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Winners and Losers under the Robinson-Patman Act

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WINNERS AND LOSERS UNDER THE ROBINSON-PATMAN ACT

Thomas W. Ross

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In this research I have received a great deal of assistance from several colleagues, particularly S. Peltzman, J. Wallis, R. Smith and F. Easterbrook. Special thanks are due to George Stigler for suggesting this line of research and to Gregg Jarrell for the time and effort he has devoted to teaching me something about capital market analysis. Particularly helpful comments were received from M. Adelman, K. Elzinga and participants in a seminar at the Federal Trade Commission. The highly competent research assistance of T. Niemira, S. Jarrell, J. Frieden and G. Heidrich is also gratefully acknowledged. Finally, I am happy to acknowledge my debt to the Federal Trade Commission, in particular R. Higgins, W. Shughart, and D. Pender, both for supplying some very valuable data and for answering a series of questions about FTC procedures and practices.

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Winners and Losers Under The Robinson-Patman Act

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Economy and the State
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September, 1983

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I. INTRODUCTION

The 1936 Robinson-Patman Ammendments to the Clayton Antitrust Act prohibit differences in price that might be injurious to competition. They also restrict certain practices (e.g. brokerage payments, unequal advertising allowances, etc.) that could be used to give hidden discounts to favored buyers. The Act has the distinction of being almost universally unpopular among antitrust scholars.[1] This is probably due to the fact that it looks less like an antitrust measure than like legislated relief for small business.[2] That the law wears an antitrust cloak is probably a measure of the cunning of its original proponents.

The statute's poor reputation is due more to theory than evidence, however. There has been very little empirical work on the impact of the Act, and what there is has been largely concerned with the effects of individual prosecutions. The purpose of this essay is to begin a broader empirical study. The essay begins by reviewing the Act's history. The impetus for the legislation came from the distributive (wholesale and retail) trades, where a struggle had developed between the old wholesale-retail order and the new chain store systems. This battle was particularly bitter in the grocery business where the largest chains operated. This discussion, coupled with that of the section following, suggests some potential winners and losers under the law.

Sections IV and V contain the empirical study. Section IV reports on a capital market analysis of chain store stocks and some interesting statistics regarding food brokers' commissions. Section V focuses attention on the firms actually charged under the Act by the Federal Trade Commission since 1962. An analysis of the stock price effects of such actions show the Act to be no toothless tiger. These firms suffer large losses when actions are brought, even if the cases are subsequently dismissed.

Since the early 1970s the number of R-P actions brought by the FTC has dropped off dramatically,[3] but it would be a mistake to dismiss the act as effectively repealed and hence uninteresting. The Act retains a great deal of support among small businessmen, arguably more support than it had in the 1930s.[4] This support has helped the law stand firm against its opponents and as long as a large number of small businessmen remain supportive, legislative reform will prove difficult.[5]

II. HISTORICAL BACKGROUND

The passage of the Robinson-Patman Act was not an isolated event. The struggles that brought about this legislation also lead to, among other things, chain store taxes and fair trade laws. This makes it hard to isolate the effects of R-P. In order to offer a plausible estimate it is necessary first to have a good understanding of all the major events of the period.[6]

The late nineteenth and early twentieth centuries saw a revolution in distribution. These developments short-circuited the traditional channels through which goods had been distributed--manufacturer to wholesaler (and sometimes other middlemen, such as brokers) to retailer. Department stores, mail order houses, cooperative retail buying groups, self-service groceries and, most important, chain stores all represented new ways of distributing goods.[7] Retailing was becoming a bigger business with increasing specializaton, many more products, and larger stores.

These developments threatened the smaller, higher-cost retailers (who were the retailers most badly hurt by chain growth) and the wholesalers and other middlemen who now often found themselves bypassed by the new channels. Just as the growth of the manufacturing industries had created a demand for independent wholesalers and brokers, the growth of retailers was shrinking their role. Increasingly, these new retailers realized economies by integrating the wholesale and retail functions. Similarly, in many trades manufacturers integrated forward, establishing branch warehouses and doing their own wholesaling.[8]

Although there are few published business data available prior to the 1929 Census of Business, Barger's statistics indicate that in 1889 about 70% of retail output went through at least one wholesaler while by 1929 this share had fallen to 60%.[9] This significantly understates the decline

of the independent middleman, for these figures count manufacturers' warehouses as wholesalers. As noted earlier, by this time manufacturers had integrated into wholesaling to an important degree in some fields, notably groceries and drugs.

The most dramatic of all these changes was the growth of chain stores. Although the chain store was not new (chain systems existed more than two thousand years ago),[10] the modern chain store period is usually said to have begun in 1859 when the second and third stores in what was to become The Great Atlantic and Pacific Tea Company (A&P) were opened.[11] Data on the total share of all retail business done by chains is not available prior to 1929 but Barger does have estimates for the grocery trade for years between 1899 and 1929. As recently as 1889 this share was close to zero but as Table One shows growth since then has

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Table One

	Chain Share of Grocery Store Sales
1899	8.3%
1909	20.4%
1919	25.4%
1929	32.8%

Source: Barger (see note 8) Table B-6, p. 148.

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been considerable.

At the turn of the century A&P operated about 200 stores. By 1929 the chain owned more than 15,000 outlets with sales of over one billion dollars. From 1919 to 1929

sales more than quintupled, giving A&P 11.3% of national grocery and combination store sales.[12] In 1929 there were several other large grocery chains, but even the second largest (The Kroger Grocery and Baking Co.) had only about a quarter of A&P's sales.

Chains had become important, but less so, in a number of other fields by 1929. Other large chains of the period included (with number of stores in 1930 in parentheses) J.C. Penney (1,452) in apparel, Walgreen (440) and L.K Ligget (549) in drugs, F.W. Woolworth (1,881) in variety, Montgomery Ward (556) in department stores, and United Cigar Stores (994) in tobacco products.[13]

The established retailing and wholesaling firms did not roll over and die. The earliest resistance involved organized boycotts of manufacturers who sold to the new retailers. Often these attacks were not disguised, and they frequently lead to FTC and Justice Department prosecutions.[14]

Eventually trade groups came to see the advantages in pushing for legislative relief. By the 1920's these groups were organized and powerful enough to start a spirited public debate on the "chain store problem".[15] The large chains took on the sort of evil image that the large trusts had suffered a few decades earlier with A&P as this day's Standard Oil.[16] They were accused of, among other things, paying low wages, not contributing to their communities, taking money out of communities, paying less taxes than

local merchants and turning America into "a nation of clerks".[17]

In 1922, at the annual meeting of the National Association of Retail Grocers (NARG) it was suggested that the number of chain stores allowed in a community be limited by law. Experts agreed that such a ban would face strong constitutional challenges, so the trade associations changed tactics. They sought instead special taxes for chain stores. In 1927 Georgia, Maryland and North Carolina enacted such taxes. Many more soon followed. The 1927 acts failed to survive constitutional challenge but in 1931 the U.S. Supreme Court upheld the Indiana law of 1929.[18] Eventually 23 states passed chain store tax laws that neither courts nor referenda invalidated.

The severity of these taxes varied greatly. Most states adopted a graduated license tax in which the fee per store grew with the number of stores operated by the chain in the state. This form was particularly punishing for the food chains for two reasons. First, the food chains were the largest and so were often assessed the highest fee per store. Second, chain food stores generated less profit per store than most chain stores in other fields. A large sample of chain stores revealed that in 1929 the net profit per store in the grocery business was about $1,694, while the corresponding averages for shoe chain stores was $3,242, for drug stores $7,841, and for variety stores $16,237.[19] The

maximum tax per store varied from the $50 per store in Maine's 1933 law (reached with the 26th store in the state) to the $750 per store charged by Texas (reached with the 51st store in the state) in its 1935 legislation.[20]

Meanwhile, the Federal Trade Commission, at the call of the Senate (itself influenced by pressure groups) was studying chain stores. It issued 33 reports, culminating in its Final Report of 1934. The report was rather supportive of chains, demonstrating their efficiencies and recommending against taxing away the advantages of chain store distribution. The Commission concluded that the chains' growth would continue but expressed a lack of concern that a monopoly in distribution could develop, arguing instead that competition between the chains was sufficient to prevent this from happening.

