 or less		53.43		40.43	1.98
9.00 or less		60.25	50.64	46.98	
9.75 or less				50.03	
12.00 or less		69.44	64.63	57.73	
15.00 or less	14.82	78.58	73.99	65.35	6.75
20.00 or less	23.29	87.25	84.76	75.82	11.98
25.00 or less	31.60	92.13			17.37
30.00 or less	38.83	94.55	92.08	85.64	22.09
35.00 or less	M 2/ 47.52				
40.00 or less	55.81		96.15	91.50	35.54
50.00 or less	71.36	98.68	98.14	94.84	51.01
60.00 or less	80.33	99.30	98.28	96.15	62.99
70.00 or less	87.64		98.65	97.53	74.15
80.00 or less	92.85		98.70	98.23	83.23
90.00 or less	94.41		98.72	98.78	88.82
100.00 or less	100.00		100.00	99.84	97.02
103.00 or less		100.00			
110.00 or less				99.90	97.66
150.00 or less					99.56
200.00 or less				100.00	100.00
Total Stock Days	12,852	2,274	10,175	6,728	14,970

Note: The following readings from this table may serve to clarify its arrangement: (1) floor trader purchases and sales were equal to or less than 1.50 percent of total stock day volume on 7.56 percent of all stock days on which they traded over the 3 weeks (i.e., 7.56 percent of 2,274 stock days); (2) specialist purchases and sales were equal to or less than 70.00 percent of total stock day volume on 87.64 percent of all stock days on which they traded over the 3 weeks (i.e., 87.64 percent of 12,852 stock days); (3) specialist purchases and sales were equal to between 80 and 90 percent of total stock day volume on 1.56 percent (94.41 percent minus 92.85 percent) of all stock days on which they traded over the 3 weeks.

1/ The percent figures in this column are rounded slightly in a number of cases. Also, the percent figures reach 200 percent because member purchases and sales are expressed as a percent of total volume (i.e., total sales only). When members account for all purchases and all sales on a given stock day, therefore, their participation rate is 200 percent.

2/ Line "M" indicates the approximate location of the median stock day of each member class.

TABLE VI–3.—*New York Stock Exchange: Number of specialist units, number of stocks with competing specialist units, and number of competing specialist units (1957–63)*

Year [1]	Number of specialist units	Number of stocks with competing specialist units	Number of competing specialist units
1957	136	228	60
1958	132	192	53
1959 [2]	131	149	47
1960 [2]	117	137	31
1961	115	72	23
1962	113	52	17
1963	109	37	13

[1] As of the 1st trading day of each year.
[2] In succeeding tables, the number of specialist units shown for this year is 110, which was the total of specialist units as of the time of the Special Study's questionnaire EX–1 in 1962; the responses from these 110 units included data for this year.

NOTE.—During 1933 there were 230 specialist units of which 105 were unaffiliated specialists. In addition 466 stocks had competing specialists. The Twentieth Century Fund, "The Security Markets" (1935), p. 404. No data are available for the years 1934–56.

TABLE VI–4.—*New York Stock Exchange: Percentage distribution of total reported round-lot volume (1928 and 1961)*

Stocks in 20 groups ranked in order of total reported round-lot volume	1928			1961		
	Total reported round-lot volume	Percent of total reported round-lot volume	Cumulative percent of total reported round-lot volume	Total reported round-lot volume	Percent of total reported round-lot volume	Cumulative percent of total reported round-lot volume
	Thousand shares			*Thousand shares*		
1	435, 784	48. 41	48. 41	325, 514	33. 19	33. 19
2	156, 346	17. 36	65. 77	148, 303	15. 12	48. 31
3	92, 865	10. 32	76. 09	100, 136	10. 21	58. 52
4	64, 163	7. 13	83. 22	78, 181	7. 97	66. 49
5	44, 528	4. 95	88. 17	63. 453	6. 47	72. 96
6	32, 970	3. 66	91. 83	53, 279	5. 43	78. 39
7	23, 794	2. 64	94. 47	43, 990	4. 49	82. 88
8	17, 111	1. 90	96. 37	36, 479	3. 72	86. 60
9	11, 879	1. 32	97. 69	30, 869	3. 15	89. 75
10	7, 474	. 83	98. 52	25, 325	2. 58	92. 33
11	4, 660	. 52	99. 04	20, 941	2. 14	94. 47
12	3, 114	. 34	99. 38	16, 898	1. 72	96. 19
13	2, 147	. 24	99. 62	13, 438	1. 37	97. 56
14	1, 442	. 16	99. 78	9, 993	1. 02	98. 58
15	897	. 10	99. 88	6, 789	. 69	99. 27
16	523	. 06	99. 94	3, 895	. 40	99. 67
17	306	. 03	99. 97	1, 627	. 17	99. 84
18	172	. 02	99. 99	882	. 09	99. 93
19	74	. 01	100. 00	464	. 05	99. 98
20	13	(1)	100. 00	199	. 02	100. 00
Total	900, 262	100. 00	100. 00	980, 655	100. 00	100. 00

