The Highest Price Ever:
The Great NYSE Seat Sale, 1928-1929

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In February 1929, the New York Stock Exchange, after deciding to increase its membership, created a quarter seat dividend for each member of the exchange. This expansion of the exchange occurred when business was booming and the real price of a seat on the exchange was the highest it has ever been. The NYSE was under extraordinary pressure because its members found it increasingly difficult to handle the rapidly rising volume of trades. Brokers became worried that their business might be lost to other exchanges. While the membership had rejected previous calls by the NYSE's leadership to expand membership, this time the majority listened. Because of constraints imposed by technology and the rules of the exchange, members found that they could not expand their own operations to meet the increased demand. Rather than lose business, they voted to increase the number of seats and share in the proceeds from those sales. Drawing upon newspaper accounts and archival materials from the NYSE, we chronicle the struggle between the various interest groups within the exchange--specialists, commission houses, floor brokers, and out-of-town members----over how to meet the demand for their services. Issuing a quarter seat dividend created a coalition whose members saw this innovation as the best means to profit from expanded capacity. We conduct an event study analysis on seat prices of the failed effort to expand the exchange in 1925 and the successful effort in 1928-1929. Our estimates show that the microstructure constraints on the exchange were substantial. When the news of a seat dividend reached the membership, seat prices rose. We estimate that there was approximately a 20 percent abnormal return, a fact that emphasizes the importance of microstructure in determining the efficiency of the exchange.

The Value of a Seat

Seats on an exchange are capital assets whose prices reflect stockbrokers' expected future profits from the special access offered to them by a seat on the exchange. In contrast to several European exchanges, a distinctive feature of the NYSE is the fixed number of seats and the vesting of the ownership of the exchange with the owners of the seats. The member-owners determine the number of seats; and before the advent of the

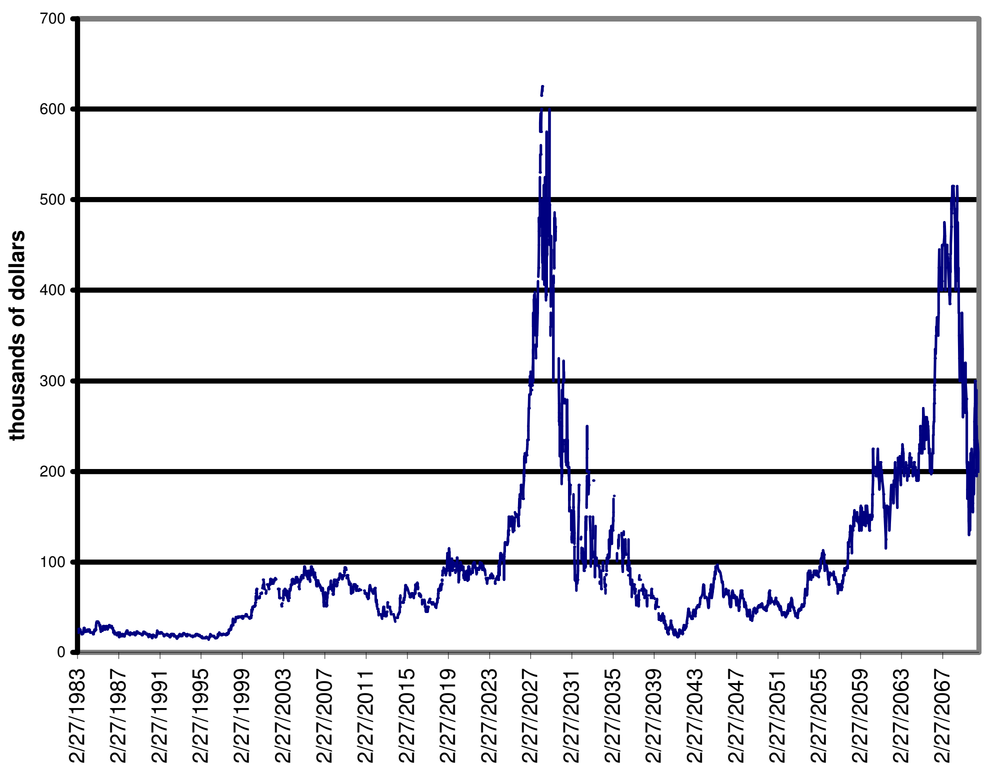
New Deal legislation governing the securities exchanges, they had control over the rules. The value of their seats is affected by the volume of activity on the exchange and the degree of competition among traders on the exchange and between the exchange and the rest of the equity market. Thus, seat prices are influenced by the volume and level of stock prices, technology, and the rules that govern trading on the exchange. The supply of stock exchange seats has been relatively constant over time. They are traded in an anonymous auction market operated by the Secretary of the NYSE and that is characterized by relatively small transactions costs. When a new bid or ask price is made, all members are informed; and current bid and ask prices for seats are posted on the floor of the exchange.

Seats differ from equities in that the "dividends" are a function, not of the firm's profits, but of the owner's use of the rights to the seat. A seat on the NYSE gives the owner access to trading on the floor of the Exchange at a reduced price. The owner may be a specialist (holding inventories of NYSE listed securities), a commission broker (handling transactions for customers of brokerage houses), a floor or two-dollar broker (executing trades for other exchange members for a floor brokerage fee) or floor trader (trading for his personal account) (Schwert 1977a). Whichever activity or activities he pursues, a seat allows the owner to trade on the exchange with reduced transactions costs. Thus, seat prices should reflected the capitalized value of any quasi-rents available to seat holders.

Although research on stock markets fills academic journals and stock price data of every description are the subject of incredibly intense analysis, relatively little attention has been given to the market for seats on the exchange. However, seat prices can provide substantial insights into questions about the technology, rules, and regulations and their relationship to the efficiency of the exchange. As best as we can determine there have been few studies of the market for stock exchange seats. The first paper, Schwert (1977a) examined the end-of-month seat prices for the period, 1926-1972 and was primarily concerned with the efficiency of the market. In similar studies, Jarrell (1984) and Golbe (1984, 1986) used end-of-month postwar data to examine the effects of deregulation of the exchanges. Most recently, Keim and Madhavan (1997) employed all bids, offers and sale prices of NYSE seats for 1973-1994 to study the determinants of pricing and the ability of seat prices to predict future activity on the exchange.

These studies have been limited both in the time period covered and in frequency of the observations. We have collected new data from the archives of the New York Stock exchange. Three volumes of the New York Stock Exchange' s Committee on Admission' s records-- records registering all transfers of membership are preserved in the archives. The recorded transfers cover the periods from November 28, 1879 to January 8, 1880, followed by a gap and then December 27, 1883 to June 28, 1971. These data represent all seats transferred within these periods. The exact dates of the transfers are not provided until January 1935. Until that time, all trades during a week were reported as of the end of the week.

Figure 1
Price of Seats on the New York Stock Exchange
1883-1971



Source: NYSE, Committee on Admissions.