The study revealed that about 15% of the chains' price advantage could be explained by the lower prices they paid their suppliers. The Commission did not attempt to determine to what extent these lower purchase prices may have been justified by cost differences. This proved unfortunate, as this 15% figure was later cited as "proof" that independents were being discriminated against.[21] In fact, however, the assistant chief economist for the investigation was to write later that "the allowances made by sellers for quantity have relatively seldom represented the full...savings in selling and delivery costs that were involved...".[22]

The depression of the 1930s brought the National Recovery Administration Codes of Fair Competition to the distributive trades. The Codes greatly limited price competition at the wholesale and retail levels. Though often a source of confusion, they did protect the traditional distribution patterns. The chain system's share of total sales did continue to grow from 1929 to 1933 but by 1935 it had fallen.[23]

On another front, the retail druggists took on price competition in their industry more directly by proposing and lobbying for fair trade laws. The National Association of Retail Druggists (NARD) was amazingly successful: versions of NARD's "Model Act" were adopted in 20 states and eventually 45 states passed some sort of fair trade legislation. These laws legalized resale price maintenance (RPM) agreements within states but were of no use unless manufacturers could be convinced to adopt RPM plans. Here too the druggists were successful.[24]

When the NRA Codes were declared unconstitutional in 1935, wholesalers and independent retailers immediately sought to have their protection against chains restored. Representative Wright Patman, who would later declare "there is no place for chain stores in the American system",[25] became their champion in Congress. On June 11, 1935 Patman introduced the first version of what was to become the Robinson-Patman Act.[26] The original bill was written by

the attorney for the United States Wholesale Grocers Association. NARD, NARG, and the food brokers quickly threw their support behind it. On June 26 Senator Robinson added his name to the bill, submitting it to the Senate. It was adopted, as modified, almost exactly a year later.[27]

After this and the passage of the Miller-Tydings Act in 1937 (which exempted RPM agreements from the federal anti-trust laws) the legislative tide began to turn slightly in the chains' favor. A campaign to defeat a referendum on a particularly harsh California chain tax law was successful in November 1936. A similar campaign in Utah succeeded in 1942. Most importantly, a national chain store tax bill proposed by Patman twice (in 1938 and 1940) died in committee both times. Referred to as the "Death Sentence Bill", it would have closed all the major chains. If the proposed tax had been in effect in 1938 A&P would have been required to pay about $472 million in taxes on earnings of about $9 million.[28] As one would expect, there were limits to the amount of relief Congress would provide to the independent retailers and their wholesalers.

III. A THEORETICAL VIEW OF THE ACT

It will facilitate the exposition somewhat and also help to focus the discussion if we begin with a brief description of how R-P affects chains and allocative efficiency. This section makes use of some results derived elsewhere.[29]

Consider the situation of a single imperfectly competitive seller selling his output to two types of buyers. His objective is to choose prices (P_1,P_2) to maximize profits. Think of the first category of buyer as independent retailers, while the second is retail chains. For simplicity assume that marginal costs are constant but different for the two kinds of buyers. The marginal cost of a unit sold to a retail chain (C_2) is less than the marginal cost to an independent retailer (C_1).

Figure One illustrates this seller's pricing decision. Without the R-P law this seller would be free to choose any point in price space. In Figure One p* is this unconstrained profit maximizing price vector. Around this point the iso-profit contours represent lower and lower levels of profit as we move further away from p*.

Under R-P price differences may not exceed differences in the costs of serving different buyers. If this means that price differences (P_1-P_2) can <u>at most</u> equal cost differences (C_1-C_2), we find that the set of legal price vectors can be represented by the area between the lines P_1=P_2 and P_1-P_2=C_1-C_2 which is shaded in the figure.[30] Maximizing profits subject to this law then will lead the seller to point A where P_1=P_1^A and P_2=P_2^A. The seller has lowered the price to the independents and raised it to the chains, as the proponents of R-P hoped it would.

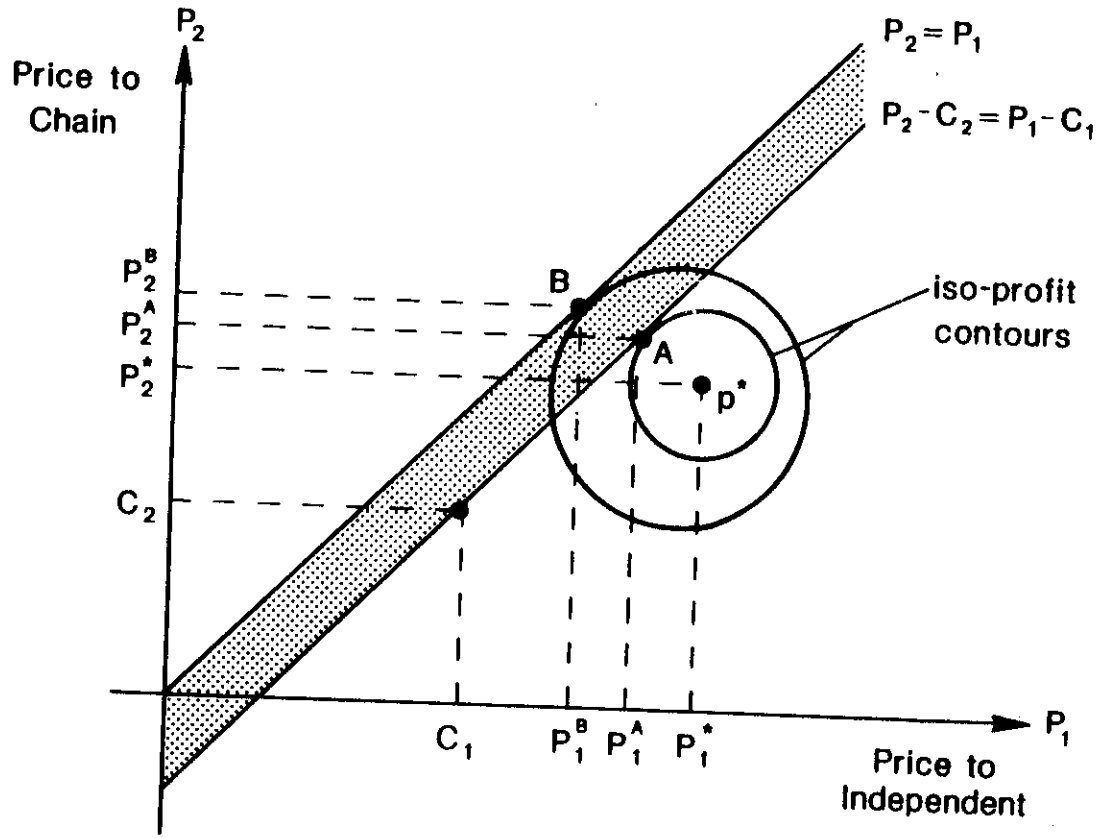

P_2
Price to Chain
$P_2 = P_1$
$P_2 - C_2 = P_1 - C_1$
P_2^B
P_2^A
P_2^*
B
A
p^*
iso-profit contours
C_2
C_1
P_1^B
P_1^A
P_1^*
P_1
Price to Independent

FIGURE ONE

It is true that p* was located rather arbitrarily here and that the analysis does not demonstrate anything about the shapes of the iso-profit loci that would allow us to conclude that P_1 falls and P_2 rises. However, I have developed this model more fully elsewhere and shown that under reasonable conditions the results are as illustrated here.[31]

The law takes from both the seller and the chains and gives to the independent retailers. Whether this redistribution is on net socially beneficial will depend on one's welfare function.

The seller's choice of point A as its constrained optimum depends on its ability to easily demonstrate that its price differential makes only due allowance for the difference in costs. Such a demonstration would be necessary if the FTC were to investigate the price differences or if an independent retailer were to initiate a civil action. In fact, however, one of the greatest complaints that antitrust scholars have about the enforcement of the Act is that the cost justification defense has become very difficult to use. Fredrick Rowe has called the defense "impossible", an assesment with which Posner agrees.[32]

The main difficulty with the defense is that the Commission has required that defendants prepare detailed objective cost studies, yet no clear guidelines exist for the preparation of such a study.[33] As a result, many costly

studies have been rejected by the FTC and the courts when there was dissatisfaction with one or another of the assumptions employed to reach the cost estimates.[34]

Because cost defenses may be rejected- or a seller may not know its own costs perfectly- a firm that wants to avoid R-P prosecution (or litigation) may opt for some margin of safety or even for a point like B in Figure One where there is no price difference at all. Under the same conditions referred to earlier, point B will be even better for the independent than A was, that is $P_1^B<P_1^A$ and $P_2^B>P_2^A$. Again, the chains and the seller are worse off.

There is an important qualification to one of the results presented here. Figure One indicates that the seller loses when R-P is passed and enforced. This result depends critically on the assumption that the chains' demand function does not change. There is reason to believe, however, that it will change in a significant way. Although under R-P the seller cannot offer the discounts it once gave to chains, the competition is similarly constrained. Thus the chains lose some bargaining power in their dealings with suppliers. This effectively reduces their elasticity of demand and may leave the sellers better off rather than worse. There are limits to how far these elasticities can fall, however, because the chains can (and did) vertically integrate or enter into contracts with suppliers who deal with them exclusively.