[1] Less than 0.005.

NOTE.—The total reported round-lot volumes above are understated by 3.4 percent in 1928 and 4.1 percent in 1961 due to the omission in the year end reported round-lot volumes of companies that merged into other companies, were acquired by other companies, or were delisted.

Source: New York Times, Jan. 2, 1929, pp. 41–43, and Jan. 8, 1962, pp. 42, 44, and 49.

TABLE VI–5.—*New York Stock Exchange: Distribution of specialist units according to the number of specialists in each unit (Mar. 26, 1962)*

Number of specialists:	Number of specialist units	Number of specialists—Con.	Number of specialist units
1	[1] 14	7	4
2	30	8	1
3	29	9	3
4	14		
5	10	Total	110
6	5		

[1] This figure does not include individual specialists who are affiliated with others in joint accounts, since such joint accounts are considered a unit.

TABLE VI–6.—*New York Stock Exchange: Percentage distribution of the number of specialists per specialist unit (Mar. 26, 1962)*

Specialist units in 10 groups, ranked in order of the number of specialists in each unit	Number of specialists	Percent of total
1st 10 percent	81	22.5
2d 10 percent	58	16.1
3d 10 percent	45	12.5
4th 10 percent	37	10.3
5th 10 percent	33	9.2
6th 10 percent	33	9.2
7th 10 percent	22	6.1
8th 10 percent	22	6.1
9th 10 percent	18	5.0
10th 10 percent	11	3.0
Total (110 specialist units)	360	100.0

TABLE VI–7.—*New York Stock Exchange: Distribution of specialist units according to the number of common stocks assigned to each unit (Dec. 31, 1961)*

Number of common stocks assigned to each specialist unit:	Number of specialist units [1]
1 to 5	13
6 to 10	34
11 to 15	41
16 to 20	15
21 to 25	3
26 to 30	1
31 to 35	0
36 to 40	2
Total	109

[1] Does not include the Post 30 specialist unit.

TABLE VI–8.—*New York Stock Exchange: Percentage distribution of common stocks assigned, by specialist unit (Dec. 31, 1961)*

Specialist units in 10 groups, [1] ranked in order of number of assigned common stocks	Assigned common stocks	Percent of total common stocks
1st 10 percent	269	21.2
2d 10 percent	183	14.4
3d 10 percent	159	12.5
4th 10 percent	143	11.2
5th 10 percent	131	10.3
6th 10 percent	116	9.1
7th 10 percent	99	7.8
8th 10 percent	79	6.2
9th 10 percent	62	4.9
10th 10 percent	31	2.4
Total	[2] 1,272	100.0

[1] Does not include the Post 30 specialist unit.
[2] Includes duplicate counting of 122 common stocks assigned to competing specialist units or to specialist units with combined books.

TABLE VI–9.—*New York Stock Exchange: Number of specialists, number of issues, number of issues per specialist, total round-lot volume, and total round-lot volume per specialist (1937–61)*

