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Mergers & Concentration in Food Retailing: Implications for Performance & Merger Policy

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Food Marketing Policy Center
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Abstract

This research report is based upon the author's testimony before the Subcommittee on Monopolies and Commercial Law, Committee of the Judiciary, U. S. House of Representatives, on May 11, 1988. Tabulated data from the Bureau of Census and industry publications indicate that seller concentration for grocery stores and supermarkets in local Standard Metropolitan Areas (SMA) markets is increasing. Unless merger enforcement policy is tightened, horizontal mergers will accelerate this trend. This conclusion is based upon two facts: the F.T.C. finds market shares in excess of 50 percent acceptable; and very few of the nation's more than 250 SMA's are now served by such dominant firms.

Research on entry barriers and seller concentration-price relationships in grocery retailing, summarized in this report suggest, from the perspective of performance, that federal merger enforcement policy is lax. Recent horizontal mergers affecting 16 SMA markets have produced leading firms with market shares in excess of 50 percent in some markets. Resulting increases in market power, the author estimates, will increase prices in these 16 SMA markets forcing consumers to pay 469 million dollars more for food each year.

Policy changes called for include: returning to enforcement policy based upon empirical assessment of industrial organization; eschewing the de facto monopolization standard applied to recent mergers and returning to the incipiency standard of Section 7 of the Clayton Act; and contrary to the recent Monfort decision, allowing competitors, including targets of hostile takeovers, more access to the courts to sue on antitrust grounds to stop mergers.

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1. Introduction

Mr. Chairman, I want to thank you for inviting me to testify on a subject of utmost urgency and importance. Unless federal merger enforcement policy changes now, current events in the food retailing industry signal the complete demise of Section 7 of the Clayton Act. In its wake will come a wave of horizontal mergers between leading competitors that will leave most Americans face-to-face with a dominant supermarket chain in their local community. Indeed this is already happening with serious consequences for consumers and the performance of the food system. We estimate that 4 horizontal mergers completed since 1986 plus the proposed Vons-Safeway and American-Lucky mergers, if approved, will raise prices in 16 SMA markets forcing consumers to pay $469 million more each year for food. One may quibble about the exact amount of this estimate, but the plain fact is consumers will pay billions of dollars more for food in the 1990s unless federal merger enforcement policy changes now.

These mergers are but one aspect of the collapse in antitrust enforcement policy during the 1980s. Market extension mergers by large supermarket chains are no longer challenged because entry barriers are declared low and potential entrants plentiful. Evidence that I will present below indicates that this declaration is contrary to observed conditions and conduct in several local grocery markets. With regard to private suits, competitors, including targets of hostile takeovers who seek injunctive relief, are severely restricted by the recent Monfort decision. Monfort's restrictions on standing must be relaxed.

These changes in policy are occurring at the same time that there is a persistent upward trend in seller concentration in local grocery markets. In fact, this trend that has been fueled during the 1980s by the relaxation of antitrust policy. My current reading of where we are headed if policies do not change is unsettling. Recent Federal Trade Commission's horizontal merger decisions in food retailing suggest that they will allow leading firms to merge until the remaining entity accounts for between 55 and 60 percent of market sales. I estimate that fewer than 10 of the nation's more than 250

census defined standard metropolitan areas (SMAs) are now served by such dominant firms.

Unless enforcement is tightened, a wave of horizontal mergers is imminent. Incipiency, the idea that merger policy should nip in the bud the trend toward high concentration and dominance, is currently being replaced by a monopolization standard. Under that standard mergers would be unlawful only if they tend to create a monopoly. How have we come to this state of affairs? What specifically is the situation in grocery retailing? What changes do we need in law and enforcement policy? The remainder of my testimony focuses on these questions. It is divided into four sections: 1) a prologue on the misuse of economic theory as a basis for merger policy, 2) documentation of increasing market concentration entry conditions and mergers in local grocery markets, 3) evaluation of the impact of recent and proposed horizontal mergers upon market concentration, barriers to entry, price levels and consumer food bills in 16 local markets, and 4) identification of needed policy changes.

2. On the Misuse of Economic Theory

Law is first and foremost an empirical exercise. Opposing sides marshall facts and the court applies a standard to those facts to determine the legal outcome. It troubles many empirically oriented economists, including me, to see the legal community race to embrace untested economic theory and apply it in antitrust litigation with minimal regard for empirical evidence. A leading antitrust lawyer, writing on the ascendancy of Chicago School theories, illustrates this preference.

> [The writings of Bork and Posner] as well as the theoretical works by Williamson, Demsetz and Stigler... forced economic analysis into law... It generally takes a theory to beat a theory and a better mousetrap seemed available [Gellhorn, p. 935].

This statement is false. Economic analysis has been used in the courts at least since U. S. versus duPont (1956). Another lawyer, recognizing that most mergers proposed today are unlawful if evaluated by the standards of the case law generated

prior to 1980, explains the mission of the defendant's lawyer as follows:

> "the real challenge is not to persuade the agencies that the transaction at hand is defensible under the older decided cases, but rather to persuade the agencies that there exist reasons well grounded in legal and economic theory why the merger being proposed will not result in the enhancement of market power or in a materially increased likelihood of collusion among participants in a relevant market."[Briggs, p. 644].

The emphasis on the saving grace of economic theory is misplaced. Simply put, one must go beyond economic theories that explain why a proposed merger may or may not enhance market power. To do otherwise puts antitrust enforcement at the same level as the common joke about a shipwrecked economist who *assumes* that he has a boat to escape an uninhabited island.

Industrial organization economists have long recognized that there exist several alternative theories of firm conduct in oligopolistic markets. For example, *if* there are no entry barriers, and *if* there is a queue of potential entrants, then mergers that create a monopoly do not generate profits above the competitive level. Because theory offers many alternatives, economic analysis of antitrust options must primarily be an empirical, fact finding exercise. Cases should be won by an assessment of fact, rather than tour de force presentations of deductive logic based upon assumptions that are revered as eternal truths. Having said this, let us proceed to an empirical investigation of structure, conduct, and performance in grocery retailing.

3. Market Concentration, Entry Conditions, Mergers and Acquisitions

To evaluate changes in market concentration during the 1980s, ideally, one would like to have several measures that are not available. The 1987 Census of Retail Trade and special tabulations of four firm concentration ratios is in process. The

1982 Census of Retail Trade does not report total food or grocery store sales for SMAs. Also the administration's cut in funds for data analysis limited 1982 special tabulations to four firm concentration ratios and Hirshman Herfindahl Indices (HHI) for grocery sales from stores with payrolls. Thus, the 1982 sales universe is somewhat smaller than the 1972 and 1977 universe (sales by all grocery stores). For the 1972 and 1977 census years supermarket four-firm concentration ratios and the Hirschman Herfindahl Indices were computed. The absence of Census data for 1982, is a major omission. Industry practices and empirical research indicate that the most relevant product market for analysis of mergers among supermarket chains is supermarket sales [Cotterill, 1986, Marion, 1986]. Indeed even the FTC in its most recent merger investigation in food retailing uses the sales of food products in supermarkets as the relevant product market. For some unexplained reason, however, they use a 1.5 million dollar minimum annual sales level rather than the commonly accepted industry 2.0 million dollar minimum annual sales ratio [FTC, 1987]. This tends to understate the market shares of firms in the supermarket market.