A related and much discussed aspect of the Act concerns the possibility that it may help to enforce cartel price rules by discouraging secret price shading by members.[35] More generally, the Act may simply hinder strong price competition in markets that, although not cartellized, are not perfectly competitive. This is, perhaps, economists' greatest concern with the law.

This simple model implies that the Act should help the independents and hurt the chains. The effect on suppliers is ambiguous although when vertical integration or exclusive contracts are attractive options for chains, the suppliers will be hurt as well.[36]

IV. THE FIRST YEARS UNDER THE ACT

There has been little empirical work done on the effects of R-P. What there is focuses on the details of individual cases brought before the FTC and the courts. The Justice Department Report is a prime example: it first makes theoretical arguments regarding the effects of the Act and then offers as support the facts of certain cases.[37]

I take a different approach to study the effects of the law. The previous two sections suggested that the chains, manufacturers, and middlemen would be affected. Here, I look in the obvious places for these effects. This is a useful first step rather than a complete analysis.

My primary focus is on the food industry from the mid-1930s, when the law was introduced, until the late

1930s. The reason for focusing on this particular industry should be clear from the historical review. Further justification comes from some results of the effects on chain stores in other fields.

Data from this period are scarce; most industry statistics are available only for Census of Business years, and the Census began only in 1929. The most interesting results here come from tests using capital market data.[38] The discussion of the effects of the law in its first few years treats in turn the effects on retail chains, grocery manufacturers, and grocery middlemen, especially the traditional wholesalers and food brokers.[39]

The Chain Systems

In an efficient capital market, the expected effects of R-P on future chain profits should have been summarized by movements in the stock prices of the chain systems. To the extent that the chains were expected to circumvent the new law through vertical integration or exclusive contracts, profits and therefore stock prices may not have been seriously affected. Similarly, if most discounts to chains could have been easily cost justified, then the R-P constraint may be seen to be nonbinding and ineffective. But if the Act has teeth, stock prices should have fallen.

To study the effects of R-P on share prices, I formed portfolios of chain stocks. Of principal interest will be the grocery chain portfolio but portfolios of drug, variety,

and department store chains were also studied for comparison. Each portfolio was composed of the major chains in the field listed on the New York Stock Exchange throughout this period.[40]

Each portfolio has a cumulative abnormal return (CAR), which is the sum of the monthly differences between the actual and expected returns on the portfolio, where the expected returns take into account the monthly movement of the market as well as an estimate of the portfolio's usual relation to general market movements (i.e., its beta factor). The monthly stock returns data comes from the files of the Center for Research in Security Prices (CRSP) at the University of Chicago.

The first step in calculating the CARs involves, for portfolio p, estimating the following equation (using ordinary least squares):

(1) $$R_{p,i} = \alpha + \beta R_{m,i},$$

where $R_{p,i}$ and $R_{m,i}$ are, for month i, the returns to the portfolio and to the market. Given estimates of α and β, $\hat{\alpha}$ and $\hat{\beta}$, we can determine the abnormal return to the portfolio in month i as

(2) $$AR_{p,i} = R_{p,i} - \hat{R}_{p,i} = R_{p,i} - \hat{\alpha} - \hat{\beta} R_{m,i} .$$

Summing the $AR_{p,i}$'s over some period yields the CAR_p for that period.

Equations of the form of (1) were estimated for each of the portfolios for the period from January 1926 to December

1945. The CAR's for the grocery group are plotted in Figure Two for the subperiod from June 1933 to December 1938. The CARs for the other portfolios are much less interesting and are not plotted here.[41]

The results for the grocery chain portfolio are striking. Beginning about June 1935 (the month that R-P was introduced into both houses) the portfolio begins a series of negative abnormal returns that lasts, with only a brief pause in late 1936, about two and one half years. A look at these plots suggests that the total negative abnormal return over this period could represent as much as eighty percent of the portfolio's value. To get a more precise estimate of the loss and to test its statistical significance, equation (1) is reestimated with a dummy variable (D) which equals one from June 1935 through December 1937. The results of this regression are given below, with t-statistics in parentheses.[42]

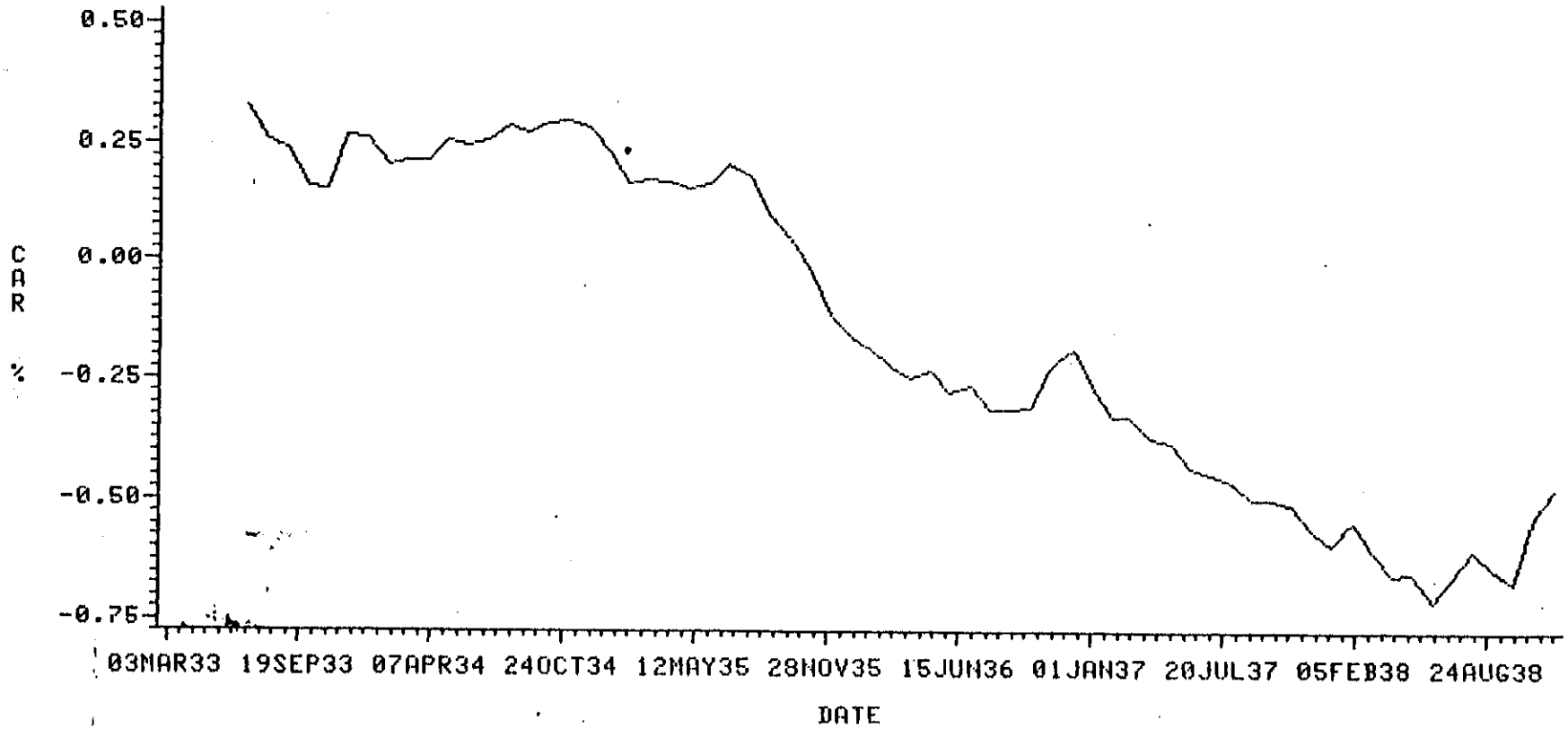
$$R_i = \underset{(1.45)}{.0056} + \underset{(19.40)}{.5892}\, R_m - \underset{(-2.59)}{.0277}\, D$$

$$R^2 = .6175.$$

The coefficient of the dummy is significant and very large, implying a mean 2.77 percentage point negative abnormal return per month, or a fall of 58 percent in equity value over the entire 31 month period.[43]

As with other studies of this sort, it is important to know just what "event" is under study. We cannot identify a

FIGURE TWO
GROCERY CHAIN PORTFOLIO (SIX FIRMS)



time, call it t, such that at t-1 the market knew nothing about the legislation while at t it knew everything. If we could, we would expect the market to react completely on day t. With most legislation, however, information is generated continuously over an extended period of time as the original bill is amended, as its probability of passage changes and as its enforceability (and degree of enforcement) becomes known. In the case of the grocery chains, this new information was almost always bad for the chains, and the negative abnormal returns continued until the middle of 1938.[44]

The other chains did not experience the extraordinary negative returns of the grocery chains. Each shows a decline just after June 1935, but in each case the slide continues for only about half a year. To test to see whether these six-month declines were significant, regressions of the form of (1) were run with a new dummy variable (D2) that equalled one only until December 1935.

