

CHART 5

U.S. Heavy Duty Office Typewriter Market

(Sales in Percent of Market Share)

Source: RX 1848

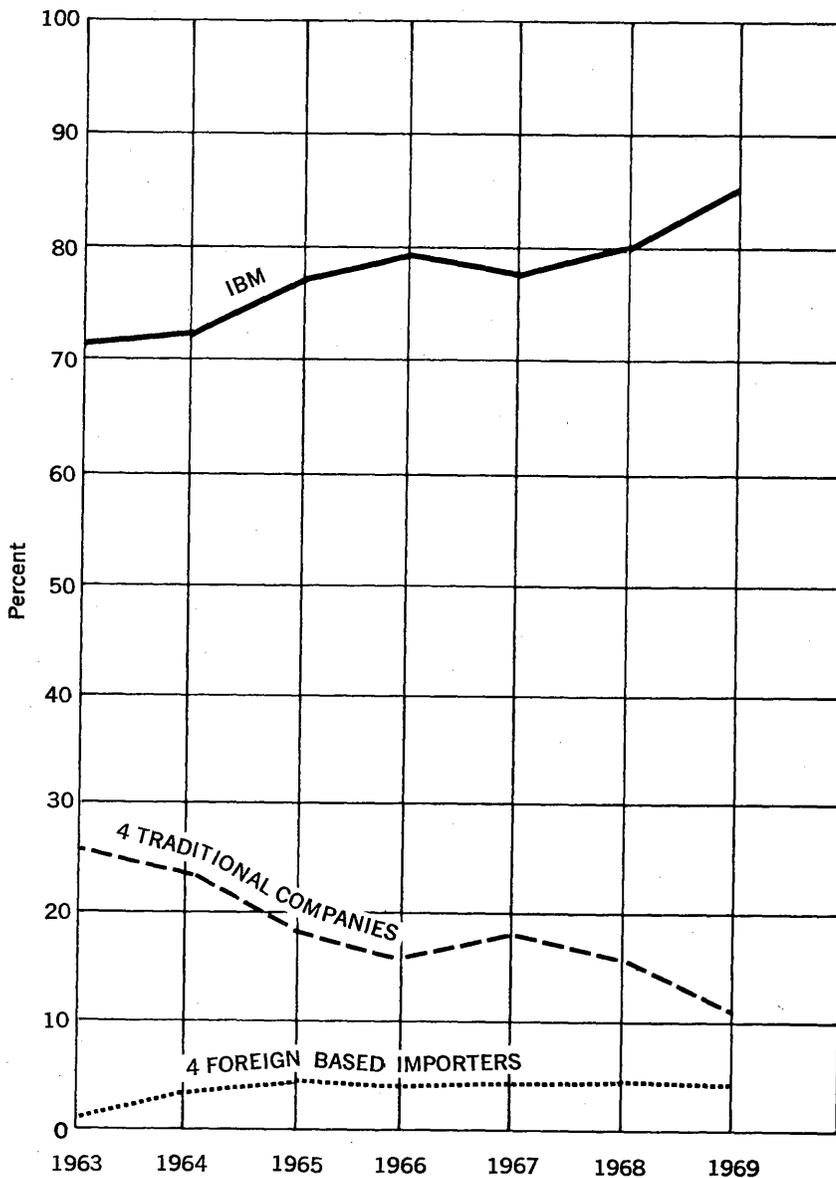


CHART 6

U.S. Heavy Duty Office Typewriter Market

(Sales in Percent of Market Share)

Source: RX 1848

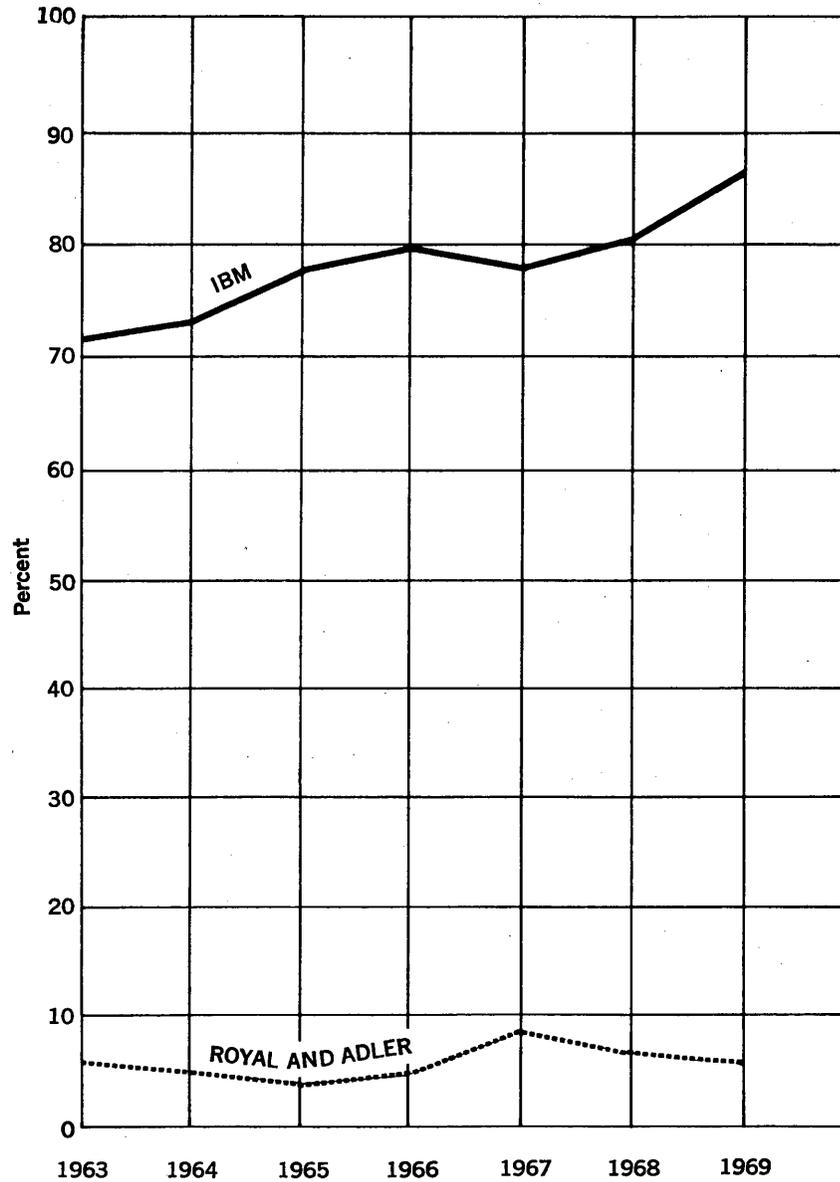


Table 3
U. S. PORTABLE TYPEWRITER MARKET
(Sales in Thousands of Dollars)

	1963	1964	1965	1966	1967	1968	1969
Royal	SALES SHR. 16494. 0.245	SALES SHR. 18653. 0.242	SALES SHR. 17879. 0.209	SALES SHR. 24197. 0.230	SALES SHR. 22243. 0.215	SALES SHR. 24859. 0.218	SALES SHR. 19117. 0.163
SCM	30089. 0.447	32689. 0.424	41024. 0.479	50068. 0.476	53028. 0.513	59091. 0.517	67095. 0.570
Sperry Rand	5842. 0.088	4863. 0.063	3221. 0.038	3830. 0.036	5013. 0.048	6446. 0.056	6527. 0.055
Olivetti	5834. 0.087	7238. 0.094	7758. 0.090	8425. 0.080	7951. 0.077	7685. 0.067	6799. 0.053
Olympia	4700. 0.070	5800. 0.075	5600. 0.065	5524. 0.053	5275. 0.051	3803. 0.033	4123. 0.035
Adler	336. 0.005	566. 0.007	957. 0.011	1081. 0.010	1101. 0.011	1145. 0.010	1507. 0.013
Messa (Sears)	0. 0.000	0. 0.000	0. 0.000	0. 0.000	13. 0.000	335. 0.003	742. 0.006
Facit	329. 0.005	438. 0.006	521. 0.006	579. 0.006	692. 0.007	757. 0.007	857. 0.007
Pailard	1938. 0.029	1958. 0.025	2016. 0.024	1982. 0.019	1948. 0.019	1898. 0.017	1825. 0.016
Brother	1717. 0.025	4825. 0.063	6744. 0.079	9165. 0.087	5721. 0.055	7760. 0.068	8308. 0.071
Nippo	0. 0.000	0. 0.000	7. 0.000	286. 0.003	427. 0.004	480. 0.004	736. 0.006
Total	67,379. 1.000	77,030. 1.000	85,727. 1.000	105,137. 1.000	103,412. 1.000	114,259. 1.000	117,636. 1.000

Source: RX 1853

Total sales of portable typewriters in the United States increased from \$67 million in 1963 to \$117 million in 1969 (RX 1853). The data show that SCM had a larger share of total portable typewriter sales than all of the other companies combined in 1969. SCM's share of total portable typewriter sales, which was 44.7 percent in 1963, by 1969 had increased to 57 percent. On the other hand, the share of total portable typewriter sales by each of the other companies, with the exception of Brother, had either declined or flattened out. Brother's sales of portable typewriters increased from 2.5 percent of the total in 1963 to 7.1 percent in 1969 (RX 1853; Tr. 8400-8401).

The data demonstrate that unless a company has a strong position in the sale of electric portable typewriters, unless it has a full line of portable typewriters to sell, and unless it is able to utilize the mass merchandising distribution outlets, its future in the total portable typewriter market is not good. Each of the companies which sells portable typewriters through dealers in the United States has experienced a decline in its share of total portable typewriter sales in the United States during the period 1963 through 1969. Olympia's share fell from 7 percent to 3.5 percent; Paillard's share fell from 2.9 percent to 1.6 percent; and Facit and Adler, whose combined shares of portable typewriter sales never exceeded 2 percent, remained relatively stable in terms of the market as a whole. Three of the four traditional typewriter companies—Royal, Remington and Olivetti—likewise experienced a decline in their total sales of portable typewriters. Olivetti's share dropped from 8.7 percent in 1963 to 5.8 percent in 1969, and Remington's (Sperry Rand's) share fell from 8.8 percent in 1963 to 5.5 percent in 1969 (RX 1853).

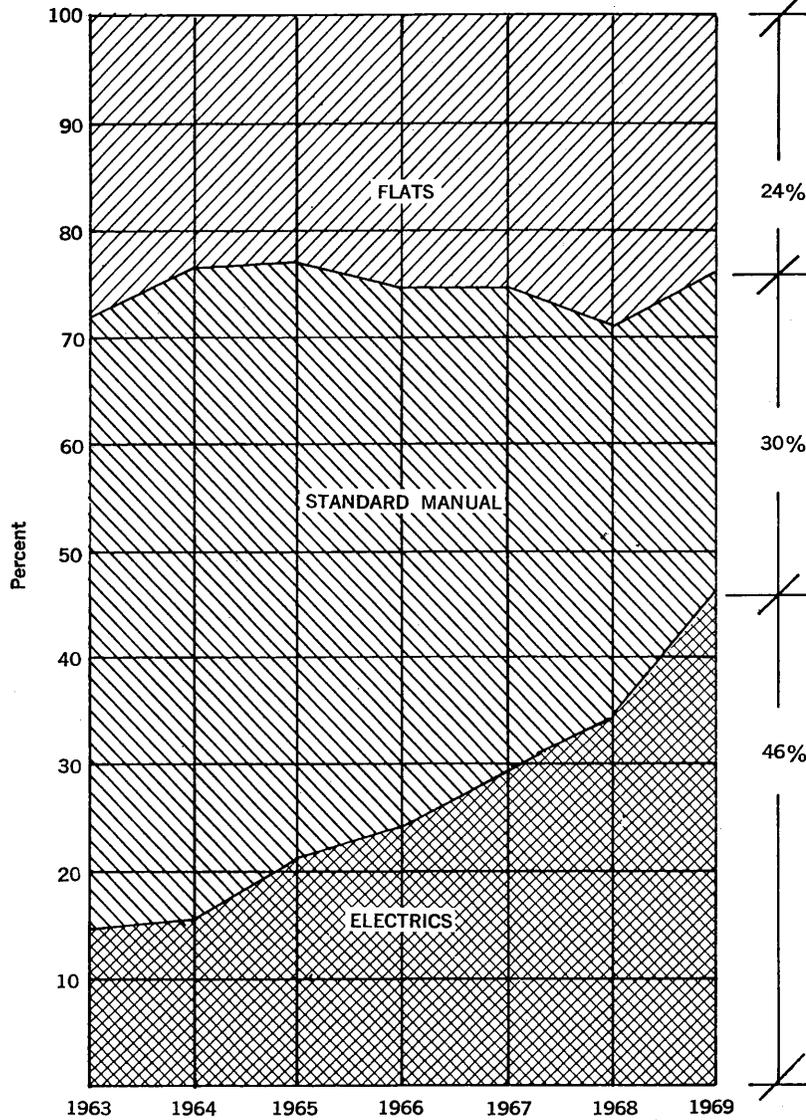
Royal's share of total portable typewriter sales in the United States decreased 8 percentage points from 24.5 percent in 1963 to 16.3 percent in 1969, most of the decline occurring between 1966 and 1969. The combined Royal-Adler shares declined by more than 6 percentage points during the period 1966 through 1969. During the same years, SCM's share of total portable typewriter sales increased by almost 10 percentage points (RX 1853). As Dr. Weston testified, a combined company whose total share of the market declined by 6 percentage points at the same time the leading firm's share increased by 10 percentage points cannot represent a threat to the other companies in the portable typewriter market. In fact, the probability is that Royal and