Because grocery sales in a market are greater than supermarket sales and because the leading firms are always supermarket chains measures of grocery concentration are always less than supermarket concentration. Nonetheless, they are highly correlated. Given this fact and the availability of four-firm grocery concentration over an extended period, they are used to analyze trends in concentration.

Figure 1 documents how four-firm grocery concentration increased between 1972 and 1982.[1] Part and possibly all of the increase between 1977 and 1982, however, is due to the use of grocery store sales with payroll rather than all grocery store sales as the denominator in 1982. Four-firm concentration for 258 SMAs averaged 52.4 percent in 1972, 56.1 percent in 1977, and 58.8 percent in 1982. Classifying SMAs by initial 1972 concentration levels indicates that concentration increased in all size classes over the 1972-1982 period, although in the greater

[1]The source of Figure 1 is the Bureau of Census, special tabulations based upon Census of Retail Trade, 1972, 1977, and 1982.

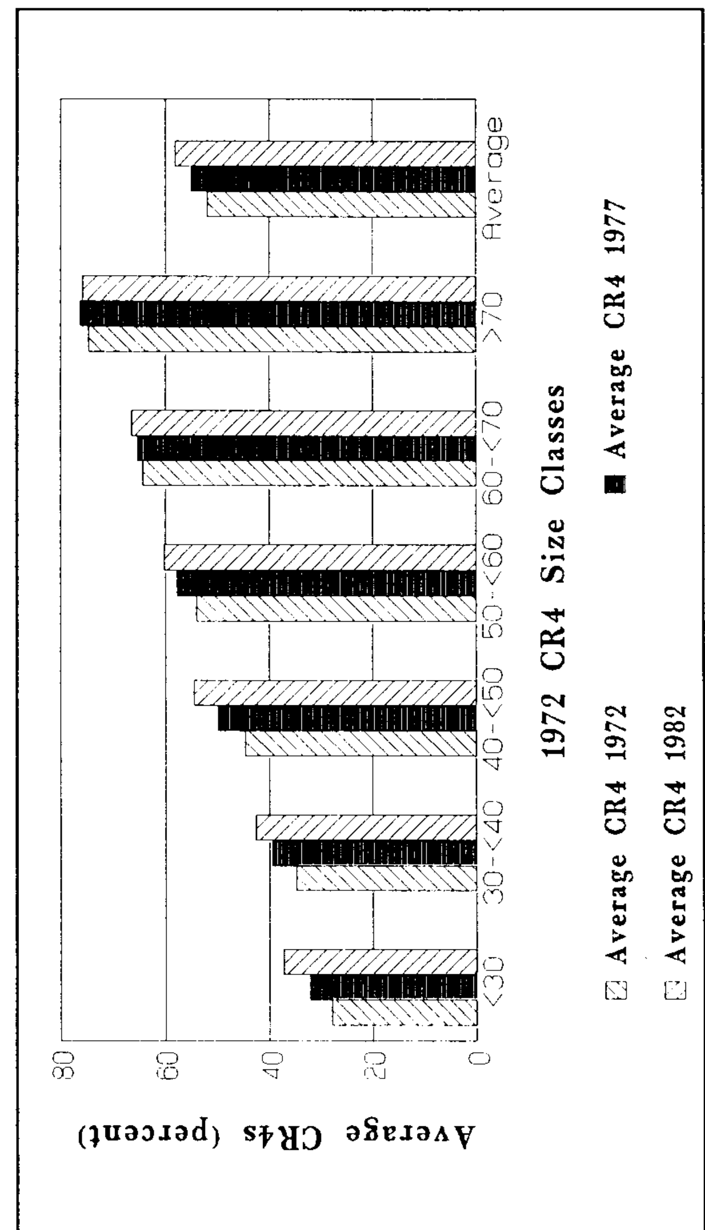

Figure 1. Four-Firm Grocery Store Concentration Ratios for 258 SMAs, 1972-1982.

Table I. CHANGE IN FOUR-FIRM GROCERY CONCENTRATION: 1980-1987.

SMA Size (1982 Grocery Sales in Million $)	No. of SMAs	Change in Four-Firm Concentration (%)
< 250	24	+6.38
250-500	30	+7.50
500-1,000	18	+2.99
> 1,000	22	+0.88
All Markets	94	+4.80

Source: Author's computations based upon Metro Market Studies, Grocery Distribution Guide, 1981 and 1988 editions.

than 70 percent size class it does fall back from a higher level in 1977.

Table I examines the change in four-firm grocery concentration between 1980 and 1987. The sample includes 94 SMAs for which comparable market share data on the top four firms is available from an industry publication (Metro Market Studies, 1981, 1988) Concentration increased on average 4.8 percentage points. Classifying SMA markets by size reveals that concentration increased most in smaller and medium sized metropolitan areas.

Although one could present more evidence, these data are sufficient to establish that the secular trend in seller concentration, whether measured by supermarket or grocery indices, is a persistent upward trend.

Mergers and Acquisitions (M&A) by large food retailers have contributed to the upward trend in concentration. Table II documents dominant M&A activity in food retailing by all of food retailers and for the top twenty and top ten food chains from 1949 to 1988. The low percent of assets acquired figures for leading chains between 1965 and 1976 reflects the tough enforcement policy towards market extension and horizontal mergers by leading chains during that era. The current M&A wave started in 1976 and has accelerated with major market extension mergers and leveraged buyouts accounting for most of the increase.

In recent years, however, there has been a significant increase in large (measured by dollar sales volume and market shares) horizontal mergers. Table III identifies horizontal mergers among supermarket retailers for 1986 through April 1988. The two 1988 mergers listed, Von's acquisition of Safeway's southern California division and American's attempted hostile takeover of Lucky, are pending.

Of those mergers consummated, the FTC challenged only Furr's acquisition of Safeway's El Paso division. The Commission staff settled for a consent decree that requires Furrs to divest stores in twelve smaller towns. The Commission provided no explanation or analysis to support its decision. Market share estimates from the National Grocers Association brief, which are in appendix B indicate that post merger concentration in some of the cities is no higher than in cities where divestiture was not ordered. Possibly the FTC feels that entry conditions (higher barriers and fewer potential entrants) in smaller cities merit a tougher stance.