Variety: $R_2 = .0005 + .6812\ R_m - .0213\ D2$
$(0.12) \quad (21.37) \quad (-.90)$
$R^2 = .6584$

Department: $R_3 = .0036 + .8079\ R_m - .0022\ D2$
$(0.82) \quad (21.76) \quad (-.08)$
$R^2 = .6680$

Drugs: $R_4 = .0064 + .4374\ R_m - .0293\ D2$
$(1.04) \quad (9.19) \quad (-.84)$
$R^2 = .3136.$

In each case the sign of D2's coefficient is negative but not significant. Thus, even when the window is picked in the way most conducive to finding a significant effect,

the hypothesis that these movements were random fluctuations cannot be rejected.

These results offer some justification for focusing on the grocery industry in the remainder of this section. Just as the grocery chains were at the center of the public debate about the chain store problem, so were they the most affected by the actions taken against the chains. It is difficult to say whether this was the case because the grocery chains were expected to suffer more than other chains as suppliers adjusted their prices or because of fear that the FTC would concentrate its enforcement efforts on the food industry. Certainly this latter concern was justified: of the first 50 docketed FTC cases resulting in orders to cease and desist, 26 involved firms in the food industry.[45]

The market was quite correct in expecting R-P to have an adverse effect on grocery chain profits. Adelman, in discussing A&P's troubles at the time claims that the chain felt the effect of R-P almost immediately, principally as manufacturers cancelled advertising allowance plans. Between 1935 and 1937 such allowances to the firm fell by more than four and one half million dollars, or about 61%.[46]

1937 was not a banner year for retail trade in general, but it was very bad for the major grocery chains. Table Two gives net profits as a percentage of net worth for the six largest grocery chains. Notice that the unweighted average

fell from 8.1% in 1936 to 3.5% in 1937, a decline of almost 57%. This last figure compares with a fall of about 12% for

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Table Two

Net Profits (after Federal Tax) as a Percentage of Net Worth

	1936	1937
Great A&P Tea Co.	10.2	5.8
Kroger G&B Co.	7.1	6.0
Safeway Stores	9.0	6.5
American Stores	7.0	1.8
First National Stores	13.9	11.6
National Tea Co.	1.6	-10.8
Simple Average	8.1	3.5

Percentage change of average from 1936 to 1937 = -57.8%.

Sources: Beckman and Nolen (see note 10), p. 151, and Moody's Industrials, Vols. 9-12.

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wholesale and retail trade generally.[47]

Furthermore, data collected from the same sources referred to in the table indicate that the unweighted average decline for seven major variety store chains was 12.2%, for three shoe chains 17.8%, and for two drug chains 25.5%.[48]

In the first years after R-P was passed chains continued to lose ground to independents. As revealed in Table Three the share of total retail sales going to chains of four or more stores fell from 1933 to 1935 and continued to decline through to 1939. Leading this decline were the gro-

Table Three

Share of Retail Sales Done by Chains* in Percent

	Total Retail Sales	Grocery Store Sales
1929	21.5	38.5
1933	27.0	44.1
1935	24.5	38.9
1939	22.8	36.7
1948	22.3	37.0

*Four or more stores

Source: Calculated from data in Historical Statistics (1975) pp. 846-9.

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cery chains, which accounted for about 30% of total chain retail sales. The losses of the chains in the drug, shoe, and variety chains were much smaller.[49]

Grocery Manufacturers

The discussion in Section III suggested that the Act could help or hurt manufacturers. It is therefore interesting to study the capital market's assessment at the time. To investigate this question a portfolio of New York Stock Exchange-listed grocery manufacturers, twenty firms in all, was constructed. I estimated equation (1) for this portfolio and calculated the CARs.[50] From June 1935 to December 1937 this portfolio lost to the market just as the chains had, although the negative abnormal return is only between ten and twenty percent. To test the significance of this

loss, a regression similar to the one for the chains was run with the return to the manufacturer portfolio R_s regressed on the return to the market and a dummy variable (D) equalling one over the period of study (June 1935 to December 1937).

$$R_s = \underset{(1.19)}{.0030} + \underset{(28.26)}{.5658}\, R_m - \underset{(-.79)}{.0056}\, D$$
$$R^2 = .7712$$

The t-statistic is so small we cannot reject the hypothesis that the loss was random fluctuation.

The fact that the manufacturer portfolio did not rise over this period could be taken as evidence that fears that R-P would improve cartel price discipline were unfounded. For this sample of manufacturers this is likely a valid conclusion, however this portfolio includes only large national firms. Where there is evidence that the Act has had such an anticompetitive effect it has been in protecting the market power of local producers, such as bakers and dairies.[51]

Food Brokers and Other Middlemen

Trade sources concluded quickly after R-P's passage that the Act would benefit food brokers more than any other group. Gordon Corbaley, reporting on the first year under the new law for the Wholesale Grocer News, claimed that food brokers had taken a new lease on life.[52] The brokers also won an important victory regarding interpretation of the new law when in 1939 the Supreme Court read the "except for services rendered" clause out of Section 2(c)'s brokerage pro-

visions.[53] This meant that even if bypassing a broker on a sale to a chain saved the seller the broker's commission, this saving (or even a part of it) could not be passed on to the buyer. By 1940 Business Week was reporting that brokers claimed that their business was much improved by the Act.[54] The opinion that the Act and its enforcement has been particularly kind to brokers is still widely held but has never been properly supported.[55]

Data from the Census of Business can be used to generate some statistical evidence. Because figures are available only for Census years (and not for the 1933 Census) we are forced to compare brokers' performance with that of others in the food industry for the 1935 to 1939 period, which includes a year and a half prior to R-P's passage. Nevertheless, the differences are still striking. Table Four presents the data.

Between 1929 and 1935 agents and brokers in the food trade lost commissions at a rate that exceeded the rates at which retail food and wholesale grocery sales were falling. In the period from 1935 to 1939, however, brokers recovered very strongly with rates of commission growth more than double that for retail food sales and more than seven times that for wholesalers.[56] From 1939 to 1948 the brokers held on, but did not add, to their relative gains.

This offers some support for the often expressed view that food brokers have been big winners under R-P. To get a

TABLE FOUR

	Sales or Commissions ($ million)				Percentage Change		
	1929	1935	1939	1948	1929-35	1935-39	1939-48
Total Retail Sales: Food Group	10,960	8,358	10,156	30,093	-23.7	+21.5	+196.3
General and Specialty Line Grocery Wholesale Sales	4,241.5	2,963.0	3,157.3	8,586.6	-30.1	+6.6	+172.0
Agents and Brokers* Commissions: Food	40.7	24.9	37.4**	98.9	-38.8	+50.2	+164.4

*Note: Agents and Brokers is a Census class that includes many types of intermediaries other than ordinary brokers (e.g., export and import agents, commission merchants, selling agents, etc.). The differences between brokers and these other types are often very slight and so we would expect R-P to affect many of them in much the same way as it affects brokers. Also, figures for 1929 (for which a complete breakdown is available) show that pure food brokers accounted for about 79% of the grocery sales of the Agents and Brokers class. Source: Fifteenth Census of the United States 1930, Distribution, Table 13, page 116, with definitions coming from pages 45 to 46.

**Note: This value for 1939 was not actually given in the table cited, but was estimated by multiplying the 1939 commission-on-sales rate by 1939 agents and brokers sales. Both of these figures were given in the table. As a check, this procedure was applied to the other years and it produced "estimates" of dollar commissions that were within a few tenths of a percent of the actual commissions.

Sources: Retail figures from: Historical Statistics of the United States (1975), page 849.
Wholesale and Broker Statistics from: U.S. Census of Business - 1948, Trade Series, The Grocery Trade, Table 1, page 16.

very crude measure of their gains we could assume that without the law their commissions would have grown at the same rate as total retail food sales. This assumption is at least partially justified by reference to the fact that agent and broker commissions in all fields and total retail sales both grew about 28% from 1935 to 1939.[57] Subtracting the 21.5% increase in retail food sales leaves gains of about $7.1 million dollars in 1939 alone, or about 19% of that year's commissions.