CHART 7

Trends in Comparative Shares of the Total Portable Typewriter Market for the Electric, Standard Manual, and Flat Manual Portable Typewriters, United States

1963-1969

Source: RX 1892



Adler will encounter great difficulty in limiting the decline of their market shares (Tr. 8401-8402).

e. The Electric Portable Typewriter Market

Trends in the total sale of portable typewriters are shown in Chart 7, which follows.

Electric portable typewriters have increased from 15 percent of total portable typewriter sales in 1963 to 47 percent of total portable typewriter sales by 1969. Sales of standard manual portables, on the other hand, have declined from 57 percent of total portable sales in 1963 to 30 percent in 1969, and sales of flat manual portables have shown a flat trend during this period. Electric portable typewriters, therefore, are the dynamic and most meaningful segment of portable typewriter sales, and their ascendancy underscores the technological breakthrough and economic characteristics of the industry in the pre-electric and post-electric years (RXs 336 L-M, R, 1845; Tr. 1549-1550, 2571-2581, 2679, 2774-75, 8306-8307).

In 1963, SCM was the only company selling electric portable typewriters in the United States, and it remained the sole seller until 1966 when Royal introduced its Ultronic and later introduced its All-Electric (RXs 1607-1608, 1849; Tr. 5557-5566, 6996-98). There were no other entrants into the electric portable market until early 1969 when Brother introduced its electric portable line in the United States market, and Remington began to purchase the Brother line for resale in the United States under its own trade name (RXs 1563 A-B, 1849; Tr. 356, 4349). Adler and other companies introduced single models of electric portables in mid-1969 and later (Tr. 6761-62, 7314, 7372-73).

Respondent's Exhibit 1849, identified as Table 4, following, shows that SCM was the leading firm in the sale of electric portable typewriters in the United States during the period 1963-1969, and that its share of the total sales of electric portables was almost 4 times the combined shares of all of the other firms in the market. Since SCM was the only seller of electric portable typewriters in the United States during the period 1963 through 1965 and had 100 percent of the market, its share declined when new entrants commenced selling electric portables in 1966. In terms of absolute sales of electric portable typewriters, SCM's sales in 1969 had almost doubled from its 1966 level of almost \$23 million (RX 1849; Tr. 8369-8370). SCM forecasts that its sales and market position for electric portable

Table 4
U. S. ELECTRIC PORTABLE TYPEWRITER MARKET
(Sales in Thousands of Dollars)

	1963		1964		1965		1966		1967		1968		1969	
	SALES	SHR.												
Royal	0.	0.000	0.	0.000	0.	0.000	2669.	0.105	4817.	0.160	6140.	0.159	8911.	0.167
SCM	10180.	1.000	12186.	1.000	17683.	1.000	22789.	0.895	23310.	0.840	32509.	0.841	42461.	0.915
Sperry Rand	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	818.	0.009
Adler	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	486.	0.004
Brother	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	1338.	0.004
Total	10180.	1.000	12186.	1.000	17683.	1.000	25438.	1.000	30127.	1.000	38649.	1.000	54504.	1.000

Source: RYX 1848

typewriters will increase substantially in the foreseeable future (RX 1652 H).

In 1969, Royal's market position was 62 percentage points below that of SCM. Adler's sales of electric portable typewriters in 1969 amounted to less than 1 percent of the total and combining Royal and Adler's electric portable typewriter sales in 1969 does not make any significant difference in market position because of the large gap in market share between SCM and the two companies combined (Tr. 9006). Committed to sell only to independent office machine dealers, having only one electric portable with no plans to produce a full line, and with high production costs compared to SCM and the Japanese, Adler had no potential for growth in either the portable typewriter market or the electric portable segment of the market.

Chart 7 supports SCM's prediction. The trends show that both the low-end portables (flats) and standard manual portables are down. As a number of witnesses testified, the electric portable segment of the market is the fastest growing and most important segment of the total portable market (Tr. 2571, 2581, 2774-75, 2782). As summarized by Dr. Weston:

* * * unless a company is strong in the electric portable segment of this market, and further, as the testimony shows, unless the company has a full line of portable typewriters, and third, even beyond that, unless a company is free to utilize the mass merchandising method of distribution which dominates this total market, and particularly the flats, that that company's share of the portable typewriter market will flatten out and likely go down (Tr. 8401).

5. Concentration Ratios and Trends

a. Introduction

In Section 7 cases, in addition to market shares, market concentration is an important factor that must be considered. *Brown Shoe, supra*, at p. 322. Both Commission counsel and respondent have presented data on concentration for various segments of the typewriter industry. Commission counsel have used the "two and four firm" ratios, and respondent has used the Herfindahl Index for measuring concentration.

The hearing examiner finds that the "two and four firm" concentration index of measuring concentration is inappropriate in this case. Simply stated, this theory holds, for example, that because IBM has 86 percent of the 1969 sales in the heavy duty office typewriter market, and the combined shares of the next three companies (Olivetti, Royal and Remington Rand) total

9.8 percent, the four leading firms control 95 percent of this market, which, under the structural theory of antitrust, constitutes a highly concentrated market.

The fallacy of using this method in this case is that it ignores the important differences in the shares of the individual companies (Tr. 8366-67, 8416-17, 9008-9009). Saying, for example, that the two leading firms have approximately 90 percent of the heavy duty office market fails to consider that one of the firms has 86 percent and the other has only 4 percent. Thus, the use of these ratios in the typewriter industry, where there is a clearly dominant firm in each market, results in misleading and erroneous conclusions as to the significance of the concentration.

This method also ignores the important changes in competition which have been taking place in the typewriter markets. For example, IBM's share has been increasing by approximately the same amounts each year as the next three companies, combined, have been decreasing; yet measured by the "four firm" index, concentration would have remained the same. This consistency, however, masks the decline of the other companies (RXs 1848, 1852).

The evidence shows that in the late 1930's, the top four companies (Underwood, Remington, Royal and L. C. Smith) had over 90 percent of the total market, each with roughly equal shares; today the top four companies still have over 90 percent, but one company which was not one of the top four companies thirty years ago, IBM, now has over 85 percent of the market to itself. As the trends clearly show, the top four companies of thirty years ago have fallen into relative insignificance. The four-firm concentration index would not reflect this fundamental competitive realignment.

In the office and portable typewriter markets, IBM and SCM have market shares so disproportionately greater than the shares of all of their competitors combined that using the "two firm" and "four firm" concentration index in this case would be more unsound and misleading than its application was held to be in *United States v. Crocker-Anglo National Bank*, 277 F. Supp. 133 (N.D. Cal. 1967). There, the leading bank had 40 percent of the market and the second ranked bank had 12.7 percent. The court held (at 166):

* * * it is statistically unsound to group the Bank of America [with 40 percent] together with any other bank in an attempt to analyze what effect the other bank has on markets or market structure.

To paraphrase the opinion in *Crocker*: "No other individual company could affect the end result that you would get, all the figures would be dominated by IBM or SCM."

It is like trying to combine a giant and a pigmy and say something about the size of a man by so doing. They are two separate classes of men and you cannot draw off a conclusion as to the average of a man by combining a 20 foot giant with a 4 foot pigmy. (Emphasis added.)

Statistically this is impossible, to get relevant or meaningful figures from such a combination. *Ibid.*

The Herfindahl Index, on the other hand, presents a more realistic picture of competition in this industry because it takes precise account of each company's market share and therefore reflects the exact composition of the industry. It does this by weighing each firm's market share by multiplying the market share times itself; the sum of all the market shares squared is the concentration index for the market (Tr. 8414-16, 9009). For a given number of companies in an industry, the more equal their shares of sales, the lower the index; the greater the disparity in their shares, the higher the index. Thus, if there are 10 firms in a market each with a share of 10 percent, the Herfindahl Index is 10 percent; but if one firm has a market share of 80 percent and 10 other firms have 2 percent each, the Herfindahl Index is 64.4 percent.⁶⁰ If two of the small firms merge, the Herfindahl Index would rise to 68 percent, an increase of 3.6 percentage points, and by more than the share of the market acquired, reflecting the presence in the industry of the firm with 80 percent (Tr. 8414-16).

The Herfindahl Index, therefore, provides much more accurate information on an industry where there is substantial inequality in market shares among the companies than the four-firm index, since it takes into account the size of the merger partners relative to the size of the other firms in the industry (Tr. 8414-18, 9008-9009).

Doctors Weston and Bock testified to the preferability of the Herfindahl Index in this case.

Dr. Weston:

But even more generally the four-firm concentration index has defects because in addition to not revealing what is taking place within the four-firms, and the typewriter industry is a clear example of that, the four-firm concentration index tells you nothing about what is happening in the rest of the industry, the—it only tells you about what is happening in connection with four firms. (Tr. 8417.)

⁶⁰ The mathematics are thus: $.8 \times .8 = .64$; $.02 \times .02 = .0004$; $.0004 \times 10 = .004$ which added to $.64 = .644$ or 64.4 percent.

Dr. Bock:

Q. In your opinion, what is the significance of the Herfindahl Index?

A. They measure concentration in a more meaningful way than can be achieved through conventional four- and eight-company measurement. Now, the conventional four- and eight-company measurements are based on a wide range of companies to be examined and take no account of the fact that there may be major differences in the shares of the individual companies that make up the first four or the first eight. * * *

Now the Herfindahl Index takes precise account of each company in the United States for which it was computed, and it reflects the exact composition of any industry to which it is applied.

* * * * *

It should be noted that the Herfindahl Index can be used only where the share of each company independently is known. Such information is not often available which accounts for the relative infrequent use of the index. This index is, in my opinion, the most revealing measure of concentration (Tr. 9008-9010).

b. Office Typewriter Market

Concentration in the total office typewriter market in Table 5 is measured by the Herfindahl Index and is computed from the market shares shown in Table 1 [p. 889 herein], *supra*.

Table 5
U. S. OFFICE TYPEWRITER MARKET
Herfindahl Concentration Index

	1963	1964	1965	1966	1967	1968	1969
H	0.295	0.297	0.320	0.342	0.363	0.403	0.495
H1	0.297	0.302	0.325	0.347	0.368	0.409	0.499
H2	0.401	0.403	0.433	0.461	0.483	0.517	0.616

H = Herfindahl Index with Royal and Adler separate.

H1 = Herfindahl Index with Royal and Adler merged.

H2 = Herfindahl Index without Royal.