Going the Commission one step further, both direct and indirect research on entry barriers and the existence of potential entrants suggest that entry conditions in many of the nations SMAs do not restrain firms from exercising market power. The major indirect evidence on this point comes in the form of quantitative studies of the relationship between concentration and price in food retailing and other industries, including cement and airlines (Cotterill, 1983, 1986; Marion *et al.* 1979; Weiss, 1987). All of these studies report that a

Table II. ACQUISITION OF FOOD RETAILERS, 1949-1988.

Year	By All Acquires	By Twenty Leading Food Chains		By Ten Leading Food Chains		% of Total Acquired Sales Accounting for by Leveraged Buyouts
	Sales of Acquired	Sales of Acquired	% of Total Acquired Sales	Sales of Acquired	% of Total Acquired Sales	
1949	66	47	71	47	71	
1950	4	3	75	1	25	
1951	26	25	89	19	68	
1952	71	55	77	53	75	
1953	88	77	88	61	69	
1954	76	37	49	31	41	
1955	559	465	83	267	48	
1956	450	310	69	141	31	
1957	319	194	61	170	53	
1958	517	361	70	261	50	
1959	319	136	43	24	8	
1960	307	201	65	36	12	

Table II. ACQUISITION OF FOOD RETAILERS, 1949-1988 (CONTINUED).

Year	By All Acquires	By Twenty Leading Food Chains		By Ten Leading Food Chains		% of Total Acquired Sales Accounting for by Leveraged Buyouts
	Sales of Acquired	Sales of Acquired	% of Total Acquired Sales	Sales of Acquired	% of Total Acquired Sales	
1961	518	407	79	292	56	
1962	306	179	58	157	51	
1963	568	463	82	416	73	
1964	312	188	60	153	49	
1965	558	61	11	35	6	
1966	539	110	20	73	14	
1967	1,350	21	2	0	0	
1968	1,155	139	12	24	2	
1969	715	41	6	13	2	
1970	688	74	11	22	3	
1971	435	28	6	28	6	
1972	1,069	242	23	3	1	
1973	206	29	14	11	5	

Table II. ACQUISITIONS OF FOOD RETAILERS, 1949-1988 (CONTINUED).

Year	By All Acquires	By Twenty Leading Food Chains		By Ten Leading Food Chains		% of Total Acquired Sales Accounting for by Leveraged Buyouts
	Sales of Acquired	Sales of Acquired	% of Total Acquired Sales	Sales of Acquired	% of Total Acquired Sales	
1974	1,591	30	2	14	1	
1975	337	127	38	84	25	
1976	882	742	84	738	84	
1977	1,218	728	60	350	29	
1978	2,456	1,835[a]	75	1,067	43	
1979	9,315[b]	911	10	680[c]	7	
1980	2,975	730	25	696	23	
1981	4,599	142	3	142	3	
1982	3,667	156	4	124	3	
1983	8,067	3,737	46	3,737	46	
1984	9,475	5,593	59	4,843	51	

Table II. ACQUISITIONS OF FOOD RETAILERS, 1949-1988 (CONTINUED).

Year	By All Acquires	By Twenty Leading Food Chains		By Ten Leading Food Chains		% of Total Acquired Sales Accounting for by Leveraged Buyouts
	Sales of Acquired	Sales of Acquired	% of Total Acquired Sales	Sales of Acquired	% of Total Aquired Sales	
1985	12,225	648	5	192	2	49
1986[d]	24,150	21,104	87	21,104	87	92
1987[d,e]	12,300	7,774	63	7,774	63	56
1988	3,946	3,946	100	1,200	30	100

Source: B. W. Marion (1986). 1985 data furnished by B. W. Marion, University of Wisconsin. Subsequent years from trade publications.
Note: For 1949-1966, data are for largest chains of 1963. For 1967-1981, data are for the largest chains of 1975. For 1981-1985, data for the largest chains of 1982. For subsequent years data are for the largest chains of 1988.

a. Pick N Pay-First National merger is included here; acquired sales of $424,120,000 are those of Pick N Pay.
b. Includes acquisition of A&P by Tengelman. Acquired sales were $5,558,000,000.
c. Skaggs-American merger is included here; acquired sales of $300,000,000 are those of Skaggs.
d. Preliminary estimates that are understated due to lack of sales information on mergers.
e. Includes Safeway Stores Inc. leveraged buyout. Acquired sales were $20,331,000,000.

Table III. Horizontal Mergers Among Grocery Retailers–1986-1988.

Date	Acquirer	Acquired	Sales of Acquired (Million $)	Common Grocery Markets
1986	A&P	Shopwell	463	NY City Stamford, Ct
1986	Pen Traffic	Gee Bee	94	Johnstown, PA
1986	Farm Fresh	Open Air	197	Newport News Norfolk
1986	Von's	Pantry Mkts	80	Los Angeles
1986	Red Apple	Gristedes	112	NY City
1986	Red Apple	Pantry Pride	NA	NY City
1986	Village	Starrs	NA	NY City
1987	A&P	Waldbaum	1,764	NY City Hartford New Haven Fairfield
1987	American Seaway	Fisher Foods	590	Cleveland Lorain-Elyria
1987	Boys	Food Company	109	Los Angeles
1987	Minyard	Safeway	NA	Dallas
1987	Kroger	Safeway	NA	Dallas
1987	Cullum	Safeway	NA	Dallas

NA = Not Available

positive statistically significant relationship exists. If there are no entry barriers and if there are potential entrants, this empirical relationship would not exist. Related indirect evidence comes from the persistence of high concentration in several major markets. Why is it that markets such as Washington, D.C. and Denver have each been dominated by two chains for years? Why is it that Kroger has dominated the Cincinnati market for at least the last twenty years?

With regard to direct evidence on the condition of entry in food retailing Marion (1987) provides a thorough explanation of the structural and strategic conduct based entry barriers in food retailing. He lists the following barriers to entry. 1) store economies of scale; 2) multi-store economies; 3) capital costs and risks; 4) the difficulty in obtaining desirable store sites; and 5) strategic behavior by incumbent chains such as zone pricing and geographic pre-emption (Marion, 1987, p. 197).

Given their size and resources, the nations top 20 chains must be identified as the most likely potential entrants into new markets. At the Food Marketing Policy Center we have conducted research on the entry conduct of the top 20 chains during the ten year period 1972-81 (Cotterill and Haller, 1987; Cotterill and Haller, 1988) We find that there are systematic and significant patterns of *de novo* entry (entry by building new stores rather than by merger). Moreover these patterns are consistent with and support previous direct and indirect evidence on the existence of entry barriers and the importance of potential competitors. The probability of entry by a top 20 chain decreases dramatically if none of the chains are within a certain geographical distance of an SMA market. In the Northeast potential entrants have a warehouse within 50 miles of an SMA. In the Midwest and South potential entrants usually have a warehouse within 100 miles of an SMA. In the Plains/Mountains and Pacific coast regions potential entrants usually have a warehouse within 200 miles of an SMA. These geographical limits circumscribe the number of potential entrants that can provide effective competition to established firms.