The nominal prices of the seat from 1883 to 1971 are graphed in Figure 1.[1] It reveals the extraordinary run up in the price of seats beginning in 1925. The collapse precedes the 1929 stock market crash, while the low prices afterwards reflect the distressed state of the capital markets and the effects of the New Deal regulatory regime. Even by 1971 when our new data set ends, the nominal seat prices had not reached the 1929 high of $625,000. The highest price yet attained, $2,650,000, was paid on August 23, 1999 at the peak of the most recent boom. In 1929 prices, using the consumer price index to make the adjustment, this peak price would have been a mere $252,000. If deflated by the Dow Jones Industrials, the 1999 price would have been just $77,600. Clearly, the NYSE was at its apogee in the 1920s, never again quite recapturing its dominance of the markets. Yet, at that moment, the exchange felt its position was threatened.

How Many Seats?

The struggle over the number of seats on the NYSE reflected a battle over the microstructure of the exchange by groups of brokers who fought over how to maximize the value of the exchange and divide the rents among themselves. The rising volume of trading and the growing number of new issues in the 1920s were not easily accommodated by the exchange, under its existing rules and structure. There were public complaints about the poorer performance of the exchange. The NYSE conceded that there were problems because of "poor executions and the limited capacity of our market" (Memorandum on Increasing Stock Exchange Memberships, n.d.).[2] The increased volume of orders delayed settlement, forcing late hours and even a closing of exchange on Saturday; and there was discussion of permitting the delivery of stock two days after the execution of orders instead of on the succeeding day. These difficulties left the exchange vulnerable to competition from other exchanges and markets, but the addition of more seats would dilute its value to members.

[1] They are adjusted for the quarter seat dividend and exclude the prices that were for private sales.
[2] Delayed executions may have increased bid-ask spreads because specialists and dealers had to carry inventory longer.

After the May 1869 merger of the NYSE, which had 533 members, with the 354 member Open Board of Brokers and the 173 member Government Bond Department, the number of seats was set at 1,060. Soon, a buoyant market left the exchange frustrated by its physical constraints. In 1879, the Governing Committee proposed the sale of 40 new memberships to finance the purchase of additional property adjacent to the exchange. The seats were to be sold to the highest bidders with a minimum price of $10,000. Although forty more seats would seem unlikely to have much effect on seat prices, the vote by the membership was extremely close 530 in favor and 510 against. The memberships were then sold at prices ranging from $13,500 to $15,000. In spite of some members' fears, prices of seats continued to rise, even at the new total of 1,100. (W.B. Nash, Remarks made before the Governing Committee Meeting, October 28, 1925)

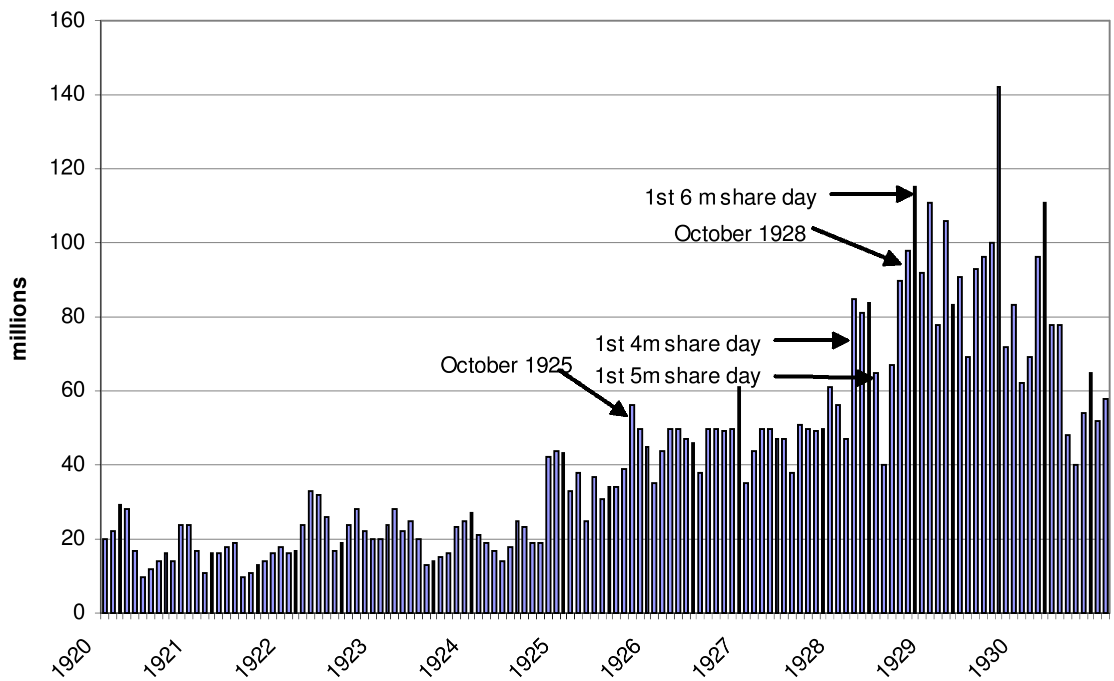
The growth of the government bond market during World War I was followed by the amazing growth of the equities market in the 1920s, pushing the NYSE to innovate.[3] In 1919, a separate ticker system was introduced for bonds; and in 1922, stock symbols were revised to make the quotation systems faster. The opening of an addition to the exchange at 11 Wall Street in 1922 provided more space for trading. The <u>Commercial and Financial Chronicle</u> (October 31, 1925, p. 2109) and the <u>Wall Street Journal</u> (October 29, 1925) happily reported a raft of new trading records. Yearly sales of shares in 1925 topped the 1919 record and monthly sales the 1901 record. There were more 1 and 2 million share days and consecutive million plus share days than the previous boom years of 1901 and 1919. The growing flow of monthly orders is shown in Figure 2. This rising volume of activity strained the Exchange, and a new late closing record of 42 ½ minutes beat the old one of 25 minutes set in 1915. The President of the Stock Clearing

[3] One contributing factor to the rising demand for the services of the NYSE was the demise of its onetime great rival, the Consolidated Exchange. Founded in 1885, the Consolidated traded NYSE and Curb listed securities, commodities and petroleum futures, taking business shunned by the NYSE, including odd lots. Unlike the restrictive NYSE, membership was available for "a few hundred dollars, with no questions asked." (Sobel, 1972). It grew rapidly after the panic of 1907; and in 1922, trading records at the Consolidated were broken. At this peak, the Consolidated was wounded by a series of brokerage failures that implicated its president, William S. Silkworth. The scandal was fatal to the Consolidated, which tarnished by its bucket shop members, lost business to the NYSE. It announced it was closing in 1926, but did not finally wind down its operations until two years later.