Source: RX 1860

Concentration in the total office typewriter market, shown by the H Index, increased substantially from 1963 through 1969, but, as shown by the market shares, this was caused by the increasing share of IBM. The effect of the acquisition of Triumph-Adler was discernible only at the third decimal place, shown by comparing the H Index with the H1 Index, and caused no significant increase in concentration. On the other hand, if Royal continued its decline or withdrew from the market, there would be a substantial increase in concentration, shown by com-

paring the H Index with the H2 Index (Tr. 8435-36, 9013-14). Doctors Weston and Bock concluded that these data showed that there would be no adverse effect on competition in the office typewriter market as a result of this merger (Tr. 8435-36, 9002-9003, 9013-14).

Dr. Weston noted that the comparability of the Herfindahl Index in the heavy duty typewriter market and the total office typewriter market "illustrates, again, that what happens in this segment of the industry [total office typewriters] is dominated by what happens in the heavy duty office electric market" (Tr. 8435). He concluded that the impact of the acquisition based on the total office typewriter market:

* * * is not discernible unless you go to the third decimal place, and this is true for every year unambiguously, except 1964. On the other hand, if a continued decline in Royal's share, paralleling the continued decline in the four traditional American typewriter company's share, persisted, the effect would be to substantially increase concentration" (Tr. 8435; emphasis added).

c. Heavy Duty Office Typewriter Market

Concentration in the heavy duty office typewriter market measured by the Herfindahl Index is shown in Table 6. [see p. 909]

The Index rose from .534 to .739 from 1963 to 1969, and increase of 20.5 points expressed in percentage. Comparing this with the individual company market shares shows that the increase reflects the increasing share of IBM and the decreasing shares of the other companies. Comparing H Index and H1 Index, if Royal and Adler had been combined during the entire period, the level of concentration would have increased by only .2 of 1 percent in 1967 and .1 of 1 percent or less in each of the other years. In contrast, as shown in the H Index and H1 Index, the concentration increase of 9 percentage points from 1968 to 1969 was not affected by the acquisition, but reflected the normal growth of IBM and the continuing decline of the other companies. The difference between the H Index and H2 Index shows the impact of Royal's market share on concentration and shows that if Royal continues its rate of decline, which was 50 percent over the last 3 years, and the remaining firms gain Royal's lost share, concentration will increase by 4.6 percentage points, considerably more than the effect of the Triumph-Adler acquisition (Tr. 8418-8419, 9013).

In the opinions of Doctors Weston and Bock, this data shows that the combination of Royal and Adler would not result in

Table 6
U. S. HEAVY DUTY OFFICE TYPEWRITER MARKET
Market Share and Herfindahl Index

	1963	1964	1965	1966	1967	1968	1969
IBM	0.718	0.726	0.777	0.797	0.779	0.800	0.857
Royal	0.057	0.036	0.024	0.030	0.064	0.045	0.031
SCM	0.078	0.061	0.022	0.015	0.012	0.008	0.006
Sperry Rand	0.056	0.056	0.056	0.056	0.049	0.045	0.024
Olivetti	0.077	0.085	0.078	0.062	0.054	0.059	0.043
Olympia	0.006	0.016	0.022	0.020	0.020	0.019	0.017
Adler	0.005	0.016	0.018	0.017	0.018	0.019	0.018
Facit	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Paillard	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000
HERFINDAHL INDEX							
H Index	0.534	0.543	0.615	0.645	0.618	0.649	0.739
H1 Index	0.534	0.544	0.616	0.646	0.620	0.650	0.740
H2 Index	0.597	0.583	0.646	0.684	0.700	0.709	0.785

H = Herfindahl Index with Royal and Adler separate.

H1 = Herfindahl Index with Royal and Adler merged.

H2 = Herfindahl Index without Royal.

Source: RX 1856

the likelihood of a substantial lessening of competition in the heavy duty office typewriter market, and that the divestiture of Adler by Royal would not increase competition in this market (Tr. 9001-9002, 9013-9014). As Dr. Weston testified:

The broader and important economic significance of these trends in the concentration ratio is that this merger would have little effect on the concentration trends that have been taking place. This merger offers a possibility that in some degree these unfavorable trends in concentration might be arrested, or mitigated in the heavy duty office electric market, the most significant market in this industry.

* * * the effect of the merger on concentration is truly insignificant as compared to the increase in concentration that has been taking place absent the merger. And that furthermore any expectation that Adler might, by itself, would make any contribution to altering the trend toward increasing concentration in this market are illusionary and unfounded because this is the period of time when * * * one would expect that a relatively new entrant, foreign typewriter company, would make the greatest gain in market share, and as the table demonstrates between 1965 and 1969, during that five-year period, Adler's market share has been absolutely flat.

So, if emphasis is to be placed on arresting the very substantial increases in concentration taking place in this market, one can not look to

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Adler, or Adler's future role, or the possibility that Adler as an independent company, could make any contribution to a mitigation in the increasing trends toward higher concentration in this market (Tr. 8423-24).

d. Portable Typewriter Market

Concentration in the portable typewriter market is shown in Table 7.

Table 7
U. S. PORTABLE TYPEWRITER MARKET
Market Share and Herfindahl Index

	1963	1964	1965	1966	1967	1968	1969
Royal	0.245	0.242	0.209	0.230	0.215	0.218	0.163
SCM	0.447	0.424	0.479	0.476	0.513	0.517	0.570
Sperry Rand	0.008	0.063	0.038	0.036	0.048	0.056	0.055
Olivetti	0.087	0.094	0.090	0.080	0.077	0.067	0.058
Olympia	0.070	0.075	0.065	0.053	0.051	0.033	0.035
Adler	0.005	0.007	0.011	0.010	0.011	0.010	0.013
Messa (Sears)	0.000	0.000	0.000	0.000	0.000	0.003	0.006
Facit	0.005	0.006	0.006	0.006	0.007	0.007	0.007
Paillard	0.029	0.025	0.024	0.019	0.019	0.017	0.016
Brother	0.025	0.063	0.079	0.087	0.055	0.068	0.071
Nippo	0.000	0.000	0.000	0.003	0.004	0.004	0.006
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000
HERFINDAHL INDEX							
H Index	0.281	0.262	0.293	0.298	0.324	0.329	0.365
H1 Index	0.283	0.265	0.298	0.303	0.328	0.333	0.369
H2 Index	0.388	0.354	0.399	0.414	0.450	0.460	0.483

H = Herfindahl Index with Royal and Adler separate.

H1 = Herfindahl Index with Royal and Adler merged.

H2 = Herfindahl Index without Adler.

Source: RX 1861.

Concentration was trending upward from 1963 through 1969; but, as shown by the market shares, this was a result of the increasing position of SCM. Royal and every other company except Brother declined or remained essentially flat with insignificant market shares. If Royal and Adler had been combined throughout the period, the effect on concentration would have been negligible, never increasing by more than 5/10 of 1 percent (comparing H Index and H1 Index). On the other hand, comparing the H Index and H2 Index shows that, if Royal continued its decline in market share, the level of concentration in the portable market would increase substantially (Tr. 8437-38, 9013-14).

The relationship between the portable typewriter market and the electric portable segment of the market is similar to the office typewriter market and the heavy duty office typewriter segment of that market. In both instances one company dominates, IBM with 69 percent of the office typewriter market and 86 percent of the heavy duty office typewriter market, and SCM with 57 percent of the portable typewriter market and 78 percent of the electric portable typewriter market. As in the office typewriter segment of the industry, where heavy duty office typewriters are the primary influence, the electric portable segment of the portable typewriter market is half the total market and trending upward with SCM projecting an even greater market position in the foreseeable future (Tr. 8400).

Doctors Weston and Bock concluded that the acquisition of Adler by Royal made essentially no difference in the level of concentration in the portable typewriter market and did not have the probability of substantially lessening competition in the sale of portable typewriters (Tr. 8437-38, 9013). As Dr. Weston testified:

Again, it can hardly be argued that in this market a combined company whose total in combined share is declining at this rate can hardly represent a threat to the other remaining companies on RX-1853 that operate in the portable typewriter market.

As testimony has indicated, the greater likelihood is they will have a considerable job from a business standpoint of stemming the decline in share that has been taking place (Tr. 8402).

e. Total Typewriter Industry

Although the total typewriter industry is not a meaningful relevant market in which to appraise the effects of the acquisition, it is relevant to consider the effect of the acquisition on overall industry concentration. This is shown in chart 8.

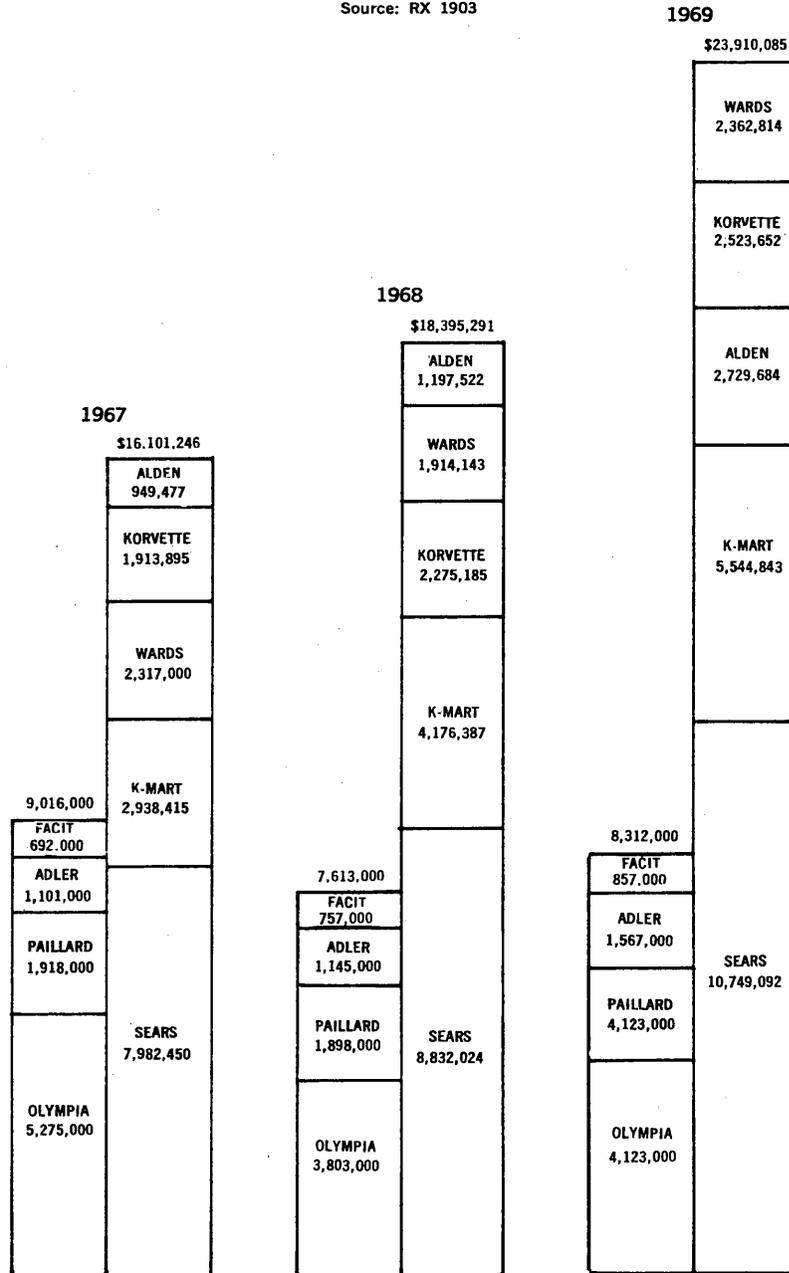
IBM's market position increased 18.6 percentage points in a six-year period to 54.3 percent in 1969. During this same period, third-ranked Royal's position declined 9 percentage points to 12.6 percent in 1969. IBM's increase in position in 1969 was 4.2 percentage points greater than Royal's and Adler's combined position in 1969.