With regard to barriers to entry we find that the probability of entry is significantly higher in rapidly growing SMA's and significantly lower in less competitively structured SMA's as

measured alternatively by number of top 20 chains in the market, the level of seller concentration in the market or the supermarket grocery sales ratio. This entry model will be used in the next section to evaluate the likelihood of entry in SMAs where substantial horizontal mergers have recently occurred or are pending.

4. Evaluation of the Impact of Recent and Pending Horizontal Mergers

The following facts indicate that horizontal mergers in food retailing will tend to substantially lessen competition: concentration is increasing in local SMA markets, there are substantial barriers to entry in low growth and noncompetitively structured markets, the queue of potential entrants is not always full, and there is a positive relationship between seller concentration and market price levels. This section reports empirical estimates of the impact of four recent and two pending mergers upon market concentration, dominance in the market by a single firm, the probability of entry after a merger, the market price level, and the consumer food bill. Numerical results are displayed in Table IV.

Two mergers from 1986 are the acquisition of Open Air Markets by Farm Fresh (Newport News and Norfolk, VA) and Penn Traffic's acquisition of Gee Bee Markets (Johnstown, PA). Farm Fresh's share of supermarket sales increased from 29.6 to 60.6 percent in Newport News and from 23.1 to 42.5 in Norfolk. Market concentration as measured by the HHI increased 1836 points to 3992 in Newport News and it increased 896 points to 2411 in Norfolk. For comparison the horizontal merger guidelines state that if the HHI increases more than 50 points and the post merger HHI is above 1800, challenge is likely. Table 4 clearly indicates that the FTC believes other factors completely offset truly gargantuan increases in market concentration.

Examining the probability of entry column provides direct evidence that entry by a top 20 chain, is extremely unlikely in Newport News and Norfolk. The probability that a top 20

Table IV. IMPACT OF HORIZONTAL MERGERS ON SUPERMARKET CONCENTRATION, MARKET PRICE LEVELS, AND CONSUMER WELFARE FOR SELECTED SMSAS: TRADE PUBLICATION DATA BASE.

Acquirer/ Target	Market Area	Pre[a] Merger Market Share	Post Merger Market Share	HHI Pre	HHI Post	HHI Change	Prob.[b] of Entry	%[c] Price Change	Sales[d] in SMA (10^6 $)	Consumer Food Bill Increase (10^6 $)
Farm Fresh	Newport	29.6	60.6	2156	3992	1836	0.033	2.87	651072	18695
Open Air	News	31.0								
	Norfolk	23.1	42.5	1515	2411	896	0.045	1.40	1244907	17451
		19.4								Subtotal 36146
Penn	Johnstown	41.9	66.8	2408	4494	2086	0.015	3.26	312135	10181
Traffic	PA	24.9								Subtotal 10181
Gee Bee Mkts										
A&P	NY City	5.9	24.7	566	931	365	0.075	0.57	11512868	65560
Shopwell		5.3								Subtotal 65560
Waldbaum		13.5								
Furr's	El Paso	22.2	49.6	1442	2660	1218	0.099	1.91	573100	10918
Safeway		27.4								
Division										
	Albuquerque	37.5	57.9	2268	3797	1529	0.089	2.39	723181	17289
		20.4								Subtotal 28207

Table IV. Impact of Horizontal Mergers on Supermarket Concentration, Market Price Levels, and Consumer Welfare for Selected SMAs: Trade Publication Data Base (continued).

Acquirer/ Target	Market Area	Pre Merger Market Share	Post Merger Market Share	HHI Pre	HHI Post	HHI Change	Prob. of Entry	% Price Change	Sales in SMA (10^6 $)	Consumer Food Bill Increase (10^6 $)
Von's Safeway LA	Bakersfield	15.6 22.7	38.3	1035	1743	708	0.263	1.11	635735	7044
	LA	17.5 10.7	28.2	1512	1885	373	0.149	0.58	12685427	74063
	Ox-Vent	31.5 19.4	50.9	2303	3529	1226	0.110	1.92	725594	13918
	Riverside	22.0 11.8	33.8	2500	3020	520	0.251	0.81	2469700	20089
	Santa Bargara	11.9 12.7	24.6	978	1211	233	0.710	0.36	423078	1541
	San Diego	25.9 22.6	48.5	1954	3122	1168	0.151	1.83	2364988	43177 Subtotal 159831
American[e] Lucky	Bakers-field	5.1 11.0	16.1	1743	1855	112	0.251	0.17	635735	1112
	LA	15.7 14.2	29.9	1885	2329	444	0.129	0.69	12685427	88070
	Ox-Vent	15.5 10.6	26.1	3529	3856	327	0.095	0.51	725594	3715

Table IV. Impact of Horizontal Mergers on Supermarket Concentration, Market Price Level, and Consumer Welfare for Selected SMAs: Trade Publication Data Base (continued).

Acquirer/ Target	Market Area	Pre Merger Market Share	Post Merger Market Share	HHI Pre	HHI Post	HHI Change	Prob. of Entry	% Price Change	Sales in SMA (10^6 $)	Consumer Food Bill Increase (10^6 $)
American Lucky	Riverside	20.7 8.7	29.4	3020	3381	361	0.215	0.56	2469700	13932
	Salinas	13.3 12.5	25.8	1579	1811	232	0.043	0.36	373319	1355
	San Diego	14.4 15.3	29.7	3122	3563	441	0.125	0.69	2364988	16316
	San Francisco	6.5 24.5	31.0	1945	2263	318	0.099	0.50	4415228	21959
	San Jose	18.6 18.7	37.3	1821	2516	695	0.089	1.09	1854703	20169
	Santa Cruz	9.2 9.5	18.7	834	979	145	0.197	0.23	303362	687

Table IV. Impact of Horizontal Mergers on Supermarket Concentration, Market Price Levels, and Consumer Welfare for Selected SMAs: Trade Publication Data Base (continued).

Acquirer/ Target	Market Area	Pre Merger Market Share	Post Merger Market Share	HHI Pre	HHI Post	HHI Change	Prob. of Entry	% Price Change	Sales in SMA (10^6 $)	Consumer Food Bill Increase (10^6 $)
American	Santa Rosa	7.2	17.8	1156	1306	150	0.190	0.23	492182	1153
Lucky		10.6								
	Vallejo	5.1	18.2	903	1038	135	0.322	0.21	512214	1081
		13.1								Subtotal 169549
										Total 469474

a. Supermarket share estimates are Metro Market grocery market shares adjusted by the Progressive Grocer Market Scope estimate of supermarket sales in the market. Progressive Grocer did not cover six markets. In those markets, the change in the ratio of supermarket to grocery sales between 1972 and 1977 (from U.S. Census) was used to estimate a 1987 supermarket to grocery sales ratio (see accompanying text).

b. The probability of entry is computed from the following equations (Cotterill and Haller, 1988, Table 2, Equation 5):

PROB(ENTRY) = 1 / { 1 + *EXP*[-1.5016 + .0634*(*MARKET GROWTH*) + 2.562*(*POTENTIAL ENTRANT*) - .0010*(*GROCERY HERFINDAHL*)]}

c. The percent price change is computed from the following equation (Cotterill, 1983, Table 6.1, Equation 8):

PERCENT PRICE CHANGE = .00156*(*CHANGE IN HERFINDAHL*)

d. This is Progressive Grocer's estimate of food sales in 1986 (Progressive Grocer 1987). Since increased quantity sold due to population growth and general price level increases contribute to increased sales this estimate of future food sales is understated.

e. Assumes Vons-Safeway merger is approved.

chain will enter Newport News at some point during the next ten years is .033, i.e., there is a 3.3 percent chance that entry will occur. For Norfolk there is a 4.5 percent chance that entry will occur. These probabilities are dramatically lower if, as the merger guidelines suggest, one looks for entry in a two year period. In most cities it takes that long to get approval from planning and zoning boards for the construction of a new store.