Corporation, Samuel F. Streit reported that records were reached in the number and value of stocks cleared:

> Settlements of these transactions have congested the machinery of the Stock Exchange and all hands have been called upon to work overtime in clearing the slates each day. All brokers and member firms have been called upon to make their deliveries as early as possible, for the purpose of speeding up the machinery, and banking institutions also have been requested to assist the Stock Clearing Corporation in every possible way. (Commercial and Financial Chronicle, October 31, 1925, p. 2110)

Figure 2
Monthly NYSE Stock Sales
1920-1930



Scenting higher profits from the post-World War I bull market, the brokers took advantage of the increased demand for the exchange's services, setting higher commissions on bond transactions in October 1925. For parties who were not members of the Exchange the rates were increased from \$1.50 to \$2.00 per \$1,000 bond. For members, rates were increased from 50 to 80 cents per \$1000 when a principal was not given up and 37 ½ to 40 cents per \$1,000 when a principal was given up (Commercial and Financial Chronicle, October 17, 1925, p. 1865). The New York Curb market quickly followed suit, raising its commission rates on bonds and notes (Commercial and Financial Chronicle, November 7, 1925, pp. 2226-7). Again, in November 1924, brokers fees were increased 25 percent and on October 28 1925, the members voted 329 to 19 to increase commissions on bond transactions so that the public paid $2 for each $1000 bond instead of $1.50. The higher commissions and the greater volume of trading helped to drive the seat prices upwards (The World, October 29, 1925).

But while business was good, the management of the exchange became concerned. On October 28, 1925, the Governing Committee took up the question of how to accommodate the increased demand for services on the exchange. Before the Governing Committee, W.B. Nash made the case for more seats (W.B. Nash, Remarks made before the Governing Committee Meeting, October 28, 1925). First, he pointed to the rise in listings and volume. On January 2, 1918, there had been 1,100 bond issues and 625 stock issues listed on the exchange; as of October 1, 1925, there were 1360 bond and 1003 stock issues listed . Similarly, the volume of sales had doubled from $1.4 billion for 1921 to $2.6 billion for the first 10 months of 1925. As membership had not increased since 1879, "a point might soon be reached when there would not be enough active members on the floor to handle adequately the constantly rising volume of orders." Nash argued that capacity required not only "additional space and mechanical facilities but also more members to handle the market."

Trading volume was also being driven by an increase in the social and geographic span of the market. The rise of the small investor brought about an increase in odd lot dealings, and the extension of the stock ticker west of the Rocky Mountains added more trading demand. The forthcoming extension of stock ticker services to the Pacific Coast and Florida were anticipated to increase business, and it was feared that unless changes were made business would be lost to the Curb market and the out-of-town exchanges. (New York Times, November 5, 1925.)

The number of seats occupied by specialists changed slowly, while the remainder of seats was divided among the competing commission houses, two-dollar brokers and the out-of-town firms. Purchases of seats by the out-of-town firms—purchases made to enable them to pay lower fees--reduced the number of active members on the floor of the exchange. At the same time, these brokerage firms were responsible for much of the increased inflow of new business—business that had to be handled by the commission house (floor) brokers and the two-dollar brokers. Table 1 shows the evolving structure of membership on the NYSE. Although New York City members had dominated the exchange in 1890, as early as 1900 the out-of-town members began to increase their numbers and influence. The 975 New York City NYSE members belonged to 421 brokerages, which had 83 branch offices; while the 125 out-of-town members belonged to a total of 100 brokerages which had 93 branch offices. By the late 1920s, the seats held by New York City and out-of-town members and the number of brokerages they represented changed little but the number of branch offices was steadily growing. The out-of-town branches were increasing much faster, generating more volume. The large number of seats held by inactive members was another headache. Estimated by some to be as numerous as 400, the inactive seats were held by prominent financiers, including John D. Rockefeller, J. Pierpont Morgan, Frank Jay Gould, Percy A. Rockefeller and Mortimer Schiff, who traded only on their own accounts. They were usually referred to as "inactive members" because of their infrequent use of their membership. This effective withdrawal of seats from regular trading lowered the number of counterparties available for each order and reduced the speed of execution.

Convinced of the need for more manpower, the Governing Committee presented the members of the Exchange with a proposal to increase the number of seats from 1,100 to 1,125 by the creation and sale of 25 new seats. The committee called for the sale of five seats each at $135,000, $137,500, $140,000, $142,500, and $145,000. (NYSE Resolution, October 28, 1925; E.H.H. Simmons, Letter to the Members of the NYSE, October 28, 1925; E.H.H. Simmons, Report of the President NYSE May 1, 1925/May 1, 1926, pp. 15-16). The chairman of the Governing Committee, Warren B. Nash, saw a big benefit for all members as the $3.6 million realized by the sale could be used to pay off part of the Exchange's $6.5 million debt on its building, thereby reducing the annual dues of members by an estimated $150.

Table 1
NYSE In and Out-of Town Members, Firms, and Branches

	NYC Members	NYC Firms	NYC Firms Branch Offices	Out-of-Town Members	Out-of-Town Firms	Out-of-Town Branch Offices
1890	1,030	377		70	60	
1900	975	421	83	125	100	93
1910	1,004	489	188	96	92	367
1920	979	447	107	121	116	555
1925	968	423	126	132	128	580
1926	968	456	129	132	131	632
1927	970	466	144	130	127	742
1928	967	475	203	133	131	856
1929	973	487	280	127	124	1112
1930	1,235	545	294	133	109	1364

Source: New York Stock Exchange Yearbooks.

The optimism of the Governing Committee was not shared by many members, and there was a groundswell of opposition led by Eben Stevens. Opposition members felt that the Governing Committee had acted secretively and against their interestspotential, engineering an increase in competition. (Commercial and Financial Chronicle October 31, 1925, p. 2109 and New York Times, November 5, 1925) In a letter to the president of the exchange, W. Strother Jones, a member of the New York firm of Jones, Maury & Smith, (Letter to E.H.H. Simmons, W. Strother Jones, October 30, 1925, NYSE archives) voiced his fear that seat prices would soften:

> I have…been a member for over 40 years, paid the highest price at which seats had ever sold at that time--$30,000. They sold not long afterwards at $17,000. I have since then bought two seats for my sons, and I made many sacrifices to do so. My immediate family, at $130,000, has $500,000 in seats. I, before long, will want to sell a seat.

Jones blamed the desire to increase seats on the big firms:

> The tendency of large firms is to crowd out the smaller ones in the general commission business. It remains for firms of small capital to do a Floor business or a Clearance business. The big firms have more business than they can properly handle, and instead of giving out business and clearing it, hang up and occupy the time of many brokers in straightening out trades.

Here, Jones appears to have been voicing the frustrations of the floor brokers who were squeezed by the larger firms whose efforts to control more of the volume led to problems in execution and settlement.

Simmons attempted to placate the membership by meeting with them on November 4 to explain his position. However, in the end, the Governing Committee failed to persuade the membership, and the resolution was rejected by a vote of 648 to 268 (New York Times November 12, 1925; New York World, February 3, 1929). After this ignominious defeat, the President of the Exchange, E. H. H. Simmons, reported that the increase was voted down because of some members' oppositio to increasing the number of seats and the feeling among others that the plan was 'too limited to prove really helpful." (E.H.H. Simmons, Report of the President NYSE May 1, 1928/May 1, 1929, p. 62). But, few observers believed this statement, and pointed out that members had expected to see their earnings drop if this proposal had been implemented. (New York World, February 3, 1929; New York Herald, January 26, 1929).