V. THE EFFECTS OF FTC ENFORCEMENT

After its passage, the FTC became the Act's champion. Here I examine the effects of FTC prosecutions. To what extent are the firms selected for prosecution hurt by the Commission's actions and how much does the damage vary between those cases that end in consent decrees, dismissals, and orders to cease and desist? To answer these questions I again rely on information from the capital market, looking for abnormal returns both around the day that the FTC's action is announced and around the date of disposition.

This is not the first study of this kind. Ellert's capital market study of the impact of FTC and Justice Department enforcement of the antitrust laws included a sample of R-P actions brought by the Commission.[58] Although he found no significant effect on the stock prices of the firms involved, there are reasons to take another look at this question. First, he had only monthly returns data to

work with, while daily returns figures now available allow more precision in locating an effect. Second, a large fraction of his R-P cases (72 out of 184, or 39%) were subsequently dismissed, and a smart market might have expected this. As these cases might bias the estimated effect toward zero it would have been interesting to split the sample and retest. Finally, Ellert did not study separately the effects on firms that signed consent orders with the FTC.

After the Commission has initiated an investigation into its pricing practices, a firm generally has an opportunity to sign a consent order promising to discontinue the offensive practice. If the FTC and the alleged violator do not come to such an agreement, the complaint is issued and the matter docketed. The case is then put before an administrative law judge who renders an initial decision. This decision may be, and almost always is, appealed by either side to the full Commission. The decisions of the Commission can be appealed to the courts, but only by the defendant.

I study three samples of firms involved in R-P actions. The first sample consists of 27 firms that signed consent orders after July 1962 (when daily stock returns data are available from the Center for Research in Security Prices).[59] The second and third samples are docketed matters that culminate in orders to cease and desist (11 cases) and dismissals (17 cases). All three samples contain only

pure R-P cases; that is, each complaint relies solely on the R-P Act. All the cases concern only sellers; Section 2(f) buyer cases were not included because of the possibility that buyers would be affected differently from sellers. It is unfortunate that there were too few buyer cases to form a separate sample to test this possibility.[60]

Consent Orders

In consent order cases there is really only one important date, that on which the consent order is agreed to and entered. I refer to this date as DC. In general, Commission investigations are secret until the date a signed order is announced, but it is difficult to say how quickly the information gets out.[61] Searching the Wall Street Journal for announcements of the orders revealed that some were reported the next day, some were reported weeks later, and many not at all. There was also a case in our sample in which the Journal reported on an investigation three months before its DC.

The consent sample is comprehensive given the constraints. It includes all the New York Stock Exchange firms that were charged with selling violations under (only) R-P between August 1962 and April 1981. These data were kindly provided by the FTC.

Using CRSP daily data we do not need to calculate abnormal returns to individual stocks, as the Center already has this information on file. It is a simple matter then to

average the firms' ARs and to cumulate them. For the period beginning 50 days before DC and extending to 60 days after, the CAR for this portfolio is plotted in Figure Three. Over the entire period the portfolio loses almost 10% of its value, a very large loss over only about one hundred trading days. The sharpest decline begins just a few days after DC when the portfolio loses more than six percent in only 40 days.

To test for the statistical significance of a loss of d percentage points over a period of N days we can use the t-statistic $t=d/(s\sqrt{N})$, where s is the estimated standard error of the portfolio. To get an estimate of the standard error outside this active time we used the 100 day period beginning 50 days after DC. A significant t-statistic, then, suggests that the drop in value, d, was not likely due to random fluctuation.

In Table Five we report the t-statistics for two inter-

Table Five

Consent Orders Around DC

Interval	d	t
-35 to +50	.0968	2.14
-5 to +50	.0759	2.08

Note: s=.004917

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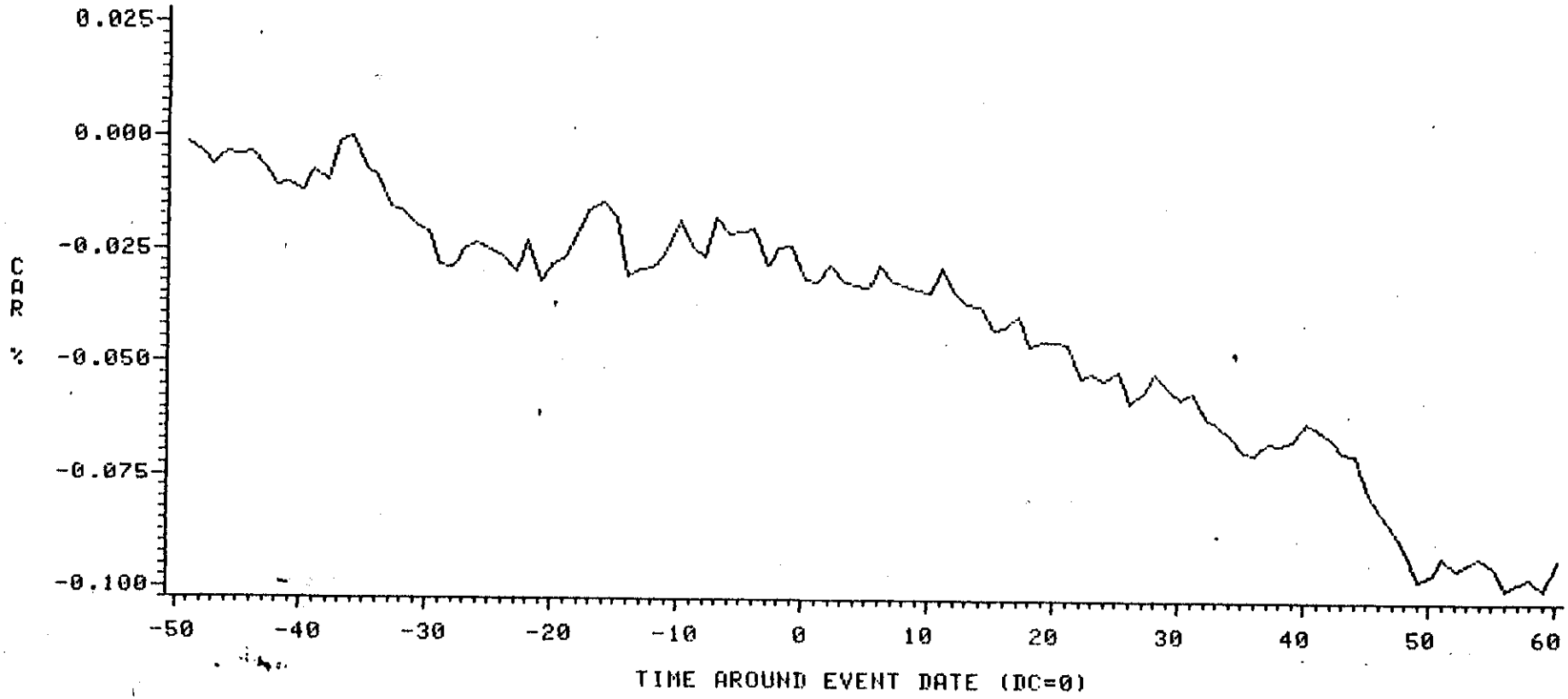
vals. The interval beginning 35 days before DC includes

FIGURE THREE
CONSENT PORTFOLIO AROUND DC (27 CASES)



much of the portfolio's early decline (between -38 and -29) which may have been attributable to leakage of information to the market. Even if this early drop was caused by some other factors, the decline from only five days before is still significant at the 5% level.

These losses are substantial and they seem that much greater because these are generally large firms and the R-P actions often involve only a small share of a firm's total output.

It is likely that a number of factors contribute to this total loss. The lost pricing flexibility, the movement from p* to A (or B) in Figure One, may be quite costly and with the Commission's attention drawn a firm may feel it has lost some pricing freedom even on products not involved in the original action. Second, there may be damage done to a firm's goodwill; some previously disfavored customers, who had been unaware that they were disfavored, might subsequently take their business elsewhere. Finally, the fear that private treble-damage suits may follow might serve to depress stock values. Very little information is available on private enforcement of R-P, but Posner claims that, as part of the enormous upsurge in the number of private antitrust actions that began in the early 1960s, the number of private R-P suits increased as well.[62]

At any rate this loss is large, so attempts to explain the recent nonenforcement of the Act by the FTC cannot claim

that the reason lies in the fact that prosecuted firms are not hurt.

Docketed Matters

Docketed cases present several interesting event dates, but I chose to focus on just two. The date of issue (DI) is the date the Commission files its complaint and the date of disposition (DD) is the date that the full Commission makes its final decision.