Using the relationship between the HHI and price from Cotterill (1983) one can predict the impact of a merger on the market price level. As reported in Table IV under the percent price change column prices are expected to increase 2.87 percent in Newport News and 1.40 percent in Norfolk. Each year consumers will pay 18.7 million dollars more for food in Newport News and 17.5 million dollars more for food in Norfolk. For this merger the estimate of the annual income transfer from consumers is 36.1 million dollars. Clearly, from several perspectives this merger should have been enjoined. It created high concentration, a dominant firm, low likelihood of entry, and higher prices to consumers with a resultant increase in allocative inefficiency.

The other mergers evaluated in Table IV produce similar results. The annual cost to consumers of the four mergers completed in 1986 is 140 million. This estimate is probably understated because the concentration measures for the huge New York market are understated (Marion, *et al.*, 1979, p. 73). The annual cost of the proposed Vons Safeway merger is 160 million, and, if American hostile takeover of Lucky is successful, California consumers will pay another 170 million annually. Again, market misdefinition may understate these estimates.[2] The total transfer from consumers for these six mergers is estimated to be 470 million dollars. If one capitalizes this income stream using the current long run interest rate, approximately 9 percent, the wealth transfer from consumers is approximately

[2]Economists analyzing the Vons-Safeway and American-Lucky mergers for the Attorney General of California who had access to data subpoenaed from the firms were able to break large SMAs into appropriate geographic markets. They estimate that these two mergers will raise prices costing consumers 400 million dollars annually (Ostroff).

5.2 billion dollars. In other words, if consumers were sufficiently organized to use the services of investment bankers, they would be willing to pay up to 5.2 billion dollars to avoid these mergers. Of course, this is an absurd proposal. The Federal Trade Commission is entrusted with protecting the interests of consumers, and should do so.

One may quibble with the exact level of these estimates, but the empirical method is valid and the general conclusions that come from it are also valid. These mergers are creating market power and directly contradict the intent of Congress when they passed the Clayton Act and subsequent amendments. If the FTC does not enjoin the proposed mergers in Southern California, a wave of horizontal mergers will engulf the food retailing industry. It will be an arbitrager's dream, boom time for investment bankers, and a loss not only for consumers, but also for independent minded grocers and the competitive process.

5. Recommended Merger Policy Changes

I am sure the committee has heard calls for tougher enforcement by the FTC and Justice Department before. I duly register one now. In retailing it is clear to me that the source of FTC complaisance has shifted from arguing that low entry barriers offset concentration increases to arguing that tacit collusion among supermarket chains in concentrated markets is extremely unlikely. I believe that part of their reticence to move rests upon a confusion surrounding the merger guidelines' statement that product heterogeneity reduces the ability of firms to collude [U.S. Department of Justice]. This guideline may apply to industrial products such as steel girders that must be tailored to fit each specific job. This, however, is not the case in food retailing. The products are standardized. A bottle of 16 oz. Heinz catsup is 16 oz. Heinz catsup no matter where one buys it. The fact that supermarket retailers sell 10,000-15,000 standardized items is not product heterogeneity. In a public market place with prices available for all (including ones competitors) to see, a firm cannot expect to go undetected if it abandons price followship in the market. Competing supermarkets regularly check each others' prices on thousands of items. In fact with the advent of

scanning, one can obtain price data in electronic form from a third party intermediary in raw or analyzed form. Market consulting firms estimate relationships between strategic variables such as price, promotions, and product movement for clients on a regular basis using market wide data. Moreover at least one firm that I know has developed a comprehensive strategic pricing system that relies upon price and movement data from competitors' stores as well as its own [Cotterill, 1985, p. 124]. Tacit collusion, often described as price followship, most certainly does occur in concentrated markets. How otherwise would one observe a positive relationship between concentration and price levels?

Dominant firm pricing models and other price leadership models also predict that market power will be exercised in the concentrated retail food markets that are resulting from lax merger policy. One can find numerous references to this type of pricing in the trade literature. Steve Weinstein, the editor of Progressive Grocer and a seasoned industry observer, recently analyzed Safeway's pricing practices in Seattle as follows:

> "Safeway has been the king of Seattle for many years. But while the chain still reigns there, with a market share of more than 30%, there are ample signs that some of its subjects are getting unruly....
>
> [T]he chain at one time had a market share approaching 50%, although it would never acknowledge the figure was that high, according to one observer...
>
> '[F]our or five years ago this was a me-too market,' says one wholesaler official, but not anymore. Competitors no longer are content to follow them on pricing...
>
> To a large degree, Safeway has lost ground because of its pre-eminent position,' he says. 'Every new store must take something from Safeway because it has so much. Their share has not declined appreciably, but they're feeling it. As the market changes, they'll be the most vulnerable. To hold on, they're doing strong pricing, but not dominant pricing.' [Weinstein, *Progressive Grocer*].

One could hardly find a more classic statement on dominant firm pricing. The fact that Safeway's share has eroded from 50 percent to 30 percent, and that it now has to share price leadership with others, hardly suggests that dominant firms quickly lose share to competitors resulting in a competitive market. The market has moved towards followship and shared monopoly pricing, but for years Safeway exercised the pricing discretion that comes with the market power position of a dominant firm. In Table IV, four of the six markets that experienced horizontal mergers now have leading firms with more than 45 percent of supermarket sales. The FTC needs to get in touch with the real world.

With respect to changes in the antitrust laws, the Monfort decision must be tempered. As the National Grocers Association stated in its brief to the FTC criticizing the Furrs-Safeway consent decree, the regulatory environment should protect the right of all competitors to have a fair chance to weather storms that are begun by competitors for their own, not the consumers' benefit [National Grocers Association, p. 10]. Monfort essentially requires a competitor to argue that the merger will lead to successful predatory pricing by the merged firm. This standard is too restrictive. A leading firm can raise the price level in a market, but they also can impose or threaten to impose costs on smaller competitors. This is often done as a means of maintaining price discipline and market equilibrium at the level desired by the dominant chain. Safeway's competitors in Seattle, for example, have benefited from its decline and would hardly like to see it re-establish dominance through merger. For these reasons and others, including the chance to rise on the merits of one's custom to become a market leader, competitors should have standing to sue under the Clayton Act to enjoin mergers. This right allows competitors to protect competition on the merits rather than competition by racing to merge.