Plans to increase the size of the exchange were abandoned. Not until 1928 when the extraordinary stock market boom began were new plans advanced. Annual volume rose from 1.6 and 1.5 billion shares in 1925 and 1926 to 1.9 billion in 1927, then soared to 3.2 and 3.9 billion shares in 1928 and 1929. As seen in Figure 2, there were also huge surges in daily volume. The first 4 million share day was reached in 1928; it was followed quickly by a 5 and then a 6 million share day. On April 13, 1928, plans were announced for a new and speedier stock ticker—a ticker capable of running at twice the speed of the current tickers. A new central quotation system, for reporting the bid and asked quotations was inaugurated at six trading posts on October 1, 1928. By February 11, 1929, it provided services to all posts. On May 14, 1928, the New Bond Room was opened adding 6,000 more square feet to the trading floor. Searching for more space, the exchange purchased the Commercial Cable and Blair Buildings on December 21, 1928 (NYSE Yearbook 1928-1929).

In 1929, the exchange planned the introduction of a new ticker that promised to be three times as fast as the old one and the installation of enclosed trading posts in place of the old style round posts. This new arrangement would enable clerks to assist the harried specialists who posted quotes, bought and sold from their inventory, and handled limit orders for the stocks assigned their posts. When volume was high, the clerical work of entering hundreds of orders in their proper sequence slowed down the pace of trading (New York Herald, January 26, 1929). However, clerks' roles were narrowly defined, and the Governing Committee adopted a rule that precluded the possibility of clerks acting as brokers on the floor. (Commercial and Financial Chronicle December 15, 1928, p. 3337). Thus, while these improvements in space, assistance, and technology helped, brokers still found it hard to manage the rising volume.

The Quarter Seat Dividend

On October 15, 1928, President Simmons called a special meeting of the Governing Committee to consider again the question of whether the membership should be increased. The outcome of the meeting was the establishment of a Special Committee to consider an increase in membership. Its members included Warren Nash, Allen Lindley, Richard Whitney, Walter Johnson, and Edgar Boody to consider an increase in membership. (NYSE Governing Committee Minutes, October 15, 1928, p. 563; (E.H.H. Simmons, Report of the President NYSE May 1, 1928/May 1, 1929, p. 62).

To avoid a repeat of the 1925 failure, Simmons convoked a meeting of the members on the exchange on October 30, 1928 where he made the case for an increase in membership. (E.H.H. Simmons, Report of the President NYSE May 1, 1928/May 1, 1929, p. 62, and "Memorandum on Increasing Stock Exchange Memberships" undated. NYSE archives). He pointed out how the growth of the market affected every group of brokers on the exchange. For the commission house and two-dollar brokers, the extension of the New York firms' ticker wires, the establishment of branch offices and advertising by radio had greatly augmented the inflow of business. Simmons observed that the odd lot houses, whose business was also booming with the growth of the small investors, found it hard to obtain sufficient partners or representatives on the exchange. He told the members:

> all this increased business must be poured into our floor through an artificially restricted membership, which has obviously reached its capacity this year for handling the volume of business offered. There is no use in continuing our other efforts to extend and expand our business unless a comparable expansion occurs in our membership.

The inflow of orders placed specialists under enormous pressure to execute them and handle the paperwork.[4] He bluntly told the members:

> There is no denying that in the great markets of this year, the Stock Exchange has been hampered in giving the public perfect brokerage service because of insufficient attendance on the floor. As our markets grow larger and larger in volume, there is no reason for doubting that poor execution of public orders will continually grow worse.

(Is it the lack of available counterparties on the floor of the Exchange that bothers Simmons? Make it clear!)

Simmons believed that the NYSE stood to lose the good will of the American public. He argued dramatically that no technological breakthrough could help, labor-saving devices had been fully exploited and "no new mechanical device can in the future make up for insufficient members' on the floor to handle the business." The inability to provide high quality service would throw business to the New York Curb Market and the out-of-town exchanges, which were beginning to list issues whose sole market had been in New York. Now that the gold standard had been reestablished, he also saw the specter of competition from the London and Berlin markets. He noted that neither of those two exchanges limited their membership and even the Paris exchange was considering adding new brokers (Memorandum on Increasing Stock Memberships).

The press also reported the New York Stock Exchange as having increasing difficulties in meeting the growing volume of trading. The Commercial and Financial Chronicle (November 24, 1928, pp. 2899-2900) commented:

[4] Simmons claimed that the wartime federal transfer tax had caused the number of floor traders to fall from 200 to 30, and that this small number was a cause of the "wide span between bids and offers on the floor."

> Scenes on the floor of the Stock Exchange and the Curb Market were the wildest in the history of the two institutions. Every available broker was at work and it was a day in which there was not a moment's rest. About the active posts were literally mobs of milling, shoving, excited brokers trying to catch a bid or fill an offer.

On November 23, 1928, after a record volume of 6.9 million shares, the staffs of most brokerage firms worked through the night, with clerical work still unfinished at dawn. In response, the Governing Committee decided to close the Exchange the next day, Saturday, to permit clerical forces to catch up with their work. The New York Curb Market, as well as the exchanges in Philadelphia, Boston, Pittsburgh, Chicago, and Detroit, also closed to catch up.[5] During the high volume day, the NYSE ticker was at one point 48 minutes behind and ended the day a half an hour behind. These expensive delays occurred even though the Exchange had taken the extraordinary temporary measure the previous day, of omitting the volume of individual stocks to speed up reporting. This action was accepted, in spite of grave misgivings that it would be impossible for traders to judge the market accurately.

More volume was soon anticipated. Faster ticker service was to be installed in January 1929 in subscribers' offices in Florida, where there was a large business from winter vacationers. It was reported that "The new ticker is capable of recording a daily turnover of 7,000,000 shares without delay. The present ticker often falls behind on days when the trading does not exceed 4,000,000 shares." (Commercial and Financial Chronicle November 3, 1928, p. 2451). On the heels of the NYSE, the New York Curb market was extending its ticker service. By early 1929, it had reached as far north as Montreal and as far south as Richmond and service was planned to be extended to St. Louis (Commercial and Financial Chronicle, March 23, 1929, p. 1310).

Simmons had ambitious plans to expand the exchange. He proposed to create a seat "dividend" for each member that would double the number of seats to 2,200. To provide additional revenue for a future enlargement of the exchange, he recommended an

[5] The New York Curb, with 550 seats, reporting record high prices for seats ($120,000 on October 4) (Commercial and Financial Chronicle, October 27, 1928, p. 2305). To cope with the higher volume, the Curb adopted an emergency measure on December 10 that permitted specialists to have a clerk on the floor. (Commercial and Financial Chronicle, December 22, 1928, p. 3482).

increase in the transfer fee on seats from $4,000 to $10,000. By increasing the number of seats and improving facilities, Simmons claimed that each exchange member would be able "to have his cake and eat it too."

While Simmons lobbied the membership, the Special Committee sent a poll to the members of the exchange. Members were queried about how quickly---within three months, within one year, or more than one year---they would sell their rights if there were a twenty-five, fifty or one hundred percent increase in membership. In addition, the poll asked if members would try to buy up other rights and thereby be able to nominate a candidate if there were a twenty-five or fifty percent increase in membership. (Ballot, NYSE archives, undated) Based on 662 answers, the Special Committee concluded that "a larger proportion of new memberships will be absorbed immediately if the membership is increased by twenty-five percent" instead of fifty or one hundred percent It did appear, though, that many members would hold on to their rights and not sell them immediately. The committee concluded that increasing the number of potential seats further than 25 percent would not result in a much larger immediate increase and settled on a 25 percent increase.