As with the consent sample, the cease and desist and dismissal samples contain only events after July 1962 and include cases that involve only R-P violations. Finally, all the firms included had to be listed on the New York or American Stock Exchanges around their event date.

Because so few cases met the above criteria and had both DI and DD dates after July 1962, several cases were included for which only the later date fell within the study period. That is, there is a much larger sample of DD events than DI events. Really, then, there are four subsamples in this section, defined by the form of the disposition (order to cease and desist or dismissal) and the date in question (DI or DD).

I begin with the DI samples, which are unfortunately too small to give us much information. We have usable dates for only two cease and desist order cases and three dismissals. To begin with, we pool all five cases together into one portfolio as we did for the consent cases earlier.[63]

With such a small sample one outlier can distort the results, and this indeed happens. One of the cease and desist order cases enjoys an extraordinary gain around its DI and pulls the portfolio up. Without this firm there is no significant movement around DI. Splitting this sample shows nothing, as the three dismissal cases show only a small and insignificant decline around DI as does the less puzzling cease and desist case.

The results of the tests on the DD samples are much more interesting. We have a portfolio of 11 firms hit with orders to cease and desist, and the plot of the CARs for this portfolio is given in Figure Four. These plots show a sharp decline right around DD. Table Six presents the d and

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Table Six

Orders to Cease and Desist Around DD

Interval	d	t
- 9 to +11	-.0506	2.09
-5 to +5	-.0277	1.62

Note: s=.00541

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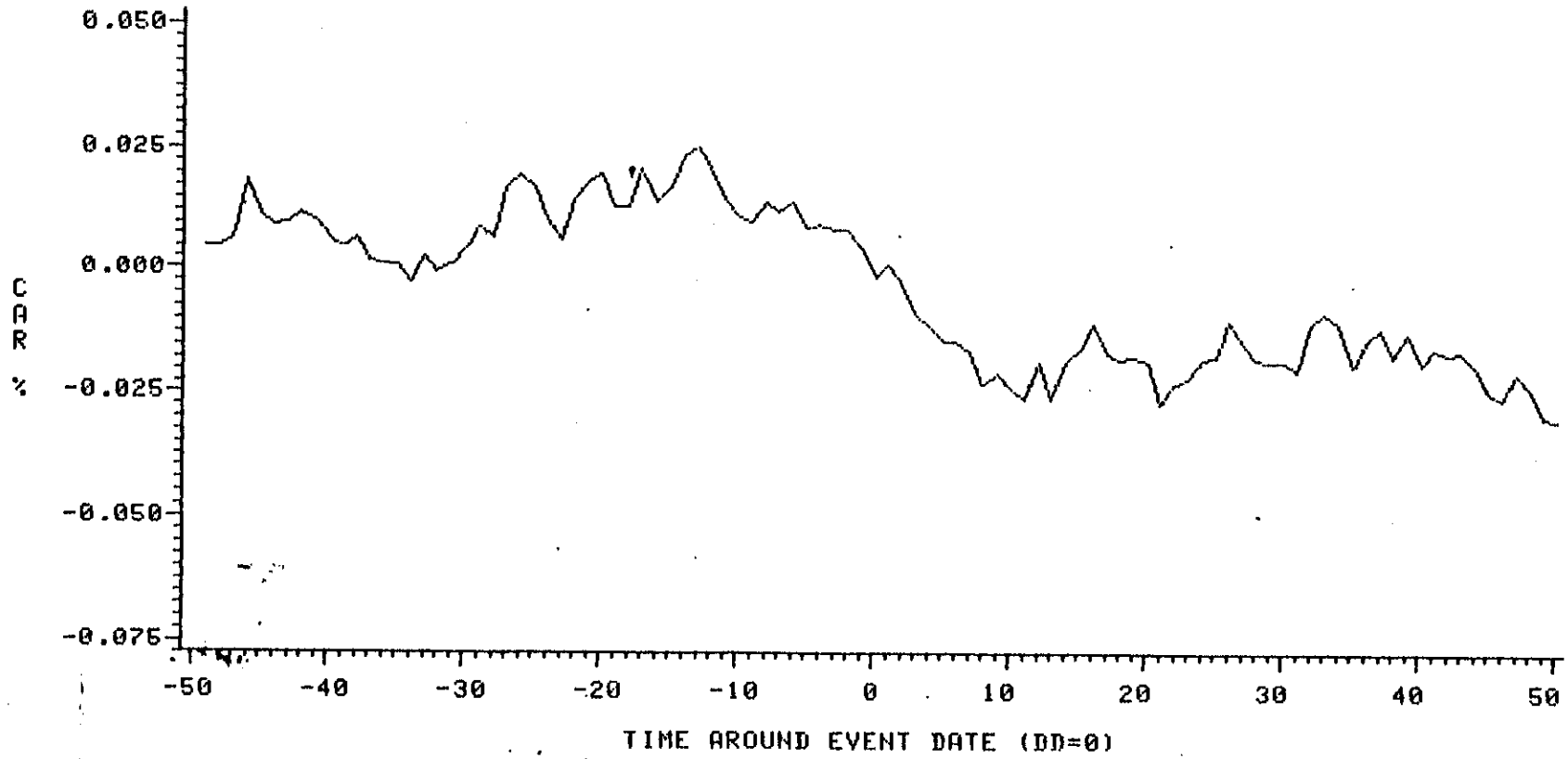
t-statistics for two intervals. Again, the standard error of the portfolio is estimated in the 100-day period beginning 50 days after DD.[64]

The most interesting thing about these results is not so much that the decline is significant, but that it is much

FIGURE FOUR
ORDERS TO CEASE AND DESIST AROUND DD (11 CASES)



smaller than the decline suffered by firms that agreed to consent orders. Because any firm may refuse consent and take its chances on a dismissal or a cease and desist order, this suggests that there are important differences between the situations of firms that do consent and those that do not.

Before developing this line of thought further, we turn to look at the dismissal cases around DD.[65] The CARs for this 17-case sample are plotted in Figure Five. These returns also show decline but a little more gradual in this case than for the cease and desist portfolio. One might have expected the dismissal to have been good news reflected in positive abnormal returns, but this is apparently not so. Although there is not much movement right around DD there are sharp declines both a few days earlier and a few days later. Combined, these periods amount to a fairly significant loss as evidenced by the statistics given in Table

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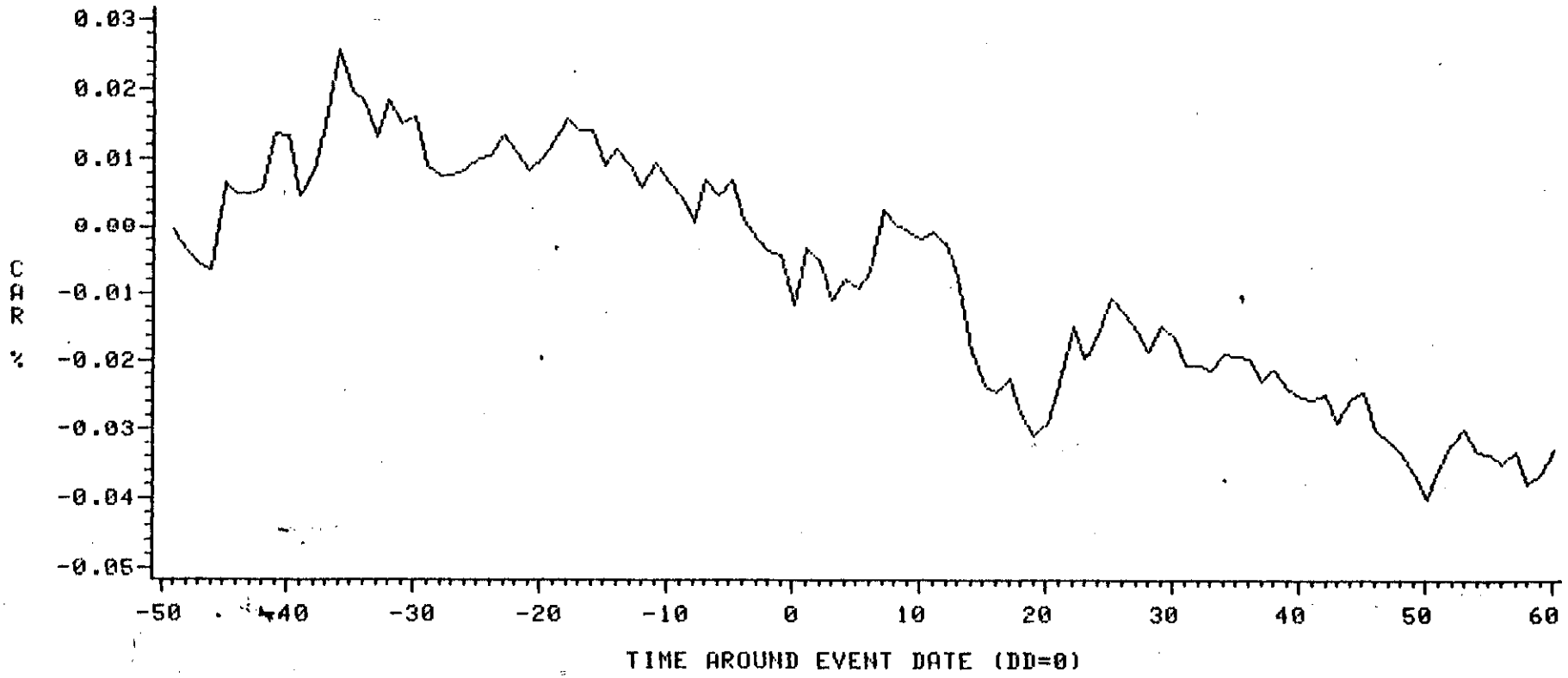
Table Seven