Total concentration, as shown by the H Index is low, but has increased between 1963 and 1969. However, as the trend in shares of sales shows, the increase has been due solely to the increase in IBM's position and the corresponding decrease of

CHART 8

Comparison of Portable Typewriter Sales in the United States: Olympia, Paillard, Facit, Adler and Selected Mass Merchandisers, 1967-1969

Source: RX 1903



the other companies. The decrease has been concentrated in Royal, Remington Rand and Olivetti-Underwood (Tr. 8438).

As shown by the H and H1 Indices, the effect of the acquisition of Adler on industry concentration has been negligible. The acquisition increased industry concentration by .4 of 1 percent in 1969, which was less than the increase would have been in 1965 and 1966 if Royal and Adler had been combined then. On the other hand, if Royal continues its decline at the rate of 33 percent, as it has over the last 3 years, the increase in concentration resulting therefrom, as indicated by the comparison of the H and H2 Indices, will be substantial (Tr. 8439, 9010).

Testifying concerning the concentration indicated by the Herfindahl Indices for the typewriter industry and the segments thereof, Dr. Bock concluded:

Q. What did you find upon examining Respondent's Exhibit 1856 through Respondent's Exhibit 1863?

A. I found that the Herfindahl concentration index for the typewriter industry as a whole * * * changed by only .6 [sic] of a percentage point by the addition of Adler's share to Royal's. And the indexes for the various other segments * * * changed by less than .5 percentage point when Adler's share is added to Royal's. This insignificant change in concentration is evidence that the acquisition of Triumph-Adler by Litton did not make a significant difference to the competitive composition of the industry. (Tr. 9010.)

* * * * *

Q. What are your conclusions based on these showings with regard to the Herfindahl Indexes?

A. The combination of Royal and Adler make no essential difference to the level of concentration measured by this index in the typewriter industry as a whole or any segment of it. But my conclusion is the elimination of Royal would significantly increase concentration measured by the index. In fact, the Herfindahl measures of concentration show that if Litton were to shut down Royal's operations in typewriters, this would do far more to increase concentration than could conceivably be achieved through the combination of Royal and Adler.

Q. Are you suggesting that the divestiture of Adler would not increase competition in the typewriter industry?

A. That is my judgment. * * * (Tr. 9013-14).

f. Capital Intensity as Affecting Concentration

Respondent introduced extensive data relating concentration in the typewriter industry to concentration in the United States industry, generally. The data show, and the examiner here finds, that the value added by manufacturing in the typewriter industry in the United States, as shown by figures published by the Department of Commerce, is \$18.2 million. This compares

with \$0.8 million per plant for all United States manufacturing, and \$8.4 million per plant for the six largest industries, which account for 42 percent of all manufacturing assets in the United States. Of the four-digit SIC industries, totalling over 400, only ten, aside from the typewriter industry, have an average value added by manufacture per establishment of \$18.2 million or more (Tr. 8288-8292, 8294-95; RXs 1840, 1841, 1842).

Since value added reflects the size of the plant and of the activity, it also reflects the capital investment. Thus, high value added reflects high capital investment. This, in turn, creates potentials for substantial economies of scale in production but requires high production volume in order to produce profitable operation (Tr. 8293-95).

The high capital intensity of the United States typewriter industry explains, in part, the high and increasing level of profits of IBM and SCM and the lack of profits of the other companies (RX 1884). The high sales level of IBM and SCM in their respective markets provides the ability to realize economies of scale in production. On the other hand, the low and declining market shares of the other companies explains why some of them have withdrawn from the office typewriter market; their low and declining sales positions have prevented them from attaining sufficient production volume to provide profitable operation for their high capital intensity production plants. The high capital intensity of the typewriter industry predicts for the future that, barring a substantial change in conditions, IBM and SCM will continue to increase their respective market shares because of higher profits produced by their increased volume (RXs 1848, 1852, 1853, 1884). It also predicts that, unless the present trend is reversed, the smaller companies will continue to decline due to decreasing profits, their business will become more unprofitable, and there may be additional withdrawals from the market (Tr. 8545-47).

Dr. Weston testified on the significance of the high intensity in the typewriter industry:

* * * \$18.2 million for value added to establishment in the typewriter industry reflects the fact that in the two major segments of the total typewriter industry, in the heavy-duty office electric, and in the electric portable, that you have individual companies * * * that account for a very large market, and therefore, a very large absolute dollar volume, as well, which permits these individual companies * * * to engage in large scale production and perform a number of operations by machine to automate operations that would otherwise be performed manually.

* * * this enables them to produce profitably in the United States and offset the differential labor cost disadvantage of producing in the United States, and in relationship to the other companies in these two important markets of the typewriter industry, provide them with significant scale economies which provide an important business and economic advantage now and continuing into the future.

* * * * *

Q. Does the fact that other companies on these two exhibits do not have these economies of scale have any competitive affect on their ability to compete in the United States' market in each of these respective markets?

A. While there are a number of other factors that might affect their ability to compete, the differential scale economy advantage possessed by the leading firms have made it, and will continue to make it, extremely difficult for other firms to increase their market shares in these two important segments of the typewriter industry. (Tr. 8371-8372.)

* * * * *

In my judgment, * * * parallel with * * * the increase in the share of the leading firm and the decrease in the share of Royal and Adler combined, * * * taken into conjunction with the tables * * * on the value added per plant or establishment in the typewriter industry and the economies of scale that those numbers reflected, anything that would stem the declining share of Royal and Royal and Adler combined, would have salutary effects from the standpoint of competition.

They would be pro-competitive in their impact on the typewriter industry. They would retard the continually increasing advantages gained which the leading firm in the heavy-duty office electric market and the leading firm in the portable electric market—those increasing advantages of economies of scale which give them advantages in terms of lower costs, higher profits, strengthening their marketing distribution organization, strengthening their service organizations, supporting research and development.

Anything that stemmed the comparative advantage which these leading companies have had, and are continuing to have—in relationship not just to Royal and Adler, but * * * in relationship to all of the other typewriter companies—any contribution to stemming the increased share of the leading firms would help all of the other firms in the typewriter industry.

Therefore, from a Section 7 standpoint, it [the acquisition] would be pro-competitive and not have adverse effects (Tr. 8404-8405).

III. COMPETITIVE EFFECTS

The courts have "recognized the relevance and importance of economic data that places any given merger under consideration within an industry framework almost inevitably unique in every case. Statistics reflecting the shares of the market controlled by the industry leaders and the parties to the merger are, of course, the primary index of market power, but only a further examination of the particular market—its structure, history and probable future—can provide the appropriate setting for judging the

probable anticompetitive effect of the merger. The percentage of the market foreclosed * * * cannot itself be decisive * * *, it becomes necessary to undertake an examination of various economic and historical factors in order to determine whether the arrangement under review is of the type Congress sought to proscribe" (*Brown Shoe, supra*, at p. 322, n. 38, 329). In this case, in particular, economic and historical factors portend the future; market shares, in fact, became secondary (Tr. 8366, 8923-24). The record shows that each of the principal markets are increasingly dominated by one company; all other companies are merely maintaining their position or declining. Litton's efforts to halt the continuing decline of Royal have not been successful and the facts of the marketplace show that Triumph-Adler does not have the potential to become a significant competitor in the sale of office or portable typewriters.

A. The Potential of Royal

An examination of the potentials of Royal and Triumph-Adler in the United States typewriter industry contrasts against IBM's successes.

1. *Failure to Develop Quality Typewriters*

In 1948, Royal introduced its first office electric typewriter known as the RP (RX 1628). This machine was designed by merely electrifying, *i.e.*, adding a motor, to the Royal office manual typewriter (HH Model) then being sold (Tr. 1970-72, 6910-12). Over the years, Royal made no effort to design or develop an electric typewriter from the ground up, but relied on the only technology it knew—that of the manual office typewriter (Tr. 1971-72).

The generations of electric office typewriters introduced by Royal up to 1965—the RP, RE, HE, EB and GA—were all based upon the Royal manual typewriter in existence since 1904, and each generation of machine provided the building block for the next generation. Royal needed a quality product to sell, but it lacked the capability to build an office electric from the ground up.⁶¹ (Tr. 926, 6995-96, 7135-37.)

From 1957 to 1964 Royal made no effort to develop new R&D

⁶¹ A typical example of the shortsightedness of Royal's management prior to 1965 was a report from Royal's marketing research manager to the Royal vice president in charge of marketing that the "high level of acceptance" of the IBM Selectric was due to the IBM name "rather than because the Selectric represents any innovation or advance in typewriter design, production or use" (RX 339 A-B). Accordingly, he recommended that Royal should not "rush" into the single element typewriter market (RX 339 B; Tr. 7016-17).

facilities. The condition of its research and development organization by any standard, was not very good (Tr. 6954-7139). For example, starting in 1961, Royal's R&D Department began the Model 108 project, which was an attempt to design a single element printer from scratch. From 1961 through 1966, Royal spent almost \$4 million on this research and development activity, but accomplished nothing in terms of successfully developing a single element typewriter.⁶² The Model 108 project was cancelled after it was determined that Royal's estimated cost of manufacturing the machine was approximately equal to IBM's retail sales price (CX 418; Tr. 4926-27, 4974-75, 5608-5611, 7505-7506).

Mr. McKenna, who took over as president of Royal at the time of the acquisition in 1965, called on rebuttal by Commission counsel, testified:

At the time of the acquisition, I would consider that over the few years prior to that, the only profitable divisions of Royal * * * would have been the Roytype Division and the McBee Division.

* * * * *

Unfortunately, the typewriter didn't work very well and subsequently, this represented a large element of the inventory of Royal that was either reserved for, at the time of the acquisition, or written off. I would say in general that Royal's position in the electric typewriter field, unfortunately, was a very minimal one (Tr. 8135-36).

Mr. Ash also testified that, at the time of acquisition, Royal's product line, factories, management, and R&D were "outdated" and its marketing capability "in need of strengthening" (Tr. 7217, 7219, 7228).

In 1966, after Litton's acquisition of Royal, the Royal 660 heavy duty office electric typewriter was introduced, accompanied by a massive advertising campaign (Tr. 6986-87). It was initially successful but soon proved to have all of the basic quality problems of its predecessors (Tr. 6979-6980, 7530-34; RXs 282-283, 293-297, 303-305). The carriage and escapement mechanism dated back to the Royal Model X of the 1920's;⁶³ the type bars also originated with the Model X; the keyboard and cam action were introduced with the GA in 1961; the motor mounting base unit and motor and clutch system date back to

⁶² Royal spent more in its futile effort to develop a single element typewriter than IBM's total development engineering expense to perfect the Selectric (RXs 418, 652). Indeed, even including product and production engineering, IBM's total expense was slightly over \$5 million and this included development of the Selectric input/output printer (RX 652).

⁶³ Many of the Royal X model parts and the 660 parts were interchangeable; they had the same feed roll and carriage mounting systems that were used 40 years earlier (Tr. 1972).

the RP; the base and sides die casting concept was taken from the EB typewriter; and the ribbon feed system was taken from the manual typewriter. Litton's 1966 Annual Report stated that the 660 "incorporate[d] a wealth of technological design data" (CX 12, pp. 9, 12).⁶⁴ Each of these mechanisms, however, was designed for a particular typewriter, and they were not compatible in combination in the 660. The 660 failed to incorporate the first principle of typewriter manufacture, which is to tie a carriage and type bar action together in unity (Tr. 1991-92).

As a consequence of poor design and construction, therefore, the Royal 660 suffered serious performance problems in the field. In January 1968, in the Newark, New Jersey, area, for example, Royal's product service consultant, salesmen and distributors observed (RX 284 A-F; see also RXs 64 F, 286 A-D, 287 B, 288 A-C, 289 A):

The general feeling of the persons interviewed (particularly the distributors) is that the poor performance and reliability of the 660 is the cause of lost sales in established accounts as well as preventing them from breaking into new accounts. Besides all the difficulties they are having, the changes incorporated are too costly to them" (RX 284 A).

Changes or so-called improvements are made. However, the major complaints we have had for years are still with us. These never seem to be corrected. There must have been at least two dozen changes in the Carriage Return alone and it's still lousy. Every time a change was made something else is added which only adds to the problem. The source of the original problem is never corrected.