The Special Committee produced a report that recommended a 275 member increase to be achieved by the issue of one-quarter seat rights to all current members. Transfers would begin on February 18, 1929 with all bids and offers in multiples of $500. (Special Committee Letter to Members of the New York Stock Exchange, February 7, 1929, NYSE archives) In order to encourage the rapid creation of new seats, the committee proposed that members be required to dispose of their rights within three years. The report carefully justified these recommendations. With the prospect of the installation of a new higher speed ticker, the foremost concern was that the exchange be able to offer efficient service to the public. The committee decided on a twenty-five percent increase because it was believed that this was the maximum that could be reasonably accommodated with the NYSE's existing physical space and assuming that 70 to 80 percent (following the existing pattern) of the additional seats would be actively used. Even so, they sought reassurance from the Committee of Arrangements that adjustments could be made on the already crowded floor and telephone facilities.

The Special Committee had received other proposals for increasing the number of persons who could make contracts on the floor of the Exchange. However, the committee rejected these ideas because they believed they would involve either a fundamental change in the nature of the Exchange or the method of doing business on the floor. Among the proposals were (1) partners or employees of members be permitted to make contracts, substituting for members. (2) two classes of members be established with only one having the privilege of trading on the floor, and (3) inactive members could lease their trading privileges. The committee believed that there were certain legal difficulties with most of these proposals and that they undermined the "individual moral and financial responsibility that exists today since contracts are made only between members of the exchange." Leasing was criticized because it would weaken the disciplinary power of the Exchange since the penalty of suspension or expulsion for a lessee would be less costly than the same penalty on a member. The committee also believed that members would be at a competitive disadvantage vis-à-vis lessees because the latter instead of needing to buy a seat would have the same privileges for just an annual fee. It also disparaged the idea of allowing clerks on the floor as they would not increase the number of individuals able to make contracts. However, clerks would be allowed to assist specialists when the new type of enclosed trading posts were installed.

The report was signed by Simmons (ex-officio), Johnson, Whitney, Lindley and Nash, but one member of the committee, Boody, dissented. He felt that there was simply not enough physical space on the floor of the exchange to accommodate 275 new members. Instead he proposed that only a 10 percent dividend, creating 110 new seats, be issued and that within the next five years when new additional floor space for the exchange became available 165 memberships be issued at the discretion of the committee. (Letter Edgar Boody, to the Governing Committee, January 19, 1929). (Report, Special Committee to the Governing Committee, NYSE archives, undated).

On January 21, 1929, the President called another special meeting of the Governing Committee. At this meeting, the Special Committee was to submit its report and make its arguments. After considering the report, the Governing Committee convened again on January 24 and it voted 31 to 1 adopt the recommendations of the special committee. (NYSE Governing Committee Minutes, January 21, 1929, pp. 619-

620 and January 24, 1929, p. 631). The members seemed well disposed to the proposal. A straw vote revealed that members favored the increase by a ratio of three to one. (New York World February 3, 1929). As the New York Herald (January 26, 1929) wrote, the membership was being asked to "vote themselves a 'melon' of $137,500,000 (on the assumption that each right would be worth $125,000).

The leading opponent of the seat dividend proposal was Edward Allen Pierce. A former member of the stock exchange, Pierce was a partner in one of the largest brokerages, a firm with 18 partners, three of whom were members of the exchange. He complained that there were already one hundred inactive members, individuals who held seats but rarely used them for trading. Pierce claimed that more seats would dilute their value and would not necessarily increase brokers on the floor. Instead he proposed that out-of-town members be allowed to lease their seats for a fee to individuals approved by the Admissions Committee. As an example, he suggested that an annual fee of $50,000 might be set, with $30,000 going to the lessor, $10,000 to the Exchange and $10,000 apportioned among the members to compensate for the increased competition. Pierce belittled the arguments of the special committee. He argued that there was no validity in the claim of the Special Committee that leasing would undermine the "individual moral and financial responsibility." He pointed out that many seats were held by individuals who had little or no capital, and whose purchase money has been provided by their firma. Thus, responsibility rested with the firm, not with the individuals, and this would also be the case with leasing. Nor did he find the penalty of expulsion or suspension any more severe for a seat owner or lessee. Pierce labeled as ridiculous the idea that it was unfair for a lessee who paid an annual fee to compete with someone who had paid more by buying their seat. By this logic, it was unfair to allow members who paid different prices for their seats to compete with one another. (E. A. Pierce, Letter to E.H.H. Simmons, January 30, 1929, NYSE archives, New York World February 3, 1929)

One prominent out-of-town member, C. Clothier Jones of Philadelphia, announced that he would vote against the proposal. He contended that the efficiency of operations on the floor of the exchange would be adequately improved by the enlarged space, faster tickers and telephone quotation service, so that the only remaining problem was one of manpower. (Letter to Ashbel Green, Secretary of the NYSE, C. Clothier

Jones, November 1, 1928) After attending a meeting of the Out-of-Town Section of the stock exchange firms, Jones reported that they believed that the lack of manpower on the floor could be met simply by (1) allowing clerks to assist specialists, following the example of the Curb Market rules, (2) permitting inactive seats to be leased, and (3) allowing members to designate a substitute partner for time of absence.(Letter to Ashbel Green, Secretary of the NYSE, C. Clothier Jones, December 17, 1928, NYSE archives).

While Pierce and Clothier were opposed to more seats, some members wanted even more than the Special Committee had recommended. E.E MacCronet, an out-of-town member from Detroit, opposed the proposal because he felt that a 25 percent seat dividend was too modest a step and a 50 or 100 percent seat increase was needed to avoid going through the process again in the near future. (E. E. MacCronet, letter, February 4, 1929, NYSE archives)

Yet, in spite of opposition from these quarters, the Governing Committee had the ear of the membership. On February 7, 1929, by a vote of 782 to 133, the members overwhelmingly approved of the Governing Committee's resoluti on. (NYSE Governing Committee Minutes, February 13, 1929, p. 643). Anticipating a favorable vote, the Governing Committee on January 28, 1929 appointed a special committee consisting of Nash, Lindley and Whitney and gave it the power to draft any regulations that it deemed necessary to implement the transfer of the seat dividends and the creation of new memberships. In preparation for the inflow of new members, members began wearing identification badges on the floor. (NYSE Yearbook, 1928-1929).