Year	Number of specialists	Number of issues	Number of issues per specialist	Total round-lot volume	Total round-lot volume per specialist
				Thousand shares	*Thousand shares*
1937	360	1,259	3.5	448,623	1,246
1938	370	1,237	3.3	326,267	882
1939	382	1,233	3.2	286,136	749
1940	320	1,230	3.8	225,157	704
1941	[1] 316	1,232	3.9	183,535	581
1942	[1] 316	1,238	3.9	133,881	424
1943	[1] 316	1,237	3.9	305,026	965
1944	[1] 316	1,259	4.0	285,419	903
1945	312	1,269	4.1	417,659	1,339
1946	314	1,334	4.2	401,859	1,280
1947	321	1,379	4.3	270,577	843
1948	327	1,419	4.3	323,862	990
1949	326	1,457	4.5	298,236	915
1950	335	1,472	4.4	565,065	1,687
1951	355	1,495	4.2	479,954	1,352
1952	356	1,522	4.3	362,368	1,018
1953	381	1,530	4.0	374,346	982
1954	369	1,532	4.2	599,882	1,626
1955	348	1,508	4.3	687,970	1,977
1956	354	1,502	4.2	585,345	1,654
1957	348	1,522	4.4	595,310	1,711
1958	353	1,507	4.3	788,940	2,235
1959	358	1,507	4.2	858,201	2,397
1960	354	1,528	4.3	793,335	2,241
1961	351	1,541	4.4	1,064,465	3,033

[1] 1941–44 is not available. The above figures for those years is an average of 1940–45.

Source: The number of issues and the total round-lot volume are from the NYSE Fact Book (1962), pp. 38 and 45.

TABLE VI–10.—*New York Stock Exchange: Distribution of specialist units according to total reported round-lot volume in assigned stocks (1961)*

Total round-lot volume (millions of shares):	*Number of specialist units* [1]
Under 1	1
1 to 5	34
6 to 10	33
11 to 15	25
16 to 20	7
21 to 25	4
26 to 30	1
31 to 35	2
36 to 40	2
Total	109

[1] Does not include the Post 30 specialist unit.

TABLE VI-11.—*New York Stock Exchange: Percentage distribution of total reported round-lot volume in stocks assigned to specialists, by specialist unit (1961)*

Specialist units in 10 groups,[1] ranked in order of the total reported round-lot volume in assigned stocks	Total reported round-lot volume in assigned stocks [2]	Percent of total reported round-lot volume
	Thousand shares	
1st 10 percent	300,252	26.2
2d 10 percent	175,542	15.3
3d 10 percent	147,101	12.8
4th 10 percent	125,236	10.9
5th 10 percent	111,816	9.7
6th 10 percent	92,553	8.1
7th 10 percent	71,990	6.3
8th 10 percent	60,099	5.2
9th 10 percent	43,500	3.8
10th 10 percent	19,015	1.7
Total	1,147,104	100.0

[1] Does not include the Post 30 specialist unit.
[2] Includes duplicate counting of 125,839,000 shares in stocks assigned to competing specialist units or specialist units with combined books.

TABLE VI-12.—*New York Stock Exchange: Percentage division of specialists' total income between commission and trading income, by specialist unit (1959 and 1960)*

Commission/trading [1]	Number of specialist units		Commission/trading [1]	Number of specialist units	
	1959	1960		1959	1960
100/ 0 [2]	7	14	40/ 60	13	8
95/ 5	0	3	35/ 65	7	2
90/ 10	1	3	30/ 70	5	2
85/ 15	3	2	25/ 75	1	0
80/ 20	9	4	20/ 80	1	3
75/ 25	5	7	15/ 85	1	1
70/ 30	9	10	10/ 90	1	0
65/ 35	10	10	5/ 95	0	0
60/ 40	12	11	0/100	0	0
55/ 45	7	6			
50/ 50	11	18	Total	110	110
45/ 55	7	6			

[1] The percentage division of each unit's income was applied to the nearest category.
[2] Includes 5 specialist units in 1959 and 14 in 1960 with a trading loss. Trading loss counted as a zero percentage.

TABLE VI-13.—*New York Stock Exchange: Percentage distribution of specialists' total income from commissions and trading, by specialist unit (1959)*

Specialist units in 10 groups, ranked in order of total income	Total income	Percent of total specialist income	Commission income	Percent of total commission income	Trading income	Percent of total trading income
1st 10 percent	$15,414,609	37.8	$4,785,852	24.4	$10,628,757	50.0
2d 10 percent	6,129,142	15.0	3,138,672	16.0	2,990,470	14.1
3d 10 percent	4,729,994	11.6	2,575,848	13.2	2,154,146	10.1
4th 10 percent	3,771,974	9.2	2,444,331	12.5	1,327,643	6.3
5th 10 percent	3,053,132	7.5	1,794,712	9.2	1,258,420	5.9
6th 10 percent	2,490,428	6.1	1,762,429	9.0	727,999	3.4
7th 10 percent	2,103,781	5.1	1,067,682	5.5	1,036,099	4.9
8th 10 percent	1,670,720	4.1	1,023,485	5.2	647,235	3.1
9th 10 percent	1,022,014	2.5	556,880	2.8	465,134	2.2
10th 10 percent	440,388	1.1	439,704	2.2	684	(1)
Total	40,826,182	100.0	19,589,595	100.0	21,236,587	100.0

[1] Less than 0.05 percent.