* * * Reluctant to place 660 in accounts, particularly IBM accounts. Experience has been poor; too many breakdowns. We give a one year warranty. Average 5-8 calls on 660. We are losing a great deal of revenue by servicing the 660. Expense comes out of our pocket.

We still have the same problems we have been reporting for years. Carriage Return, tabulating, carbon ribbon-twin paks, alignment, line lock.

Merk & Co., Elizabeth. Was 100% Royal. Because of the many breakdowns on the 660, IBM has been selling their machines by the dozens. One department now has all IBM.

Service required on Royal 660 is ten to one compared to other products we service" (RX 284 C).

⁶⁴ Commission counsel cite frequently the text of annual reports on new product introductions and forecasts of new business. The record shows that product failures countered the favorable forecasts of the annual reports. It is expected that a company puts its best foot forward and displays optimism for the future in its annual report. See *c.g.*, *Fortune Magazine*, "How's the Annual Report Coming?", Samuel W. Bryant, January 1964.

* * * Morale of city salesmen and distributors at low ebb. Mainly due to 660 performance and questionable reliability" (RX 284 F).

The successive failure of Royal's office electric typewriters seriously affected Royal's customer relationships. Whereas Royal's office manual typewriter once enjoyed a good reputation, the tarnished image of its office electric machine overrode any advantage that accrued from this past reputation, and many large industrial organizations, banks, utilities, and insurance companies, which form the largest and most profitable part of the office typewriter purchasing segment, have refused to accept Royal's electric office typewriter (Tr. 1036, 7035, 7738-7741). Examples include:

(a) E. I. duPont de Nemours Co. has approximately 4,000 typewriters in use at its Wilmington, Delaware, facilities. It purchased the Royal electric office typewriter models RP, RE and HE in the 1950's, but discontinued buying them because the quality was unsatisfactory and the service provided by Royal was inadequate. Currently, its reaction to any Royal product is negative (Tr. 5009, 5014-5016, 5019, 5021-22).

(b) Union Carbide Corporation uses approximately 5,200 to 5,500 typewriters throughout the United States and about 1,400 at its Park Avenue headquarters in New York City (Tr. 5035). In the early 1960's, it purchased Royal office electric typewriters, but discontinued buying from Royal because repeated and excessive service calls were required. It cost about four times as much to service the Royal typewriters as it did the IBM office typewriters. Although Royal salesmen have continued to call, Union Carbide has refused to purchase from Royal because of its past experience with quality failure (Tr. 5045-46, 5048, 5051-53).

(c) Chase Manhattan Bank, which has over 4,000 office typewriters in use in the United States (Tr. 5092), tested the Royal 550 and 660 in 1967 and found the machines unacceptable for purchase because of mechanical deficiencies in the carriage assembly and the difficulty in making adjustments to the escapement mechanism (Tr. 5074-77, 5087).

(d) The Morton Salt Company purchased Royal's office electric typewriters until approximately 1963 when purchases were discontinued because of maintenance problems, numerous breakdowns, and difficulties in obtaining service. Morton has not purchased typewriters from Royal since that time (Tr. 5325-27).

In commenting on Royal's ability to regain its competitive position and improve its image, the general office manager said:

No, I think it would be quite a long haul for them to get back into the typewriter picture where they were at one time. I should say at one time in manuals, they were great in the market as you probably know.

When they first went into the electrics, people thought they were going to do it, but in our opinion, in my opinion, the whole name went sour back in the early '60's. I think they would really have to do a selling job to overcome that feeling (Tr. 5352).

(e) The Ford Motor Company, which uses between 15,000 and 20,000 typewriters throughout the United States, had purchased the Royal HE, Emperor (EB) and Electress (GA) office electric typewriters during the period 1960-1964. The Royal Electress (predecessor to the 550), a light duty machine, was not satisfactory for Ford's purpose, and the purchase of it, as well as other Royal machines, was discontinued (Tr. 5365-67). Ford, however, subsequently purchased approximately 50 Royal 660's, which proved inadequate. Consequently, in 1967 the Royal 660 was removed from Ford's acceptance list and the 660's which had already been acquired were removed from the typing stations because of the machines' excessive downtime (Tr. 5368-69; see also 2893-94, 5209, 5232-34, 5237-38, 5256, 5299, 5435-36, 5446, 5772-74, 5788-5790, 5827, 5877-78, 6146, 6153-55).

(f) The supervisor of typing services for the Standard Oil Company of California, which has over 1,000 typewriters in use in San Francisco alone, testified that Royal had gone downhill and was no longer an acceptable company from whom to purchase quality office typewriters.

Independent office machine dealers likewise testified that the poor quality and image of Royal's earlier office electric typewriters seriously affect Royal's present business. A former Royal branch manager and Royal agent, who is presently an Adler dealer, testified that in his opinion Royal has never made a quality electric typewriter (Tr. 5883-85, 5892-93, 5898). For Royal, during the period 1955 to 1965, in terms of producing a quality office electric typewriter, "It was one debacle after another. Each one had cheesecake around it and had different style and operating features dressed up, but there was no durability" (Tr. 5893). The "Royal typewriter simply was not a durable machine" (Tr. 5895).

A former Royal salesman, who became a Royal dealer in 1951, and current treasurer of NOMDA, testified that in terms of

office electric typewriters Royal "brought out one disaster after another. We would replace the machines and the replacement would be as bad as the original" (Tr. 6440). The poor quality of the Royal electric typewriters had a substantial effect on his business because: "It shut us out of a great many accounts. They—some accounts would be realistic about it, and say, 'We realize this is not your fault. You are doing your best, but you have a poor product to work with' " (Tr. 6440).

Mr. Charles Scher, a former Royal salesman and now an Adler dealer, who was called on rebuttal by Commission counsel, testified:⁶⁵

It [the Royal office electric] was very difficult to maintain. It didn't stand up. It was just not selling in the market place. And the future of the business was, of course, electric typewriters. And we, up to that point, we were basically selling the manual, and we were all optimistic at the time of the introduction, but we were extremely disappointed (Tr. 9068).

Royal's continuing product failures caused Mr. Scher to "lose confidence in it" and leave the company (Tr. 9068).

The consistent quality failures of Royal's office electric typewriters in the 1950's and early 1960's not only caused considerable customer dissatisfaction, but also had a serious negative effect on the morale of Royal's salesmen. When a typewriter was returned by a customer due to quality deficiencies, the salesman who made the sale had his commission charged back against him. In addition, the poor reputation of Royal's electric office typewriter prevented the Royal salesmen from making repeat sales. Unable to earn sufficient income, many of Royal's salesmen left the company. At the same time, Royal's poor quality reputation prevented Royal from being able to hire good salesmen. Consequently, the turn-over rate of Royal's salesmen increased, and the size and effectiveness of its sales force declined over the year until by 1969 the turn-over rate had reached 50 percent (Tr. 6970-74, 9067-69; RX 1599).

Royal's problems with product design and quality control were not limited to office typewriters. In the early 1960's, Royal had tried but failed to develop a portable electric typewriter to compete with SCM, which had created the portable electric market in 1956 (Tr. 3007-3008). Just as with the office electric typewriters, Royal began by attempting to electrify one of its existing manual portable typewriters. In 1961, it attempted to electrify

⁶⁵ Later as a Royal dealer in Connecticut, Mr. Scher discovered that the quality of the Royal 550 and 660 " * * * hadn't improved very much over the years * * * " (Tr. 9068-69).

its Royalite flat⁶⁶ manual portable which was then being manufactured in Holland. The Royalite, which was first introduced in 1945, was a light action typewriter with a carriage shift as opposed to a segment shift. Royal's first portable electric, the Ultronic, was introduced in the spring of 1966, ten years after SCM's first electric portable. The Ultronic had an electric carriage return, but the tab system, ribbon system and the back space were manual operations (Tr. 5557-5562; RX 1751).

Shortly after introduction, reports from the field indicated quality deficiencies. Within a year, the Ultronic was called back from the field and a crash program started to redesign the machine (Tr. 5562-64, 7077). Out of a total production of approximately 40,000 to 50,000 Ultronic portables, 10,000 to 15,000 were destroyed and many others had to be rebuilt (RX 313 G-H; Tr. 7077-78). Royal's optimistic hopes for the Ultronic, as reflected in the 1966 Annual Report (CX 12) referred to by Commission counsel (CCF 176), therefore, proved to be illusory and its failure further diminished Royal's image in the marketplace.⁶⁷

The Willy Feiler All-Electric portable typewriter was a more costly failure than the Ultronic. As the record shows, it was a compounding of poor design to begin with, and more engineering failures and miscalculations. Although many of Royal's typewriter engineers spent hundreds of man hours working on the project, its deficiencies were never overcome and it was not well received in the market. The Singer Company, for example, ordered 10,000 which could not pass quality control tests; most of these typewriters were later destroyed (DE 7-8, 13; Tr. 6999-7001, 7494; RX 314 A-B).

After the acquisition of Royal, Litton, which did not have electro-mechanical typewriter capabilities of its own, began to make substantial efforts to obtain competent R&D personnel

⁶⁶ A flat portable is generally described as being less than 3" in height and sells at the low end of the price range.

⁶⁷ Alden's, a large mail order house based in Chicago, Illinois, dropped the Royal Ultronic from its catalog because the quality was poor and sales did not live up to expectations (Tr. 2392, 2435, 2450; see Tr. 5181-82). K-Mart, one of the largest discount department store chains in the United States, dropped the Royal portable typewriter line because, among other things, Royal did not have a full line of portable typewriters, and its Ultronic portable typewriters had tremendous mechanical and design problems and could not be sold (Tr. 2755, 2780, 2794). Sears, Roebuck and Co., the largest mass merchandiser in the United States, with approximately 800 retail stores, tested the Royal Ultronic in 1968 and 1969, and found that its design did not meet Sears' standard (Tr. 2798, 2805, 2808-2809). Independent office machine dealers also were adversely affected by the poor quality of Royal's electric portable typewriters. As one remarked the Royal Ultronic's "[Q]uality control was miserable. The machine just wouldn't work. Tabulation, backspace. Keys refusing to fire. It was bad news" (Tr. 6439).

for Royal.⁶⁸ Mr. Harry Gray, the head of Litton's Business Group, authorized the president of Royal to search for a good research and development head, and suggested a salary equivalent to that of the president of Royal's Office Typewriter division, with attractive stock options (Tr. 7496-7500).

Mr. Richard Plat, who had a background in the office machine industry, was employed by Mr. Gray to work in product planning for Royal. Mr. Plat worked to determine whether the 660 standard office electric typewriter could be modified into a quality product. His conclusion was that any further effort on the 660 would be a waste of money. The machine was fundamentally unsound. Mr. Plat told Mr. Gray "* * * what we have to have is a quality electric, full featured office machine to compete with IBM or we are going to have to go out of business" (Tr. 7521-23, 7530-31).

The cost of developing a type bar office electric typewriter from scratch was estimated to have been between \$5 to \$7 million, and it would have taken four or five years (Tr. 1120-21, 1124). But after an inspection of the Hartford R&D facilities, Mr. Gray⁶⁹ concluded that the Royal R&D personnel would never be able to accomplish anything in the single element field because they did not have the basic knowledge necessary (Tr. 7487).⁷⁰ Therefore, before Royal could even undertake the design and development of a new electric typewriter, new and competent R&D staff would have been required. Recruiting a functioning R&D team would have required two to three years, which would have added to the time required to get a competitive office electric, or a total of five to seven years in all (Tr. 7505-7506).

2. *Prelude to the Triumph-Adler Acquisition*

Royal's inability to produce quality electric typewriters, before and after its acquisition by Litton, was paralleled by its financial difficulties.

Analysis of Royal's condition prior to acquisition in 1965 re-

⁶⁸ For the most part, Litton's other divisions lacked electro-mechanical R&D capabilities which would be of any value in the typewriter business. Most of Litton's research and development capability is grounded in electronics, and the scientists, physicists and chemists engaged in these activities were not qualified to work on electro-mechanical typewriter design (Tr. 1037-39, 7262-64).