While the sale of seat dividends and the creation of new seats began smoothly, the crash of the stock market in October 1929 slowed down the process. Between February 7, 1929 and October 26, 1931, 1020 seat dividends were converted into 255 new memberships.[6] As of the latter date, 80 rights for 20 new seats had not been transferred. The membership was concerned that these used rights would not be traded before the vote's expiration date of February 7, 1932. Thus, on September 9, 1931, 524 members presented a petition to the Governing Committee, requesting that the time to exercise the rights be extended an additional year to February 7, 1933. In response to this petition,

[6] The only other change afterwards occurred in 1953 when the NYSE repurchased and retired 9 seats, leaving 1,366 outstanding.

the special committee offered the Governing Committee a plan to finish the sale speedily by October 26, 1931. The committee took charge of selling to any applicant, approved by the Committee on Admissions, a membership at a price not less than the price of the last fair market sale. The four dividends for the new membership would be selected by lot and the proceeds divided among the right holders. Alternatively, a membership could be transferred irregardless of price, if four right holders petitioned the committee. As an extra goad, any member who did not dispose of his right prior to February 7, 1932 would be fined $250. (Letter, Special Committee, to the Governing Committee NYSE, October 26, 1931). After considering the report, the Governing Committee moved on November 4, 1931 that the resolutions contained in the reported be adopted and submitted to the membership. In a vote of 638 to 30 on November 24, 1931, the membership approved of the resolutions. (GC Minutes-archive notes)

Table 2

Distribution of NYSE Memberships

	Members in NYC	*Member Partners in NYC*	*Member Non-Partners*	*Partnerships*	*Non-Member Partners*	*Average No of Partners*	*Members per Partnership*
1927	968	785	183	473	1685	5.6	1.7
1928	973	677	296	490	1919	5.9	1.4
1929	1177	806	371	533	2451	6.8	1.5
1930	1235	831	404	545	1907	5.8	1.5

Source: NYSE Yearbooks.

The fear that the new seats would be absorbed by out-of-town members proved to be unfounded. As Table 1 indicates, the number of out-of-town member remained unchanged, the whole increase being absorbed in New York, pointing to the existence of a serious bottleneck. The seat dividend also seems to have eased a struggle between different groups on the floor of the exchange, as seen in Table 2. Between 1927 and 1928, the number of members in New York had increased slightly at the expense of those from out-of-town. But, if members who were not part of partnerships are considered to be floor brokers, it appears that a big shift was occurring, a shift that reflected the demand for more service on the floor by out-of-town houses. The number of members who were not part of partnerships rose, while partners dropped. As the market boomed, partnerships were increasing in number and they were growing in size. Partnerships tended to represent commission houses, funneling orders into the exchange; and a higher volume of orders could be accommodated by some consolidation of order flow through larger partnerships, without increasing the number of NYSE members in the partnership. The partnerships, which were growing moving from an average of 5 to 6 partners, could and did give up almost all 100 seats to the members who were not part of a partnership. The seat dividend allowed the New York City partnerships to obtain more seats, increasing their representation on the floor, but perhaps more importantly it permitted the floor brokers continue to grow in number to 371. These members were clearly vital to the prompt execution of trades, and their increase in number was achieved by the expansion of the number of seats. The rising numbers of orders channeled by the larger partnerships, which might have gone to the Curb or the regional exchanges, reached the NYSE where their prompt execution and settlement was made more likely by the higher number of floor brokers.

Did the Dividend Increase the Value of the NYSE?

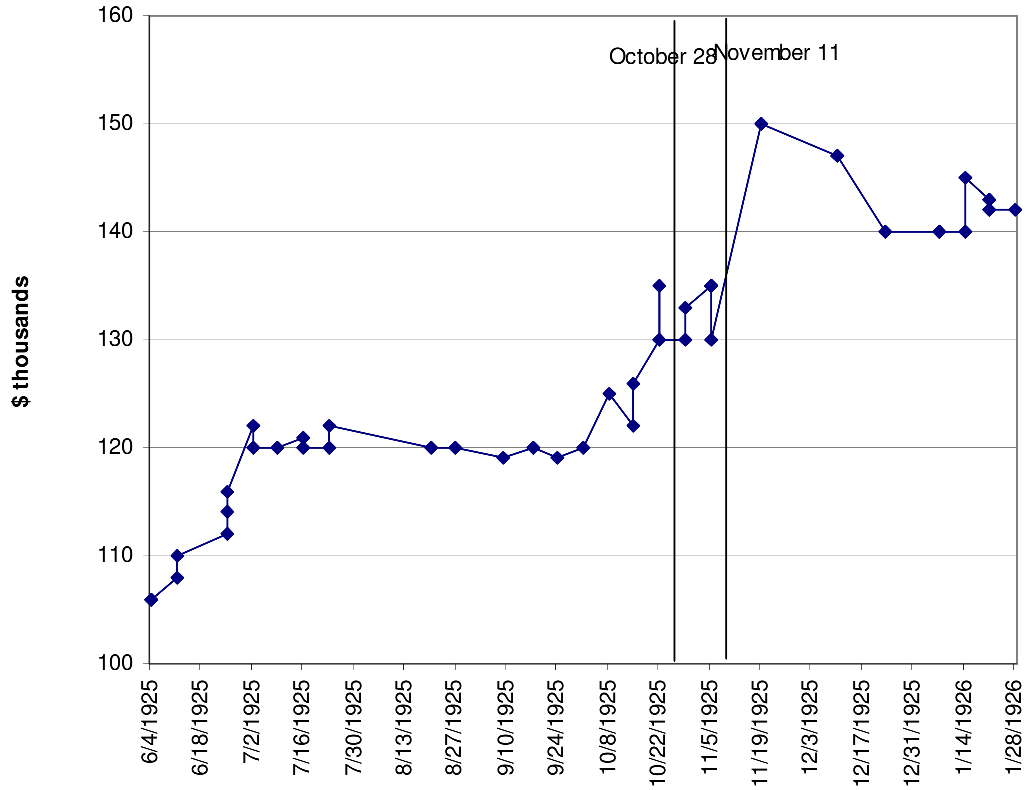
The decision to augment the number of seats by 25 percent was a major change, and an admission that the microstructure of the exchange needed to be revamped. Certainly, the volume and price of shares on the exchange were increasing, but increasing the number of seats was not necessarily the optimal response. Why could not members have simply captured the benefits of the booming market by trading more shares themselves, expanding their back offices to improve the efficiency of their members on the floor? Yet, instead of trying to expand their own activities, members chose to sell off part of those rights to membership on the exchange. The reasons behind this choice would appear to have lain in the numerous restrictions, both large and small, on membership---restrictions that made it difficult for individual members to capture the potential new volume. Like a stock split or a stock dividend, unless it truly increased the exchange's efficiency, there should have been no increase in value to the aggregate asset; its value would just have been subdivided, unless.

The change in seat prices reveals a substantial contemporaneous gain in the value of the exchange from the increase in the number of seats. If we take the price of a seat before any discussion of a dividend to be at the October 1928 level of about $450,000, the aggregate pre-announcement value of the exchange would have been $495 million. Taking either the post announcement prices, which fluctuated between $560,000 and $600,000 (forgetting the peak of $625,000 or the post-dividend distribution prices that ranged between $420,000 and $500,000), would yield aggregate values between $605,000 and $660 million. The jump in value from $495 to $605 or $660 million would have been a grand gain of 20 to 25 percent.