Dismissals Around DD

Interval	d	t
-16 to +19	-.0452	2.04
-16 to + 0	-.0257	1.72
+10 to +19	-.0291	2.59

Note: s=.00375

FIGURE FIVE
DISMISSALS AROUND DD (17 CASES)



Seven. The total decline, from 16 days before DD to 19 days after, is about four and a half percent. These losses are puzzling. Even if any announcement is viewed as bad publicity, an efficient capital market would have been expecting some decision, so only a decision worse than expected should lead to negative abnormal returns.

These declines are all the more surprising because in sum they are about as great as those suffered by firms that lost their cases. It appears, on the surface, that the dismissal was bad news. This is hardly believable, but finding a sensible explanation is not easy. Peltzman obtained a similarly curious finding in his study of the capital market effects of FTC false advertising actions. Firms winning dismissals suffered significant negative abnormal returns just prior to the date of dismissal.[66]

By either measure the negative effect of the dismissal announcement is again significantly smaller than the effect felt by firms signing consent orders. I offer two explanations for why the consent cases have the greatest effect. First, consider the situation of the firm in Figure One, which has been pricing at p*. Assume that when p* is further from the set of legal price vectors the probability of the firm's winning a contested case falls but that the stakes (the lost profits should it consent or lose) grow. Though the lower probability and greater stakes create a tradeoff for the firm choosing its strategy, if the prob-

ability of winning falls low enough the firms with "very discriminatory" prices facing positive legal costs may choose to sign consent orders. Should this be the case, the consent sample will be made up of the most serious offenders, which will be the ones most hurt by having their pricing freedom restrained.

A second possibility, and one that can be at least partially tested, is that the firms in the consent sample are, in general, smaller firms without in-house legal departments. If firms without their own legal departments find it more costly to contest an FTC action, we would, ceteris paribus, expect a greater proportion of them to settle early with consent orders. We might also expect R-P actions to be less damaging (in percentage terms) to big firms because each action typically involves the pricing of only one or a few products, and larger firms may have many others unaffected. These effects would combine to create a consent portfolio of generally smaller and more vulnerable firms.

Although explanations for some of these results are elusive, it seems that R-P actions impose significant costs on firms, even if the cases are eventually dismissed. This fact, coupled with the inordinate amount of attention the FTC paid to the food industry, further justifies the capital market's reevaluation of grocery chain stocks after the passage of R-P. An interesting question we did not address here (because our samples were already so small) is whether

the capital market effects varied for different R-P offenses. For example, were brokerage cases (section 2c) more costly than general price discrimination (2a) or advertising allowance (2d) cases? To get large enough samples to answer this question may involve returning to the monthly data that Ellert used. The current non-enforcement of the Act is certainly not providing many new cases. It would also be useful to follow up the cases that go to courts of appeal, although there again we will be struggling with small samples if we try to work with daily returns data.

VI. CONCLUSIONS

The Robinson-Patman Act has had some important effects. Most of the results here confirm what has become the conventional wisdom, although the magnitudes of some of the effects may be surprising. The data for the first few years under the law provide evidence of deleterious effects on the grocery chains but little evidence that other chains and grocery manufacturers were affected. Some crude calculations suggested that the food brokers were advantaged, to the amount of several million dollars a year.

The capital market analysis of the effects of FTC enforcement of the law also provided some interesting and puzzling results. Perhaps the most striking of these are the size of the negative abnormal returns suffered by firms that sign consent agreements and the fact that firms that win their contested cases fare as poorly in the capital market as those that lose.

This research should be viewed as a first step toward a better understanding of what the Act does and whom it serves. Many interesting questions remain. For example, how much is the consumer paying for R-P in the form of higher prices? A more sophisticated approach should yield a better estimate of the gains to brokers and other middlemen. Finally, what effects do R-P actions have on the rivals of the firms charged? To the extent that a successful FTC action inhibits efficient distribution these rivals may be hurt as well. On the other hand, if the order inhibits vigorous price competition, they may be made better off.

FOOTNOTES

1. See United States Department of Justice, Report on The Robinson-Patman Act (1977) (hereafter cited as Justice Department) for a discussion of modern opposition to the Act.

2. In this regard it may differ in degree, but not in kind, from other antitrust laws. Nevertheless, the differences in degree seem substantial.

3. See R. Posner, The Robinson-Patman Act (1976), at 31-34.

4. In T. Ross, Support for the Robinson-Patman Act: Then and Now, (unpublished working paper, University of Chicago, July 1983) I suggest some reasons for the growth in support for the Act among retail trade groups.

5. The small business community is not small in numbers. It may have numbered nine and a half million in 1975. See the opening remarks of J. Evins in, Hearings Before the Ad Hoc Subcommittee on Antitrust, The Robinson-Patman Act and Related Matters of the Committee on Small Business of the House of Representatives (94th Congress, 1975-76), Part 1, at 1.

6. This historical discussion will be brief; the reader interested in more detail is directed to C. Fulda, Food Distribution in the United States, the Struggle Between Independents and Chains, 99 U. of Pa. L. Rev. 1051 (1951) and J. Palamountain, The Politics of Distribution (1955).

This particular presentation borrows from Ross, supra note 4.

7. The revolution has continued through this century even if its pace has slowed. The late 1920s saw the development of the supermarket and post-war America witnessed a boom in discount houses and shopping centers.

8. In 1939 manufacturers' sales branches did 36.5% of the wholesale grocery sales, and 25.9% of wholesale drug sales. These figures do not include chain store warehouse sales. See H. Barger, Distribution's Place in the American Economy Since 1868 (1955), at 74.

9. Barger, supra note 8, Table 20, at 70.

10. See T. Beckman and H. Nolen, The Chain Store Problem (1938), at 14-18, for a brief but interesting discussion of early chain systems. The oldest chain organization in North America is undoubtedly the Hudson's Bay Company, chartered in 1670 and operating a large number of trading posts by 1750. The company is still very much alive and remains a major force in Canadian retailing.

11. The year 1858 is also often offered as marking the beginning of the modern chain era as this was the year A&P's first store opened in New York City.

12. See G. Lebhar, Chain Stores in America (1963), at 33, and Facts in Food and Grocery Distribution, January, 1938. A combination store sells meats as well as groceries.

13. Source for these chain sizes is: FTC Chain Store Report, 72d Cong. 1st Sess., Document No. 100, Growth and Development of Chain Stores (1932), at 76-77.

14. For examples of these techniques in use and the legal cases which followed, see Palamountain, supra note 6, at 43-48.

15. During the 1890s and early 1900s a large number of national wholesale and retail trade associations were formed. Notable among these births were those of the National Association of Retail Grocers (1893), the National Association of Retail Druggists (1898), and the United States Wholesale Grocers Association (1892). Dates come from National Trade and Professional Associations of the United States and Canada and Labor Unions (C. Colgate ed.), Fifteenth Annual Edition (1980).

16. This useful comparison was drawn by Posner, supra note 3, at 26.

17. Each of these charges is discussed and rebutted in G. Lebhar, The Chain Store--Boon or Bane? (1932).

18. The law was upheld (in a five-to-four ruling reversing a lower court's invalidation) in State Board v. Jackson, 283 U.S. 527 (1931).

19. Beckman and Nolen, supra note 10, at 152.

20. See Retailer's Manual of Taxes and Regulations (J. Nichols, R. Bauer, P. Landsman, W. McCall and P. Olsen, eds. 1935).