The standard counter argument to private antitrust suits is that competitors initiate them for strategic reasons (i.e., such suits protect competitors not competition). Yet, consider another side of this issue as illustrated by American's proposed hostile takeover of a horizontal competitor, Lucky. American is clearly engaging in a strategic game that centers upon lax antitrust enforcement. If American merges with Lucky, it will

be able to exercise more effectively market power in Southern California. This is especially true since Lucky is considered the low price chain in the region. On the other hand, American has put Lucky into play and Lucky is attempting to negotiate a management led leveraged buyout (LBO). If this happens, American will benefit not only from the gains on Lucky stock held but, more importantly, from the debt strapped position of a major competitor. Clearly, American is imposing costs on Lucky, these costs will make Lucky more receptive to tacit collusion with two other firms that have a very real interest in maximizing cash flow, Ralphs and the new Vons-Safeway. Ralphs was recently revalued in the hostile takeover of its parent, Federated Department Stores. Safeway, a firm that has similarly had heavy costs imposed on it by a LBO, seeks to retain 30 percent ownership in Vons. An independent minded competitor, who doesn't want to follow the dictate of a dominant firm or the core firms in a tight oligopoly, should have standing to sue on antitrust grounds to stop these mergers. Such suits have merit because they may protect competition, as well as a competitor.

In closing, I would emphasize that the pending Safeway-Vons and American-Lucky mergers are the harbinger of the new competition that will materialize in food retailing unless antitrust policy is tightened. Financially oriented entrepreneurs and takeover artists will transform competition on the merits of the product into a strategic game of imposing costs on competitors, merging to exercise market power, and transferring wealth from consumers to arbitragers and stockholders of the moment.

6. Post Script: Policy Response by the Federal Trade Commission and the Attorney General, State of California

This Research Report is based upon testimony delivered on May 11, 1988 before the Subcommittee on Monopolies and Commercial Law, Committee of the Judiciary, U. S. House of Representatives. It sparked considerable debate on merger policy in the food industries at the F.T.C. Daniel Oliver, Chairman of the F.T.C., sent a letter dated June 10, 1988 to the Subcommittee defending its recent policy decisions and promising to produce a written report reviewing empirical research on the relationship between concentration and prices and profits in the supermarket industry. Commissioner Mary L. Azcuenaga sent a letter dated June 10, 1988 explaining that she and Commissioner Strenio disagree with Chairman Oliver and Commissioner Calvani. She and Strenio argue for stronger policy actions. These letters are reprinted in Appendix A.

At the time that this Research Report was printed (December 1988) the FTC had approved the proposed Vons-Safeway and American-Lucky mergers subject to cosmetic consent decrees. On both of these cases the Commission was deadlocked two for and two against the consent decrees issued. The two opposed Commissioners deferred, for, otherwise, the Commission would have taken no action. Commissioners Azcuenaga and Strenio's dissenting statements are reprinted in Appendix A. In Safeway-Von's, Von was required to divest 12 Vons or Safeway stores to obtain 172 Vons stores. Also for ten years Vons cannot require any food retailer in certain areas of California and Nevada (FTC, Docket No. C-3233). In American-Lucky, American was required to divest 27 American or Lucky stores in California and stores accounting for $1.8 million per week in sales during 1987 in Santa Clara county to obtain 362 Lucky stores in California. For ten years American can acquire only a limited number of stores in certain California markets without prior FTC approval (FTC, Docket No. C-3238).

The Attorney General of California, subsequently challenged the latter merger on antitrust grounds and the case went to trial in December 1988.

Appendix A: Letters from Federal Trade Commission and Dissenting Statements on Von's/Safeway and American-Lucky Consent Decrees.

United States of America
Federal Trade Commission
Washington, D.C. 20580

June 10, 1988

The Honorable Peter Rodino
Chairman
Subcommittee on Monopolies and
Commercial Law
Committee on the Judiciary
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for inviting comment on the Federal Trade Commission's antitrust enforcement activities with respect to mergers and acquisitions in the food industry. The Committee's purpose in its hearings is to determine whether mergers and acquisitions in the food industry, at the manufacturing, wholesale or retail level, have adversely affected consumer welfare. As you know, the commission's enforcement policy in this area, as well as in other segments of the economy, is to remedy situations created by mergers and acquisitions where there is a potential for harm to consumers from a reduction in competition that would lead to higher prices.

The Commission has found in its recent investigations related to the food industry that markets in this industry are often characterized by vigorous competition, and that market conditions may often not be conducive to collusive or monopolistic exercises of market power. New entry is often relatively easy into many food industry markets, and other conditions, such as product heterogeneity and cost differences among firms competing in the different markets, may combine to make coordinated pricing difficult even in markets with relatively few firms and higher concentration. In addition, mergers and acquisitions in competitive food industry markets can often achieve efficiencies, through either manufacturing or distributional economies, resulting in a significant benefits to consumers.

The Commission has obtained relief or issued complaints in recent years in the food industry in instances where it has appeared that there is a potential for harm to consumers. In 1986, the Commission's request for a preliminary injunction was granted by a federal district court in Coca-Cola's attempt to

acquire the Dr. Pepper Company. Other recent enforcement activities relating to the food industry have involved one authorization to staff to seek a preliminary injunction to enjoin a proposed acquisition in the supermarket industry, and one authorization to staff to seek a preliminary injunction to enjoin a proposed acquisition in the spice industry, together with the issuance of administrative complaints, as well as the issuance or prospective acceptance of consent orders obtaining divestitures in markets where a merger or acquisition created potential anticompetitive effects. In one other matter, which is non-public, a proposed acquisition was abandoned prior to Commission action. Staff had recommended enforcement action with respect to this proposed acquisition, and the parties had talked with Commissioners before reaching their decision to abandon the proposed acquisition. Copies of the orders and press releases that the Commission has issued with respect to these matters are attached to this statement.

In Supermarket Development Corp., which involved Supermarket Development Corp.'s (Furr's) proposed acquisition of the Safeway El Paso Division, the parties entered into a consent agreement with the Commission after the Commission authorized staff to seek a preliminary injunction. In the other matter in which the Commission authorized staff to seek a preliminary injunction, the proposed acquisition by McCormick & Co., Inc. of the Spice Islands brand of spices from Specialty Brands, Inc., the parties abandoned the proposed acquisition after the Commission directed the staff to file an injunction action.