However, the great bull market was in full swing, and prices of seats may also have been rising because of demand driven by ordinary fundamentals. To examine the effects of the increase in the number of seats on the value of the NYSE, looking for abnormal returns to a seat on the NYSE, we conduct two events studies; the first of the abortive increase in 1925 and the second of the successful increase in 1929 (Campbell, Lo and Mackinlay, 1997).

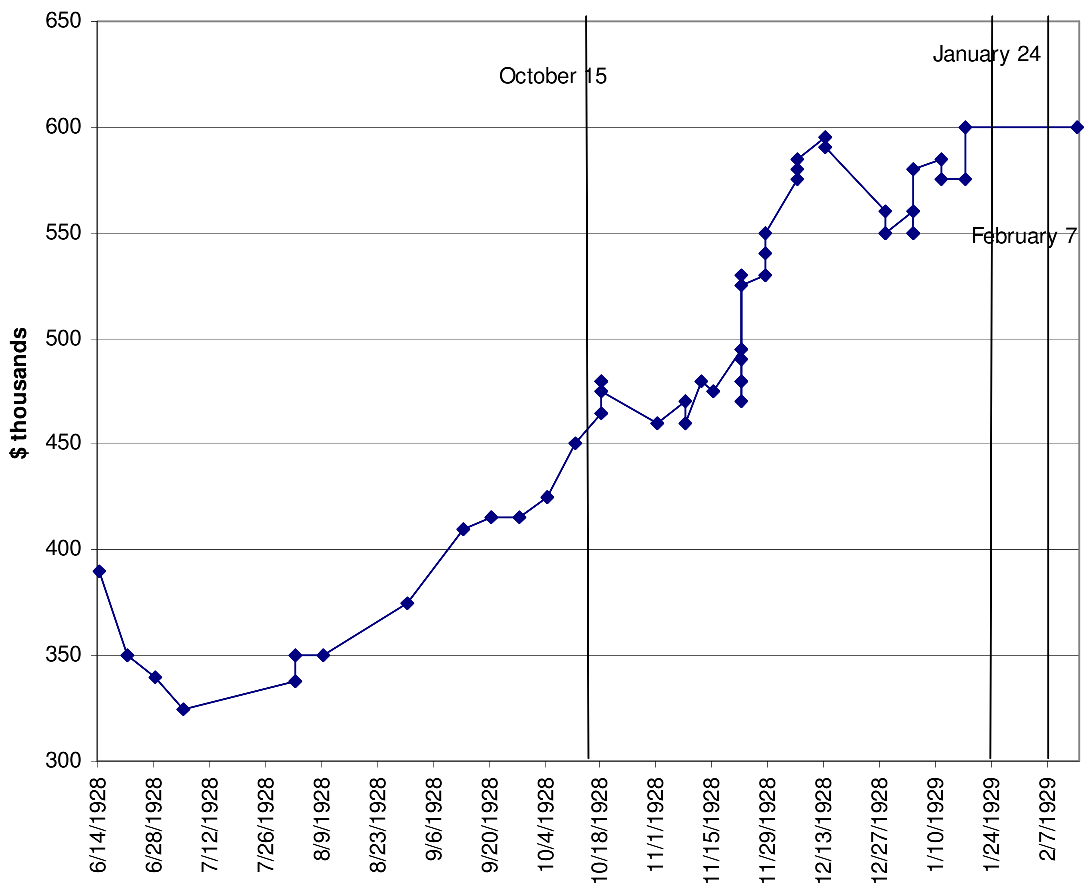
In order to conduct an event study, we need to define the time of the event. Prices for seats would move once members became aware of a change in the number of seats and were convinced that it would or would not occur. The movement of seat prices around the 1925 event window is depicted in Figure 3. The first public knowledge of a proposal to increase seats dates from October 28, 1925 when the Governing Committee issued a resolution to create and sell 25 new seats. This date marks the beginning of the event window, although some discussion of the proposal might have leaked out beforehand. This proposal was rejected by the membership on November 11, 1925, closing the window. This failure seems to have occasioned a rise in seat prices from $130,000 to $150,000, an increase that reflected the members' concern that, if it had succeeded, the value of their seats would have been reduced

Figure 3
NYSE Seat Prices June 1925-January 1926



The event window for the 1928-1929 quarter seat dividend is shown in Figure 4. Members' expectations about the proposed increase in the number of seat probably evolved over time. There was no simple announcement that would have influenced prices; and given the failure in 1925, members might well have been skeptical about any new efforts by the leaders of the exchange. The first indication that an increase in the number of seats was possible that we can find in the record, occurred on October 15, 1928 when President Simmons called a special meeting of the Governing Committee to discuss whether to increase membership. At this meeting, the Committee established a Special Committee to investigate the question. However, there might have been some private conversations that leaked out in advance of this meeting; and they could have driven up seat prices. Consequently, selecting this date as the beginning of the event window may underestimate the abnormal return. As seen in Figure 4, seat prices were already rising before October 15, although this increase may have been driven by other fundamentals. As he did not want to be accused as he had in 1925 of being secretive, President Simmons pressed the case for increasing membership in a meeting with members on October 30, 1928. At this point, the potential increase in the number of seats could have ranged from 25 to 100 percent. The official proposal for the quarter seat dividend came in a report by the Special Committee that was submitted to the Governing Committee in a special meeting on January 21, 1929. However, members had already been informally polled. Three days later on January 24, the Governing Committee reconvened and voted to accept the report's recommendations. This action was followed by the members' favorable vote on February 7, 1929 that permitted transfers to begin on February 18, 1929. The second window covers the period from October 15 to February 7 and encompasses a rise in the value of a seat from $425,000 to $600,000.

Figure 4
Seat Prices June 1928-February 1929



Owing to the fact that the only date for the sale of a seat is the end of the week in which there was a transaction, we restrict our analysis to weekly changes in the prices of seats, taking the last observed sale as the end of week price. The two basic fundamentals that should govern profits for brokers, and hence, seat prices on the exchange are the level of stock prices and the volume of trading. In the simplest model where microstructure, technology and regulation are held constant, profits to brokers should be a function of the level of prices of stocks traded on the NYSE and the volume shares traded. Assuming that the discount rate and commission rate are constant, seat prices will change only if there has been a change in volume or share prices. The two measures of fundamentals we use are the innovations in the Dow Jones Industrials average and the volume of shares traded on the NYSE. As measures, we use both the change in the daily volume from week to week and the change in the volume over the last thirty days. Presumably, the first measure gives an indication of the volatility of the volume, while the latter provides information on its trend. These four series were stationary. Using Dickey-Fuller tests we easily rejected the hypothesis that there were unit roots in the time series.

One of the basic features of asset return data is that the volatility of asset returns is usually serially correlated (Campbell, Lo, and MacKinla7, 1977; Poon and Granger, 2003). To capture this feature of the data a GARCH (1,1) model is employed. The first regression estimates the model, using data from January 8, 1920 to October 22, 1925, the end of the week for the last recorded sale before the opening of the first event window. The results for the determinants of the returns to NYSE seats are presented in Table 3. The estimates for the fundamentals leading up to the first and second events are very similar. A rise in the Dow Jones and the thirty day volume of trades cause a change in the return to a NYSE seat. However, if daily volume increases, the return declined. The two measures of volume reflect, as expected, the shifts in day to day volume and movements in the trend. Day to day shifts are costly as they mean that capacity in a very general sense must kept high relative to the trend to satisfy customers. Also, as expected, the Garch model fits the data, which exhibits serial correlation in the returns.