NOTE.—The income of 4 specialist units was reported for a fiscal year; their income was applied to the nearest calendar year.

TABLE VI-14.—*New York Stock Exchange: Percentage distribution of specialists' total income from commissions and trading, by specialist unit (1960)*

Specialist units in 10 groups, ranked in order of total income	Total income	Percent of total specialist income	Commission income	Percent of total commission income	Trading income	Percent of total trading income
1st 10 percent	$13, 194, 482	38. 0	$4, 995, 784	26. 4	$8, 198, 698	52. 0
2d 10 percent	5, 562, 386	16. 0	3, 086, 477	16. 3	2, 475, 909	15. 7
3d 10 percent	4, 387, 234	12. 7	2, 508, 975	13. 3	1, 878, 259	11. 9
4th 10 percent	3, 140, 575	9. 1	1, 875, 830	9. 9	1, 264, 745	8. 0
5th 10 percent	2, 492, 192	7. 2	1, 785, 166	9. 4	707, 026	4. 5
6th 10 percent	2, 057, 358	5. 9	1, 251, 233	6. 6	806, 125	5. 1
7th 10 percent	1, 627, 091	4. 7	1, 028, 117	5. 4	598, 974	3. 8
8th 10 percent	1, 333, 399	3. 8	940, 931	5. 0	392, 468	2. 5
9th 10 percent	757, 636	2. 2	634, 010	3. 4	123, 626	. 8
10th 10 percent	135, 190	. 4	812, 268	4. 3	−677, 078	−4. 3
Total	34, 687, 543	100. 0	18, 918, 791	100. 0	15, 768, 752	100. 0

NOTE.—The income of 4 specialist units was reported for a fiscal year; their income was applied to the nearest calendar year.

TABLE VI-15.—*New York Stock Exchange: Distribution of specialist units according to total income from commissions and trading (1959 and 1960)*

Specialist income	Number of specialist units		Specialist income	Number of specialist units	
	1959	1960		1959	1960
Loss	1	2	$1,100,000 to $1,199,999	0	1
0 to $99,999	18	20	$1,200,000 to $1,299,999	1	0
$100,000 to $199,999	22	31	$1,300,000 to $1,399,999	1	0
$200,000 to $299,999	23	22	$1,400,000 to $1,499,999	1	0
$300,000 to $399,999	16	7	$1,500,000 to $1,599,999	0	0
$400,000 to $499,999	8	11	$1,600,000 to $1,699,999	0	0
$500,000 to $599,999	9	7	$1,700,000 to $1,799,999	0	0
$600,000 to $699,999	3	2	$1,800,000 to $1,899,999	0	1
$700,000 to $799,999	3	1	$1,900,000 to $1,999,999	1	0
$800,000 to $899,999	1	1	$2,000,000 and over	1	2
$900,000 to $999,999	0	1			
$1,000,000 to $1,099,999	1	1	Total	110	110

NOTE.—The income of 4 specialist units was reported for a fiscal year; their income was applied to the nearest calendar year.

TABLE VI-16.—*New York Stock Exchange: Distribution of specialist units according to commission income (1959 and 1960)*

Commission income	Number of specialist units		Commission income	Number of specialist units	
	1959	1960		1959	1960
Less than $100, 000	36	41	$700, 000 to $799, 999	1	1
$100, 000 to $199, 999	35	36	$800, 000 to $899, 999	0	0
$200, 000 to $299, 999	24	21	$900, 000 to $999, 999	0	0
$300, 000 to $399, 999	9	7	$1, 000, 000 and over	0	1
$400, 000 to $499, 999	1	1			
$500, 000 to $599, 999	3	1	Total	110	110
$600, 000 to $699, 999	1	1			

NOTE.—The income of 4 specialist units was reported for a fiscal year; their income was applied to the nearest calendar year.