21. See M. Adelman, Price Discrimination as Treated in in the Attorney-General's Report, 104 U. Pa. L. Rev. 222 at 232.

22. W. Stevens, An Interpretation of the Robinson-Patman Act, 2 J. of Marketing 38 (1937), at 44.

23. The figures appear in Table Three.

24. RPM agreements were never as common in the grocery trade.

25. Cited in M. Adelman, A&P--A Study in Price-Cost Behavior and Public Policy (1966), at 53, fn. 58.

26. H.R. 8442, 74th Congress, First Session.

27. The original Patman bill was much tougher on chains than the version that finally passed. It permitted functional discounts to wholesalers and brokers without cost justification, made no requirement of competitive injury and allowed no meeting competition defense. See Palamountain, supra note 6, at 228-230.

28. Lebhar, supra note 12, at 257.

29. T. Ross, The Costs of Regulating Price Differences (unpublished working paper, September 1983).

30. This seems to be the FTC's (and the Courts') interpretation of the clause, but this is not a settled point. On this see Ross, supra note 29, at 15. No substantive changes would be required in this discussion should we choose to interpret the law as allowing equal percentage markups, i.e., P_1 can be no greater than $(C_1/C_2)\cdot P_2$.

31. Sufficient conditions for this configuration would be: (i) the two demand functions are independent, (ii) $C_1 \leq C_2$, (iii) chain demand function more elastic than the independent buyer's demand function and (iv) the seller's profit function, $\Pi(P_1,P_2)$, strictly concave in both prices.

32. F. Rowe, Price Discrimination, Competition and Confusion: Another Look at the Robinson-Patman Act, 60 Yale L. J. 929 (1951), at 963 and Posner, supra note 3, at 40.

33. What is more, real and accounting costs differ. This means that any rule based on accounting costs may fail to protect price differentials attributable to real cost differences.

34. F. Rowe, Price Discrimination Under the Robinson-Patman Act (1962), Chapter 10, has a nice discussion of cost justification including the problems with the defense. On page 297 he lists several cases in which the defense was wholly disapproved by the FTC.

35. See, for example, Justice Department, supra note 1, at 58-63.

36. If this market was perfectly competitive and all firms had the cost function assumed here, it is clear that point p* for any firm would coincide with the vector of marginal costs. With a perfectly functioning due allowance defense this pricing would be legal and we would therefore expect no prices to change. Should the defense be difficult to use, sellers would be forced to stop serving both cus-

tomer classes through the market. They may adapt either by refusing to serve one class or by merging with customers of one class while continuing to serve customers of the other. In either case, no buyer's welfare is affected.

37. Many similar studies are referenced in Justice Department, supra note 1.

38. Although the techniques employed in these tests are described briefly below, the interested reader should consult G. Schwert, Using Financial Data to Measure the Effects of Regulation, 24 J. Law & Econ. 121 (1981), and the references he cites, for a more complete treatment.

39. Among the important winners not considered here must be lawyers (many in the government) specializing in R-P cases. Elzinga and Hogarty crudely estimate the direct costs of complying with and litigating the Act to be $1.4 billion for the period 1936-74. Legal fees and the value of the time spent by government lawyers on R-P cases would represent a large fraction of this sum. See K. Elzinga and T. Hogarty, Utah Pie and the Consequences of Robinson-Patman, 21 J. Law & Econ. 427 (1978).

40. The grocery portfolio includes six chains (but not A&P which was not listed at the time) while the variety group has eight, the department store group has four and the drug store group only two. The firms in these and all the portfolios studied here are listed in an appendix to this paper, available from the author.

41. These sets of plots are included in the appendix.

42. Since it is possible that the Act changed this portfolio's β (systematic risk), we also estimated this equation with the interactive term $R_M \cdot DB$ where DB is a dummy variable equal to one from June 1935 on. The coefficient on this term was tiny and its t-statistic was just over 0.1, leading us to conclude that the β was indeed stable.

43. The 31-month decline figure comes from $1-(1-.0277)^{31} \cong .5814$.

44. In a personal communication, Professor Adelman suggested that some of this decline may be attributable to the fact that the major chains were very slow to build supermarkets. I agree. Nevertheless, the timing of the decline, together with the fact that there are no significant abnormal returns for 18 months prior to June 1935, argue for a strong independent effect of R-P.

45. Compiled from: C. Edwards, The Price Discrimination Law (1959), Appendix A, Table 1, at 661-3. The last of these orders came from cases begun in late 1939.

46. Adelman, supra note 25, Table 22, at 471. A&P's 1935 profits were about $19.2 million.

47. Estimated from data in Historical Statistics of the United States, (1975) at 930, by taking Total Receipts less Total Deductions (column 179), subtracting Income Tax (180) and then dividing the difference by Capital Stock (176). The rate of return estimated this way is 9.8% for 1936 and 8.6% for 1937.

48. These firms are listed in the appendix.

49. Using data from Facts in Food and Grocery Distribution, January 1945 we can also see that the losses in market share of the grocery chains was not really concentrated in the largest chains. The six largest grocery chains accounted for just over two-thirds of total chain grocery sales in this period. This fraction was relatively steady from 1933 to 1935 (in 1933 it was 67.0%, in 1935 67.1%) and by 1939 it had fallen only a little, to 66.0%.

50. The appendix includes a list of these firms and the CAR plots for the portfolio.

51. The bakery case is U.S. v. Cotton, Inc., Cr. 75-43, M. D. La. (1975) and is discussed briefly in Justice Department, supra note 1, at 54. The dairy case was suggested by Edwards, supra note 45, at 443-4, who believes that the FTC's 1953 Page Dairy Order (Docket #5974) had such an effect.

52. G. Corbaley, First Year Under the Robinson-Patman Act, 12 Wholesale Grocer News 10 (August 1937), at 10.

53. Great A&P Tea Company v. FTC, 106 F.2d 667 (3d Cir. 1939), cert. den. 303 U.S. 625 (1940).

54. Business Week, "Brokers Dodge R-P Boomerang", August 10, 1940. According to this article and other sources, there was a chance that the Act could have boomeranged on the brokers as A&P tried to implement a policy of buying only from producers who never used brokers. This was not an entirely successful tactic for A&P and the rules were

greatly relaxed. See also Adelman, supra note 25, at 186-93.

55. See Rowe, supra note 35, at 540, and Posner, supra note 3, at 45.

56. Data from Historical Statistics (at 549 and 852) suggest that agents and brokers in other fields were not so successful over this period. The increase in commissions received by agents and brokers in all fields rose about 27.7% from 1935 to 1939 while total retail sales rose slightly more, about 28.2%.

57. See previous footnote.

58. J. Ellert, Antitrust Enforcement and the Behavior of Stock Prices, (March 1975) (unpublished Ph.D. dissertation, Univ. of Chicago).

59. These data are available on the Scholes Daily Excess Returns Tape at CRSP.

60. The firms in these portfolios are also listed in the appendix.

61. The DC dates used here for the cases up to 1972 are the consent dates given in the CCH Trade Regulation Reporter. Beginning (in this sample) with the 1973 cases the Trade Regulation Reporter Transfer Binders--Complaints and Orders began to give two dates, one called the "announced" date and the other the order date, which was at least two months later. A check of the Wall Street Journal around each of these dates revealed that when an order was

reported at all it appeared in the Journal shortly after the announced date so it was this date that was used as DC from 1973 on.

62. Posner, supra note 3, at 29. Table 5-1 at 533 of R. Posner and F. Easterbrook, Antritrust (2d ed. 1981), charts the growth in private antitrust actions. The authors also explain (at 989), however, that some recent decisions have made private R-P actions very difficult to win.

63. The CARs for this portfolio are plotted in the appendix.

64. Three possible cease and desist cases were excluded from the sample for special reasons. In one case the final order, although still to cease and desist, actually weakened the initial decision and so should have been good news. In another, the firm involved was in the middle of a takeover struggle and enjoyed a very large positive abnormal return right around DD. In the third case the firm also had a very large positive abnormal return right around DD. This return was 20 to 25 percent over only a few days, so both its magnitude and sign suggest that the abnormal return was not due to the Commission's order. It would appear that something else important was happening, but the Wall Street Journal reported nothing of interest. This firm was left out of the sample anyway, on the assumption that something else must have been going on. Restoring it to the sample reduces the magnitude and significance of the portfo-

lio's decline. For example for the interval from -9 to +10 the portfolio loses only about 3.86% with a t-statistic of 1.73.

65. One of these cases was actually closed with an "Order to Terminate Proceedings," an abrupt form of dismissal.

66. S. Peltzman, The Effects of FTC Advertising Regulation, 24 J. Law & Econ. 403 (1981), at 419.