Table 3

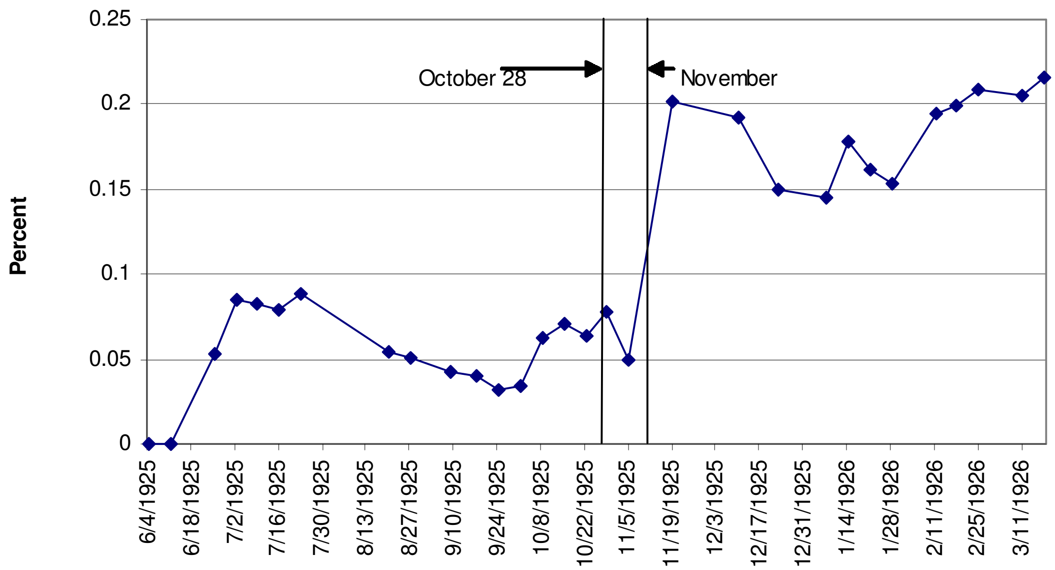
Determinants of the Returns to NYSE Seats

	1920-1925	1920-1928
Constant	0.0023	0.0045
	0.0022	0.0022
Dow Jones	0.2479	0.2768
	0.0648	0.0637
Daily Volume	-0.0118	-0.0131
	0.0049	0.0066
30 Day Volume	0.0472	0.0449
	0.0131	0.0144
Constant	0.0000	0.0000
	0.0000	0.0000
Arch(1)	0.0385	0.0319
	0.0153	0.0153
Garch(1)	0.948	0.9453
	0.0201	0.0275
Number of Obs.	214	326
Wald Chi-Sq (3)	37.4	30.9
Prob>Chi-Sq	0.0000	0.0000

Note: The terms below the coefficients are the standard errors.

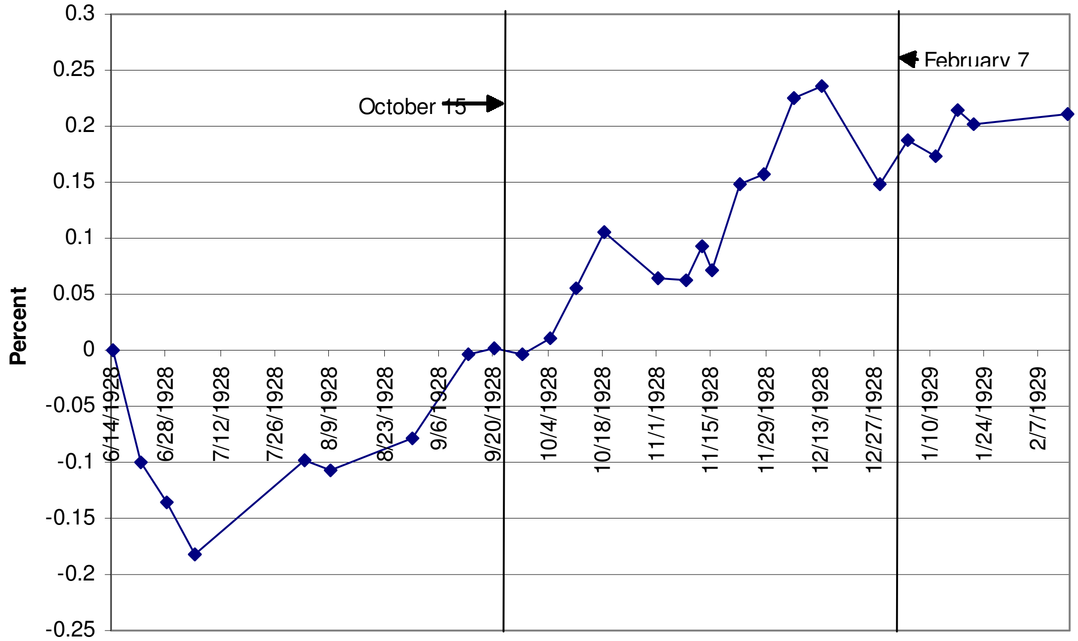
The difference between the observed returns on NYSE seats and the fitted values gives the abnormal returns. Figures 5 and 6 plot the cumulative abnormal returns beginning several months before the event window. In the case of the abortive 1925 attempt to increase the number of seats, there is no movement at the time of the announcement. The members may have doubted that it would succeed, but there is a large sustained leap in the abnormal return immediately after the members voted to block the creation of the new seats, a move that reflected their view that they had preserved the value of their seats.

Figure 5
Cumulative Abnormal Returns
June 1925-March 1926



In Figure 6, there are fairly large cumulative abnormal returns several months before the second attempt to increase the number of seats. The drop in seat prices occurred in the summer months when business on the exchange was typically low and there were fewer transactions. More importantly, the cumulative abnormal returns begin to rise at the beginning of the event window, reaching about 20 percent. This increase suggests that about 20 percent of the 35 percent rise in the price of seats may be attributable to the quarter seat dividend with the remainder being driven by the usual fundamentals.

Figure 6
Cumulative Abnormal Returns
June 1928-March 1929



Microstructure Matters

Normally a split in the rights to an asset does not affect the aggregate value of the asset; but, in the case of the 1920s NYSE, the distribution of a quarter seat dividend to members raised the value of the exchange. After World War I, the flow of orders was rapidly increasing after World War I, and the NYSE was reaching a capacity constraint that was determined in part by the fixed number of seats. Given the state of technology and the rules of the exchange—rules that governed clerks, the leasing of seats, and other dimensions---higher order flows reduced the quality of service to customers. Concern over the potential loss of business to competing exchanges forced the NYSE to consider its options. Although some groups of members were unhappy, the large majority of the members found the creation of a quarter seat dividend provided them with a means to obtain some of the gains from expanding the exchange. The rise in the price of seats that reflected the anticipation of the 25 percent increase in the number of seats, speaks to the force of the regulations governing the microstructure of the exchange.

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