⁶⁹ Mr. Gray became head of Litton's Business Equipment Group in November of 1967 (Tr. 7472-73, 8085-86). He is now president of United Aircraft Corporation (CCR pp. 64-65).

⁷⁰ By 1968, in addition to the earlier 108 single element project which failed, Royal engineers had been working on a single element typewriter for five years at a cost of \$3,942,000, but had accomplished only the development of a handmade rotary printing device put together in a model shop (Tr. 7571-77, see CX 469 A-B).

vealed that it was a liquidating company. Its total assets had shrunk by almost \$15 million from 1960 to 1964, a liquidation of more than 17 percent; it had an unfunded pension liability of \$9.7 million; it was in a tight cash position; and it had substantial inventories of unsaleable product (CX 22, p. 13; RX 1887; Tr. 6994, 7165, 8108, 8572-78). Further, its foreign marketing organization, which prior to World War II was "one of the strongest in the world," Mr. McKenna testified, had "deteriorated to be practically insignificant" (Tr. 8126).

In many respects, in 1965 Royal's position was like Underwood's five years earlier. As Mr. Ash testified, "[t]he same factors that had been bearing upon Underwood had also affected Royal. They were ones of marketing, production, new products. The two companies were following the same course; one was just a little bit later than the other" (Tr. 7174). By 1970, Royal's condition would have been identical to that of Underwood. "It was on its way with no possibility of recovering, we though, without our doing something about it * * * it [Royal] was going right down. Sinking" (Tr. 7229).

In March or April 1965, immediately after the acquisition, Mr. McKenna directed the Royal office typewriter division management to come up with a solution to Royal's electric office typewriter problem (Tr. 926-930). As an "interim solution," the Royal 660 was introduced in 1966 with a big promotion which caused its sales to increase initially (Tr. 931). It was an initial success; "The orders were coming in at a higher level than prior to the introduction * * *. We experienced some progress in sales and we ran into some good times economically, and this helped" (Tr. 6986-87).¹¹ But by November, 1967, sales began to decline substantially (Tr. 7473-79). With the failure to achieve repeat sales of the 660 and Ultronic and the inability to introduce quality products, new orders also declined drastically and profits dropped substantially below plan (Tr. 7621-7622). Royal's continuing product failures over the years had built up a substantial loss of confidence in the marketplace which could not be overcome, despite the many attempts to revitalize Royal and the infusion of substantial cash advances by Litton (Tr.

¹¹ In addition, in 1966 the Federal Government allocated millions of dollars in connection with the War on Poverty, which provided funds for the purchase of office equipment and typewriters by schools which, in turn, materially increased the sales of the Royal 550 (Tr. 6987-88).

4804-4809, 4851-53, 5181-82, 5368-69, 5827, 5877-78). By 1968, Royal was in a substantial loss position (RXs 394 A, 396 A).

By early 1968, Litton had concluded that a research and development team capable of developing a marketable office electric typewriter could not be assembled at Royal in time to develop competitive electric typewriters and stem Royal's accelerating decline, and that the only alternative was to purchase an office electric typewriter that would meet the quality standards of IBM (Tr. 1046, 7175-76, 7244, 7513). In the spring of 1968, Mr. Berry, then president of Royal, made an evaluation of Royal's competitive situation and concluded that there was no way to keep Royal viable with its current product lines. In Mr. Berry's view, if Royal did not develop a typewriter competitive with IBM, Royal was finished as a company and should get out of the typewriter business (Tr. 940-942, 1046, 7533-34).

Mr. Berry, called by Commission counsel, testified concerning the problems and alternatives facing Royal as he saw them in February, 1968:

By Mr. Lavine:

Q. As you assumed the presidency of Royal, what were the alternatives open to you as you saw them at that time?

A. There was a necessity to get an office electric that could compete with IBM. It is still a necessity [in 1971] to get a single-element machine. Actually the necessity [in 1968] was to get a so-called basket machine, that is, a key lever typewriter, and also get a single-element machine.

The alternatives facing me in order to solve that problem were to either solve the 350 problem, in other words, make it into a durable, more rugged machine, or eliminate the welding problem in the stampings. That would have been one.⁷² And another equivalent to that that is under the category of internal development would have been to undertake the development of an office electric modeled after the IBM Model "D".⁷³

Another alternative would be to get a license from IBM to manufacture their Model "D" and/or the single-element machine.⁷⁴

Another alternative would have been to sell a machine comparable, either IBM's machine or one comparable to it.

The other alternative would have been to acquire a company that had a machine of this nature. The last alternative would have been to go out of business (Tr. 940-941).

* * * * *

Q. Did there come a time during 1968 when you determined that one of these alternatives should be pursued?

A. Yes. I had made a survey of the feelings and attitudes of the sales force, a personal one * * *.

⁷² Attempted and failed (Tr. 938,5625).

⁷³ A number of attempts to develop a competitive office electric failed, *supra*.

⁷⁴ Attempted and failed (Tr. 4911-19, 4936-37, 4946-49, 7510-12, 7667-70).

Initial Decision

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I held extensive meetings with the engineering department at Royal—the extensive meetings were very long and often and late—in evaluating the progress they were making on the various programs they were working on and also their capability.

From this I determined that in my judgment the Royal R&D function was really incapable of developing a machine from point zero. It would have required complete reorganization and recruiting of new types of talent to do it. It would have also taken years of research work, more years of tooling, considerable investment of money. During this period the sales force was experiencing a horrendous turnover. The turnover rate was close to fifty percent. There was panic and lack of morale—poor morale I should say, not lack of it—poor morale in the organization.

It was my opinion we had to get a solution to this problem soon, that even the knowledge that a solution was really forthcoming would have a stabilizing effect.

Consequently, I ordered an engineering evaluation of the Adler electric primarily with the idea that if that held up under our engineering evaluation, that we might be able to persuade the Adler people to let us sell it for them as an alternative, alternate avenue of distribution for them.

Q. Under a distribution arrangement?

A. Yes. That is really the course of action I decided upon. So, I wrote a letter to Mr. Grundig, who owned the Adler-Triumph companies that produced this machine, suggesting that we might meet to discuss matters of mutual interest (Tr. 941-943; see CCF 253; Tr. 7535-37).

At his first meeting with Triumph-Adler officials, Mr. Berry was told that no purpose would be served in talking to Mr. Grundig, the majority owner of Triumph-Adler, if he only wanted to discuss the purchase of 50,000 office typewriters a year for distribution in the United States. After agreeing to discuss the acquisition of Triumph-Adler, Mr. Grundig agreed to meet with Mr. Berry, and they discussed the purchase by Litton of Mr. Grundig's interest in Triumph-Adler (DG 156-162; Tr. 951).

Mr. Berry reported to Mr. Gray that Mr. Grundig's offer to sell Triumph-Adler was the only solution for keeping Royal a viable company in the typewriter business (Tr. 952-953, 7535-37). Mr. Gray agreed, and after several additional meetings with Triumph-Adler personnel, Mr. Berry and others met with Messrs. Thornton, Ash, McDaniel and Gray at Litton's headquarters (see CCF 262-263; Tr. 955, 993-995; CX 64 A-Z34).

At that meeting, Royal's product problems, market trends in the typewriter industry, and the heavy turnover rate of the Royal sales force were discussed. It was pointed out that it would take in excess of three years to gather a competent research and development team, and an estimated 4 to 5 years to develop a new "basket" or key-lever office electric by reverse engineering (*i.e.*,

copying) the IBM Model D office electric. However, it would take from 6 to 7 years to build a typewriter from the ground up. It was agreed that time was a very critical factor to Royal's future. In the summer of 1967, Royal had experienced a sales downturn which had continued, while at the same time IBM sales were increasing substantially. Royal's profits had declined drastically resulting in a loss of almost \$8 million in fiscal 1968 (RX 382). It was concluded, in view of the time factor, that the acquisition of Adler was the only available alternative for Royal (Tr. 7175-76, 7535-39).

Commission counsel contend that, because three alternatives were discussed for solving Royal's problems, all of the three alternatives were actually feasible (CCR 34, 162-163). The alternative of internal development urged by Commission counsel was in fact considered and rejected because of the time it would take, weighed against IBM's increasing market share and Royal's declining share. As Messrs. Ash, Gray and Berry concluded, the timing was critical—if Royal were to survive in the marketplace, it had to have a competitive office electric typewriter immediately. Mr. Ash gave his approval to proceed with the negotiations because he felt that if Litton did not acquire the Triumph-Adler office electric typewriter, “ * * * the only realistic alternative available” would be to close Royal; Mr. Thornton indicated a negative attitude (Tr. 7535-37, 7542-43).

At Mr. Ash's request, Mr. Gray met with Mr. Thornton at a later date and discussed the alternatives. He stressed Royal's desperate position and the critical importance of timing. Mr. Gray told Mr. Thornton that, if the acquisition of Triumph-Adler did not go through, “* * * you have really two alternatives. You can let it [Royal] degenerate into a bankrupt situation or you can close it.” At this point Mr. Thornton concluded that these alternatives were not acceptable and approved the acquisition (Tr. 7175-76, 7542-46). After further negotiations, an agreement was reached to acquire Triumph-Adler.

B. Potential of Triumph-Adler and Independent Office Machine Dealers

There are limitations on a foreign company's ability to sell typewriters in the United States stemming from labor shortages, the price of typewriters in the United States and the need to allocate production and distribution over many countries (Tr. 151-154, 282, 295-297, 4298-4300, 7365-67). Triumph-Adler

could not ship substantial percentages of its typewriter production to the United States because it must balance its sales on a worldwide basis to protect its markets. It currently exports about 60 percent of its typewriter production to overseas markets around the world, and could not expand exports beyond this ratio (DG 601-604). Moreover, with typewriter prices higher in Germany than in the United States and some models selling at cost in the United States, it would not be commercially feasible to concentrate Triumph-Adler's efforts in the United States (Tr. 7279-80, 7351-53; RX 1814 A-D).⁷⁵

Triumph-Adler and its dealer organization were not a significant potential competitor in the sale and distribution of typewriters in the United States. Although it had increased its number of dealers from approximately 300 in 1964 to approximately 900 in 1969, a threefold increase, its market share of the total office typewriter market increased by only 5/10 of 1 percent to 1.9 percent of the market where it leveled off (RX 1852; Tr. 1183-84, 1193).⁷⁶ The expansion of Adler's dealer organization during this period contributed to its increase in sales (Tr. 6790). Since 1969, however it appears that Adler has lost market position. Total sales of office typewriters are increasing at a substantial rate but Adler's sales in 1970 were below the 1969 level (Tr. 6795-96). The testimony of Adler's "exclusive" dealer in Manhattan, the largest potential market in the country, a rebuttal witness for Commission counsel, is indicative of the impact of independent office machine dealers in general:

Q. You were asked about your sales, and you testified that your sales dropped slightly between 1969 and 1970. It is a fact, is it not, that your sales in 1971 are down from 1970, of the Adler typewriters?

A. In the first quarter, you are correct.

Q. You said you had six salesmen? How long have you had six salesmen?

A. We just hired the sixth one this week, as a matter of fact. We have—we have another salesman that has only been there a month. The remaining

⁷⁵ Triumph-Adler's sale of the Universal 200 office manual in the United States is unprofitable. It costs \$89.60 to manufacture and is sold to Adler Business Machine at the same price with freight absorbed by the factory (Tr. 7283-7285, 7289-7291). Similarly, the Tippa portable typewriter is sold to Adler Business Machine at the manufacturing cost of \$33 (Tr. 7279-7281, 7292).

⁷⁶ Similarly, Paillard increased the number of its dealers from 900 in 1965 to approximately 1400 in 1971, yet its market share declined from .8 percent to .6 percent between 1965 and 1969; Facit increased the number of its dealers from 550 in 1963 to approximately 1100 in 1971, yet its market share declined from .5 percent to .4 percent between 1965 and 1969; and Olympia increased the number of its full line dealers from approximately 250 in 1963 to approximately 800 in 1971, and Olympia's share declined from 3.7 percent in 1963 to 3.2 percent in 1969 (Tr. 122-123, 272-273, 715, 725-726; Chart 8 [p. 912 herein], *supra*).

four have been with us—well, the longest is over two years, and before that, four months (Tr. 9070-70 A).⁷⁷

* * * * *

Q. Since the fall of 1970 has your business been profitable? * * * Any way you want to give it.

A. The last quarter was very bad, and we lost money each month. As for the year we—we had a profit for the year which was down considerably from the previous year (Tr. 9070 B).