The Commission has also recently accepted a proposed consent agreement with American Stores Company relating to its proposed acquisition of Lucky Stores, and a proposed consent agreement with The Vons Companies, Inc. with respect to its proposed acquisition of the Safeway's Southern California Division. In both of these matters, the Commission had reason to believe that anticompetitive effects were likely in certain markets.

In the Supermarket Development Corp. matter, the Commission accepted a consent order to obtain effective relief through divestiture of stores in certain local geographic markets where it appeared that there was a likelihood of anticompetitive effects from the merger. In other geographic markets, no divestiture was required because it did not appear that the acquisition created likelihood of anticompetitive effects. The Commission, Commissioner Azcuenaga dissenting, has accepted consent divestiture orders for public comment in the American Stores and the Vons matters. The determination concerning likely anticompetitive in certain geographic markets as a result of these acquisitions was based on several factors, including in particular, market concentration, market shares of the acquiring and the acquired firms, and entry conditions. In markets where there was evidence of recent new entry, or where new entry was being planned, or where it has appeared that new entry would be attractive, the Commission has not required divestiture. Markets exhibiting significant market growth are, in particular, markets where new entry is likely to be most attractive.

In these investigations, the Commission determined that new entry into the supermarket industry is not, in all instances, either particularly easy or likely. Thus, the Commission will continue to investigate mergers and acquisitions in the supermarket industry, and evaluate, in each instance, factors that may affect the potential for anticompetitive effects in relevant geographic markets. This often involves consideration of factors which are unique to certain markets, and

which have not therefore been relevant in other investigations. As this process continues, it will add to the Commission's body of learning with respect to the supermarket industry.[1]

I am aware of empirical studies showing that there is a positive and significant relationship between concentration and prices and profits in the supermarket industry. In the course of merger investigations and in assessing existing economic analyses in food retailing, the Commission's Bureau of Economics has reviewed these studies. The Bureau currently is in the process of writing a report analyzing these studies, the results of which the Commission would gladly share with the Committee, when it is completed.

Thus, I do not believe that it is accurate to say that increasing concentration in different segments of the food industry is a general problem that must of necessity be remedied. While increasing concentration does, in certain circumstances, create the potential for anticompetitive effects in certain markets, mergers and acquisitions may also create the potential for efficiencies, which enure to the benefit of consumers. The Commission bases its enforcement policy for all industries on an evaluation in each instance of whether the structural and qualitative features of a particular market make it likely that an acquisition would harm, rather than benefit, consumers.

Commissioner Calvani joins in the views express in this letter.

Sincerely,

Daniel Oliver
Chairman

---

[1]The Commission's enforcement activity with respect to the supermarket industry is not limited to mergers and acquisition matters. In the Smitty's and the Roswil, Inc., cases, the Commission obtained consent orders, in settlement of a Complaint alleging violations of Section 5 of the Federal Trade Commission Act, which required that respondents cease and desist from activities designed to restrict, impede or interfere with the efforts of price checkers or price reporters.

United States of America
Federal Trade Commission
Washington, D.C. 20580

June 10, 1988

The Honorable Peter Rodino
Chairman
Subcommittee on Monopolies and
Commercial Law
Committee on the Judiciary
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

This letter explains why I do not join my colleagues' letter of June 10, 1988, regarding the consequences of recent mergers and acquisitions in the food industry. I am particularly concerned about possible anticompetitive behavior in the food industry because it affects the economic well being of virtually every consumer in the United States. Food and grocery items are a significant part of most household budgets, and the cost of these items represents a particularly large part of the budget of less prosperous Americans. In light of the direct impact of food costs on consumers, I think that preservation of effective competition is particularly important in these markets.

I recently dissented from tentative acceptance of the consent orders in the Vons-Safeway and American Stores-Lucky Stores mergers because of concern about the reduction of competition in specific local California retail grocery markets and because the orders did not go far enough to protect competition in those communities. I also have supported seeking preliminary injunctions to block significant mergers in markets involving the processing and sale of individual food products, and I remain convinced that potential competitive problems loom in segments of this business.

I question the assertion in my colleagues' letter that in recent investigations the Commission has found that food markets are "often characterized by vigorous competition" and that market conditions in this industry are not conducive to collusion or monopolization. I further question the conclusions that new entry is "often" easy, and that product heterogeneity makes collusion difficult. The Commission has not undertaken any systematic industry-wide investigation of conditions in the retail grocery industry or the food processing industry. In the absence of serious study, I cannot join sweeping characterizations about the level of competition in food markets or about the nature of market and entry conditions in this industry.

I also want to disassociate myself from the conclusion that increasing concentration in different segments of the food industry is not a general problem that must be remedied. We do not have enough information to draw a blanket conclusion about either concentration or competition. Indeed, in many of the

specific market segments that have been the subjects of FTC merger investigations, the Commission found reason to believe that a violation of Section 7 of the Clayton Act occurred. Chairman's Oliver's and Commissioner Calvani's letter lists many such findings. If any generalization can be made from the specific markets that we have examined recently, it appears to be that vigorous enforcement of the antitrust laws is needed.

Finally, I welcome the debate about the impact of mergers in this industry that the hearings before the Subcommittee on Monopolies and the Commercial Law has provoked. Although I have not yet had the opportunity to review the work of Professor Cotterill, he has raised issues that warrant attention and consideration.

Commissioner Strenio joins in the general concerns raised in this letter. He voted in favor of provisionally accepting the consent agreements in the Vons-Safeway and American Stores-Lucky Stores mergers. Commissioner Strenio wishes to note that his votes to provisionally accept the consent agreements in these two matters were based upon his concern that absent a majority vote to accept the consent agreements, the relief sought by the agency would likely have been less than that contained in the settlements. Commissioner Strenio also notes that he has voted in favor of seeking preliminary injunctions to block significant mergers in markets involving the processing and sale of individual food products.

Sincerely,

Mary L. Azcuenaga

DISSENTING STATEMENT OF COMMISSIONER AZCUENAGA
VONS COMPANIES, INC.

File No. 881-0038

I dissent from the decision of the Commission majority to accept this consent order from Vons Companies, Inc. ("Vons") because the order is not sufficiently broad to resolve the potential anticompetitive effects of Vons' acquisitions of the southern California stores of SSI Associates, L.P. ("Safeway"). The levels of concentration, conditions of entry, and other facts that bear on the state of competition in the supermarket industry in discrete southern California markets indicate that the Commission should require the divestiture of a greater number of stores to protect competition in markets in which Vons and Safeway now compete.

August 31, 1988

CONCURRING STATEMENT OF COMMISSIONER STRENIO
IN VONS COMPANIES, INC.

File No. 881-0038

I would prefer to secure additional consumer safeguards in this matter either by renegotiating the proposed consent agreement or by rejecting the consent and pursuing a preliminary injunction. In particular, an increase in the number of stores to be divested would be in the public interest. However, lacking a Commission majority in favor of that approach, the alternative to the proposed consent agreement is not a stronger set of safeguards but rather no safeguards at all. Under these circumstances, and in light of the non-trivial nature of the relief obtained, I have voted to make final the proposed consent agreement.