The evidence is compelling that a direct sales force is the most efficient and desirable method of selling office typewriters, and that independent office machine dealers are unable to compete effectively with direct sales organizations in the sale of office typewriters. Triumph-Adler, nevertheless, with its limited sales volume in the United States, has a long standing policy and commitment to sell typewriters in the United States only through independent office machine dealers (DG 590, 594, 599).

A direct sales force affords the manufacturer a host of advantages stemming from his complete control over a unified operation (Tr. 683, 1104, 2995, 4517, 4521-22, 7033-34). Independent office machine dealers, on the other hand, have their sales efforts diffused over a large number of products. They frequently handle more than one brand of typewriters, including IBM factory-reconditioned typewriters, copiers, duplicators, electronic calculators, adding machines, time clocks, and a host of other products. With a large number of products, they lack brand loyalty; and where they meet sales resistance to one product, they are quick to push another product, instead of expending time and effort to sell the first product. In short, they tend to sell whatever product is the easiest to sell. As a result, independent office machine dealers currently are switching a substantial percentage of their sales effort and inventory away from typewriters to electronic calculators where they have no entrenched competition like IBM (DG 621-622, 772-773; Tr. 4518, 5901-5902, 6375-77, 6498-99, 6532, 6563-6572, 6616-17, 6713-16, 6724-25, 6742, 6744-45, 7034-35, 7167, 7177-7178, 7833, 7935, 9055-56). As the president of Adler Business Machines testified, Adler has added new products to counter this development:

In my opinion, this [the addition of new products] has been necessary in view of the fact that we have hit or reached a plateau on our Adler electric 21 sales.

⁷⁷ Against Adler's dealer, IBM maintains 13 branch offices in New York City, 6 of which are geared to specific types of accounts such as banks, brokerage offices, communications offices, government offices, law offices and printing and publishing offices (RX 630 A-B; Tr 3113-14).

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Additional products have been necessary for us in order to maintain our business.

Well, up until about four years ago the electronic calculator had not as yet made its inroads.

* * * * *

As the electronic calculators came into its being—and in my opinion, these Adler dealers knew—many of them felt that they were fighting a losing battle selling Adler electric typewriters.

In other words, they had reached about as far as they are going to reach.

* * * * *

It became very obvious to me that we needed to do something to make up for this loss in business.

One thing, of course, was to take on additional products (Tr. 6712-14).

Competition among the dealer-oriented companies for attracting good dealers is substantial. With the entry of the IBM factory-reconditioned typewriter at the dealer level, which is discussed in detail elsewhere in the initial decision, the potential of the dealer-oriented typewriter company is diminished (Tr. 6498-99, 6505-6506, 6614-16). From 1967 to 1969, the sales of IBM's factory-reconditioned typewriters through dealers increased from 1.2 percent of total dealer sales of heavy duty office typewriters to 10 percent of total dealer sales of such typewriters (RX 1870).

Typically, independent office machine dealers are small local businessmen with 4.6 average employees per dealership, including the dealer. They are primarily service-oriented rather than sales-oriented; many are former typewriter servicemen who have gone into the business from the service area. Since the largest part of a dealer's profit stems from service rather than sales, dealers tend to concentrate their efforts in the service area. Sales most often come from service leads. (Tr. 5979-5980, 6010-11, 6298-6300, 6449, 6533-37, 6584). Although dealers concentrate on service, it is IBM who has the most extensive coverage for typewriter service in the industry (Tr. 6537-38). In many instances, IBM assigns a serviceman exclusively to one office building (Tr. 6307-6308).

To combat the over-riding advantages inherent in direct sales to national accounts, the dealer-oriented companies, including Adler, have attempted to cultivate national account business. Most national accounts for a number of reasons, however, prefer to deal only with a manufacturer of typewriters on a direct basis (Tr. 2891, 3007, 5041, 5044, 5078-79, 5136-37, 5236-37,

5258-59, 5372, 5723-24, 5791-92, 5743-44, 6572-75, 6629-6630). Included among these reasons are the following: (1) The manufacturer can provide better service (Tr. 2891, 2905, 5041, 5044, 5136-37, 5258-59, 5300-5302, 5305, 5372, 5791-5792, 5743-44); (2) the purchaser can exert more leverage on the manufacturer than on a dealer (Tr. 5078, 5236-37); (3) dealing with the manufacturer eliminates the control problem between the selling and delivery points, and makes a large order easier to administer (Tr. 5136-37, 5372); (4) dealing with the manufacturer provides an opportunity for design input and a better opportunity for quality control (Tr. 5236-37); (5) the buyer has only to look to one source for purchase cost (Tr. 5723-24); and (6) it is easier to pinpoint responsibility when buying from the manufacturer (Tr. 5372).

Many national accounts test and evaluate typewriters before authorizing purchases. The headquarters office publishes an approved list of the typewriters which may be purchased by the branches of the company. However, these approved lists and blanket orders do not mean that any specific number of typewriters will be purchased, or that any will be purchased (Tr. 1237, 5372, 5374-76). Most national accounts do not order typewriters from dealers. Union Carbide, for example, rejected Adler and Olympia typewriters specifically because they were being sold through dealers (Tr. 5041); Ford rejected Adler machines because they were being sold by dealers (Tr. 5372); and Fireman's Fund refused to even consider Adler typewriters because they are distributed through dealers (Tr. 5757-59).

Mr. James Ayres, president of NOMDA, and an Adler dealer, testified that it is an "exceptional occurrence" for a dealer to receive a sizeable order from a national account and that, whenever a dealer has been able to sell a national account, it generally has been the result of extraordinary perseverance over an extended period of time or the result of peculiar circumstances (DG 922-925; Tr. 1185-1190, 1229-1231, 5917-18, 5920-21, 5986-87, 6005-6006, 6070, 6304-6305, 6385-89, 6404, 6417-6422, 6430, 6431-32, 6472-75, 6540, 6573-75, 6634, 6736-39, 6750-54, 9070 H-J, 9074-75, 9078-79). Mr. Ayres, himself, although the largest independent office machine dealer in the United States, has never been able to sell more than 9 or 10 Adler office electric typewriters to any one national account. He has been trying to sell typewriters to Ford for over 15 years and thus far has been able to

sell only 2 or 3 Adler office electric typewriters to this account (Tr. 6540, 6572-75, 6634).

Commission counsel placed in evidence a number of national account user lists. A number of Adler dealers who appeared as witnesses, testified as to the accuracy and reliability of these lists. The record shows that the lists are used as sales tools to encourage the dealers and that companies are included in the lists even though only one or two typewriters may have been sold. In spite of frequent urging and a suggested price 10 percent below list, sales to national accounts constitute less than 10 percent of Adler total sales of typewriters in the United States (CXs 193 A-B, 196; Tr. 6519-6520, 6787-88).

IBM, with 86 percent of the commercial business versus 4.6 percent for the four dealer-oriented companies, is dominant in the sales to national accounts (RX 1868). As one of the dealer witnesses called by Commission counsel testified: "I don't think I have ever walked into an account * * * small or large [that was not] 90 percent IBM's" (Tr. 6428). As Mr. Ayres testified: "The image of IBM is overwhelming" (Tr. 6615-16), and as witnesses from commercial accounts testified: " * * * in probably 99 percent of the cases [typists] prefer IBM over anything else because of the name * * * " (Tr. 5790-91), and "if the girls don't have the IBM machine, they don't have the Cadillac of the field" (Tr. 5010 A).

The uncontradicted record shows that during the period 1967-1969 dealers accounted for not more than 12 percent of office typewriter sales as compared to 88 percent direct sales by manufacturers.⁷⁸ Although there is testimony in the record suggesting that three of the traditional companies (Royal, SCM and Remington) may be relying to a greater extent on independent office machine dealers for distribution of their office typewriters,⁷⁹ a comparison for the years 1967 through 1969 shows that in 1967 their combined sales of office typewriters were \$21 million, declining to \$18 million in 1969. Their direct sales declined from \$76.6 million to \$61.8 million during the same period (RX 1870). As Dr. Weston testified:

⁷⁸ In fact, excluding the dealer sales of IBM factory-reconditioned typewriters to dealers, which is on the increase, sales of office typewriters through dealers are on the decline (RX 1870; Tr. 8489-8491).

⁷⁹ Witnesses from each of the three companies attested to the advantages of the direct sales method for office typewriters (Tr. 1104, 2199, 2993-95, 2998-99, 3006-3007, 3016, 4517-18, 7033-34).

Now, these numbers have very great significance from a business and economic standpoint, because what they say and demonstrate is that while the percentages of dealer sales for these three traditional American typewriter companies appear to be rising in each case, and therefore in total, and while it would appear that their dependence on the dealer is increasing, those percentage figures are misleading when you look at what was happening in trends in terms of the absolute numbers.

Now, what the absolute numbers indicate is that it is true that their direct sales have been going down, and have substantially in this two-year period of time, they went down by approximately \$15 million.

But, and here is where the real economic and business significance lies, it doesn't mean that the dealers have therefore taken over and done the job for them, because dealer sales for them have also declined. Not as much, but the numbers were smaller to start with. The dealer numbers have also gone down.

What this means, and particularly taken into conjunction with my discussion with the efforts of firms to use a direct method of distribution, but the need to have volume in order to do that, this demonstrates that one of the reasons they have been pushed to try to use the dealer more is that their volume has gone down so greatly in the direct method of distribution, but that in their efforts for the dealers to take up the slack the dealers have not been able to do the job, that is the sales through dealers has also declined (Tr. 8493-94).

* * * * *

But in this segment of the total industry, it is the increase in the share of the leading firm that accounts for the decline in volume of direct sales by the traditional American typewriter companies. As a consequence with this decline in volume they have been pushed to rely more on the dealers, but the dealers haven't done the job as the data indicates (Tr. 8495-96).

Independent office machine dealers lack the potential to compete successfully in the sale of portable typewriters in the United States. Triumph-Adler dealers' complaint "that the discount houses, the department stores make it almost impossible for the dealers to sell portable typewriters" (CCF 413). This record demonstrates that "mass marketing" is the "only answer to building a portable sales volume" in the United States, and that the "discount houses, the department stores" do "make it almost impossible for the dealers to sell portable typewriters" (RX 1903-1905).

The growth of mass merchandising as the most effective method of distributing portable typewriters in the United States is dramatically evidenced by comparing sales of portable typewriters in the United States by the four dealer-oriented companies (Olympia, Paillard, Facit and Triumph-Adler) with the sales of portable typewriters by five selected mass merchandisers

(Sears, Roebuck & Co., Montgomery Ward & Co., Korvette's, Gamble-Aldens and K-Mart)⁸⁰ during the years 1967-1969, as set forth in Charts 8, 9 and 10 (RXs 1903-1905) on the following pages.

In 1967, the total sales of portable typewriters by the four dealer-oriented companies amounted to a little more than \$9 million, as compared to sales of over \$16 million by the five selected mass merchandisers. With the exception of Aldens, the 1967 sales of each of the other four selected mass merchandisers exceeded Adler's portable typewriter sales in that year. Adler's 1967 sales amounted to only 6.8 percent of the total sales of the five selected mass merchandisers (RXs 1903-1905).

By 1969, the total sales of portable typewriters by the four dealer-oriented typewriter companies had declined to \$8.3 million in comparison to sales of almost \$24 million by the five selected mass merchandisers. Adler's portable typewriter sales in 1969 constituted only 6.1 percent of the total portable sales by the five selected mass merchandisers, and Adler's sales were exceeded substantially by each of the individual five selected mass merchandisers. Sears, whose 1969 sales constituted 45 percent of the total sales of the five selected mass merchandisers, had sales of \$10.7 million in 1969, which were almost \$2.5 million more than the total sales of the four dealer-oriented companies (RXs 1903-1905).