August 31, 1988

DISSENTING STATEMENT OF COMMISSIONER AZCUENAGA
American Stores Company

File No. 881-0076

I dissent from the decision of the Commission majority to accept this consent order from American Stores Company ("American"), because the order is not sufficiently broad to resolve the potential anticompetitive effects of American's acquisition of Lucky Stores, Inc. ("Lucky"). The levels of concentration, conditions of entry, and other facts that bear on the state of competition in the supermarket industry in discrete California markets indicate that the Commission should require the divestiture of a greater number of stores to protect competition in markets in which American and Lucky now compete.

I also oppose the highly unusual and curious provision in the order in which the Commission at once takes from and returns to American its ability to reduce competition by acquiring stores in the Bay Area. Simply explained, the order requires American to divest from 15 to 21 stores in the Bay Area (with the exact number depending on the sales volume of the divested stores) within six months, but allows American to acquire one store per year (without reference to sales volume) in the same area without prior Commission review or approval. If, as the divestiture provision implies, the majority has determined that divestiture of at least 15 stores is needed to preserve competition in the Bay Area, then the acquisition of another store in the same area or, as permitted under the order, the reacquisition of one of the same stores required to be divested may equally pose a competitive danger. If, however, the majority is permitting the acquisition of one store per year without prior approval because of doubts about the long-term need for this level of divestiture, then it would be simpler and more efficient simply to lower the number of stores to be divested. The Commission should not require divestiture unless it is certain that the remedy is necessary, but once a particular remedy is found to be necessary, it should not be diluted. The Commission's mechanism for prior approval of future acquisitions that are competitively unobjectionable is the appropriate way to deal with future changes in circumstance.

August 31, 1988

CONCURRING STATEMENT OF COMMISSIONER STRENIO IN AMERICAN STORES COMPANY, INC.

File No. 881-0038

I would prefer to secure additional consumer safeguards in this matter either by renegotiating the proposed consent agreement or by rejecting the consent and pursuing a preliminary injunction. In particular, an increase in the number of stores to be divested and a reduction of the exceptions embodied here to the Commission's prior approval authority would be in the public interest. However, lacking a Commission majority in favor of that approach, the alternative to the proposed consent agreement is not a stronger set of safeguards but rather no safeguards at all. Under these circumstances, and in light of the non-trivial nature of the relief obtained, I have voted to make final the proposed consent agreement.

August 31, 1988.

Appendix B: Natural Grocers Association Market Share Estimates: Farrs/Safeway Acquisition

FURR'S/SAFEWAY ACQUISITION

City	Pre HHI	Increase HHI	Post HHI	Pre Market Leader Name %	Post Market Leader Name %
Albuquerque	2499	1733	4232	Furr's 41	Furr's 62
*Alamagordo	2550	1023	3573	Safeway 27	Furr's 46
*Artesia	2575	2100	4675	Furr's 35	Furr's 65
*Clovis	2676	1772	4448	Furr's 38	Furr's 61
El Paso	1625	1249	2874	Safeway 30	Furr's 51
*Espanola	2909	2644	5553	Furr's 36	Furr's 72
*Fort Stockton	5578	4422	10,000	Furr's 67	Furr's 100
*Hobbs	3060	740	3800	American 40	Furr's 44
*Los Vegas	3243	2268	5511	Safeway 48	Furr's 71
*Lovington	2900	2450	5350	Furr's 35	Furr's 70
*Pecos	3294	1998	5292	Safeway 48	Furr's 69
*Portales	2655	1953	4608	Safeway 31	Furr's 62
*Roswell	3571	2399	5970	Furr's 51	Furr's 75
Santa Fe	1975	977	2952	Furr's 30	Furr's 46
*Silver	3718	2056	5774	Safeway 48	Furr's 78

*FTC divestiture required

Source: National Grocers Association "Statement of National Grocers Association to the Federal Trade Commission on proposed Agreement Containing a Consent Order for Supermarket Development Corporation, 19 October 1987, FTC File No. 871-0066.

Appendix C: Market Share Estimation Procedures

To estimate the impact of these mergers one must estimate market shares for supermarket firms in an appropriately defined geographic market. In merger litigation, the FTC can obtain company sales data for any geographic area that it chooses and directly compute shares. This analysis, however, must rely upon supermarket share estimates that are based upon trade publications and available census data. Trade publications usually provide data for Standard Metropolitan Areas (SMA's). For very large SMA's such as Los Angeles, smaller geographic areas are more appropriately deemed economic markets. Within those subareas of the measurement metric chosen, are usually significantly higher because some firm's sales are not uniformly distributed over the SMA. Alternatively, market share data for very large SMA's understates the level of seller concentration in the revelant economic markets.

Table 4 in the test analyzes the impact of six recent or pending mergers in sixteen SMA's. It relies upon recent trade publications to estimate pre and post merger supermarket shares. Supermarket shares are calculated as follows. Metro Market's estimate of a firm's share of the grocery market in the year prior to the merger is multiplied by the reciprocal of Progressive Grocer's 1988 Market Scope estimate of the market's ratio of supermarket sales to food sales. To the extent that the universe used by Metro Markets and Progressive differ, i.e., Progressive Grocer's estimate of food sales is greater than Metro Market's estimate of grocery sales, these supermarket shares are overstated. Nonetheless, the estimate for El Paso and Albuquerque are somewhat lower than those estimated by the National Grocers Association (see Appendix B). Since the FTc provided no supermarket share estimates to the public, these are the only estimates available for comparison.

Progressive Grocer does not provide estimates of the supermarket share of sales for six markets (Johnstown, Salinas, Santa Barbara, Santa Cruz, Santa Rosa, and Vallejo). We estimated the supermarket share of sales as follows. Using the most recent Census data for which the supermarket share of grocery sales is available (1972 and 1977), we estimated the 1987 supermarket by doubling the change in the share between 1972

and 1977, and adding it to the 1977 share estimate, if it was positive. In Vallejo the change in share between 1972 and 1977 was negative, so we used the 1972 ratio rather than project a lower share for supermarkets in 1987. In Salinas, the estimated supermarket share in 1987 was nearly 100 percent, so we snubbed it at 90 percent to account for sales by grocery stores that are not supermarkets (convenience stores, mom and pops).

Also a check of the boundaries of Metro Markets and Progressive Grocer market areas revealed discrepancies in Newport News, New York, Los Angeles, and San Francisco. We adjusted Progressive Grocer data to Metro Market's New York market area, for example includes Nassau-Suffolk, and Progressive Grocer's does not. Table A4 uses population weighted averages of the Progressive Grocer supermarket share estimate for the New York SMA and Nassau-Suffolk to compute supermarket shares for the metro market area. Similarly, population weighted averages are used to compute supermarket shares for Newport News, Los Angeles and San Francisco.

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