In addition to the more traditional forms of mass merchandising, an increasingly important outlet for portable typewriter sales by manufacturers are the use of direct mail companies to solicit consumers directly for the sale of portable typewriters. At first it was the catalog houses and more recently mail solicitations by premium houses and others.⁸¹ The direct oil company promotion, typical of this innovation, is another form of merchandising that has replaced independent office machine dealers as outlets for portable typewriters. Oil companies, when billing

⁸⁰ Sears, Roebuck and Co. has approximately 800 retail stores and a mail order division (Tr. 2798-99, 2810; RXs 1701-1717).

Montgomery Ward & Co. is a large retail chain and catalog house (Tr. 2553; RX 1669 A-C).

Korvette's, a subsidiary of Spartan Industries, is a discount department store with 49 retail stores (Tr. 2673, 2676, 2680, 2695; RXs 1676-1683, 1685).

Gamble-Aldens, a subsidiary of Gamble-Skogmo, Inc., operates retail stores and a mail order division. The figures for the charts are for the mail order division only (Tr. 2384-2388; RXs 1655, 1664-1666).

K-Mart, a division of S. S. Kresge Corporation, operates approximately 365 discount stores (Tr. 2748-49, 2751; RXs 1696-99).

⁸¹ Sales of portable typewriters via catalog solicitation is substantial. Aldens, for example, which sends out 13 catalogs each year, in one mailing of its 1970 Christmas Book was able to sell 11,000 SMC portable typewriters for a total dollar value of \$323,000 (RXs 1664-66).

CHART 8

Comparison of Portable Typewriter Sales in the United States: Olympia, Paillard, Facit, Adler and Selected Mass Merchandisers, 1967-1969

Source: RX 1903

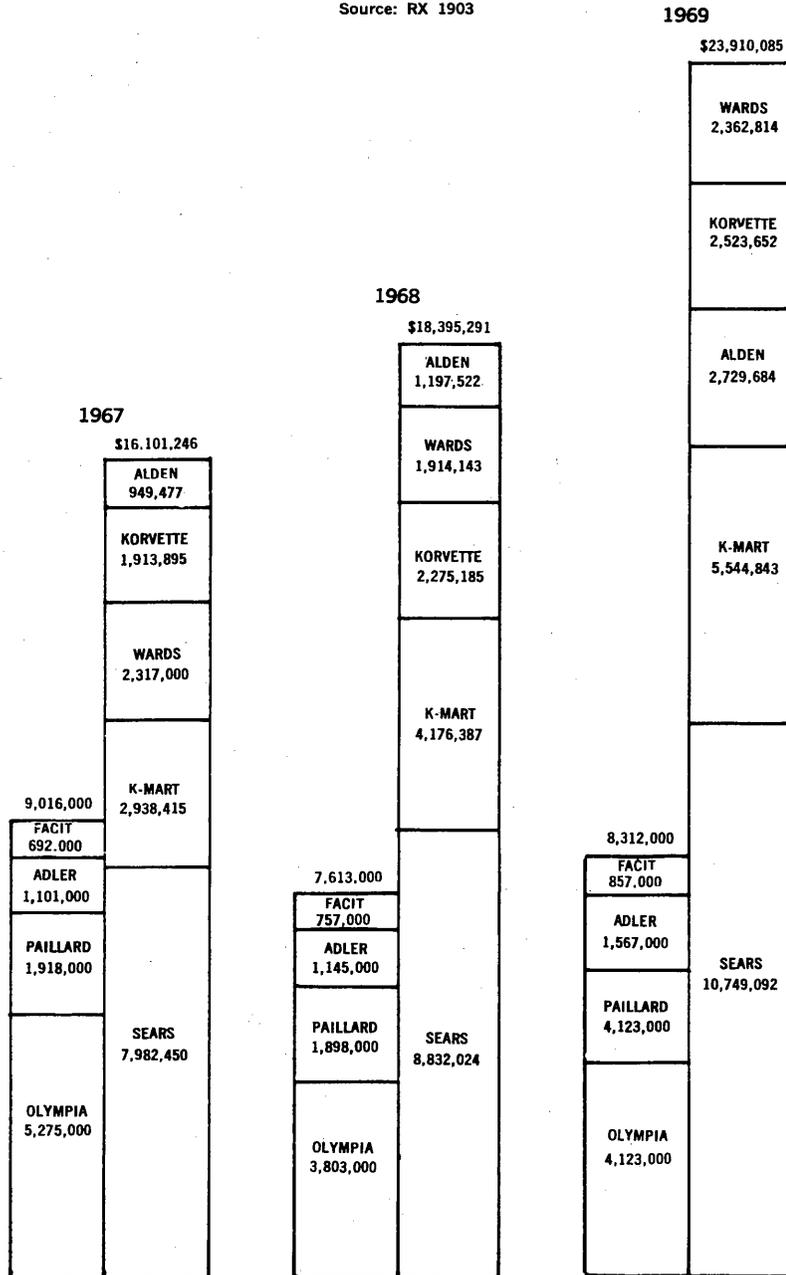
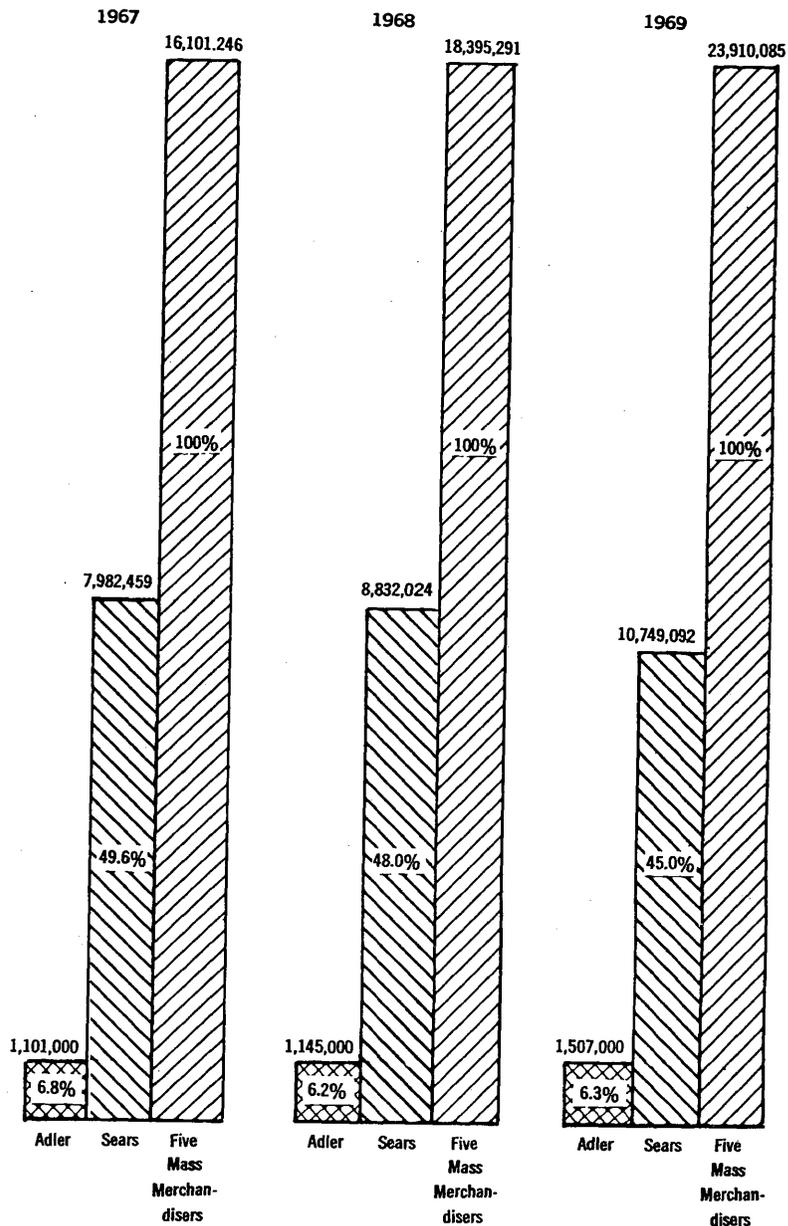


CHART 9

Comparison of Portable Typewriter Sales: Adler, Sears, and Selected Mass Merchandisers*, 1967-1969



*In addition to Sears, K-Mart, Korvettes, Montgomery Ward and Alden's.

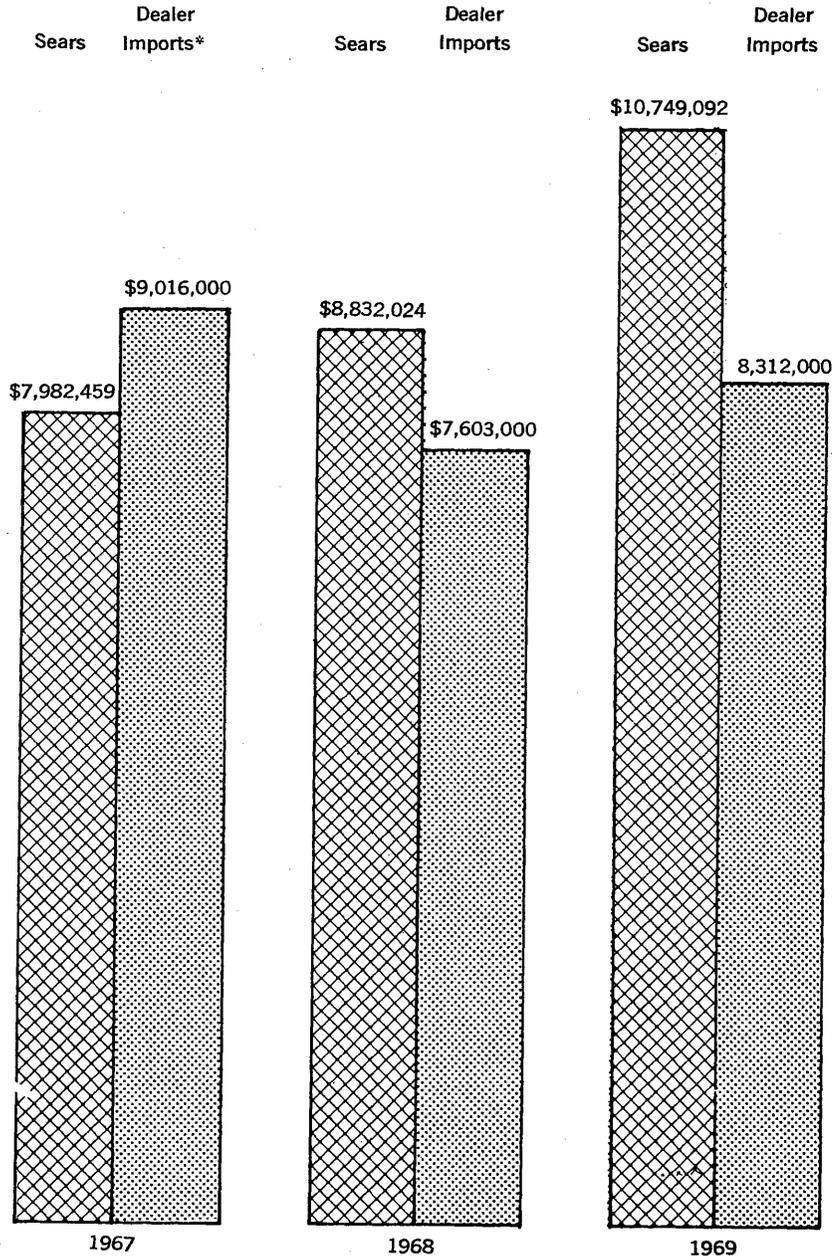
Source: RX 1904

CHART 10

Comparison of Portable Typewriter Sales in the United States: Olympia, Paillard, Facit, Adler and Sears, 1967-1969

*Manufacturers selling exclusively through dealers in the United States.

Source: RX 1905



their gasoline customers, enclose what are called "credit stuffers," which advertise the sale of portable typewriters. Remington, for example, sold approximately 26,000 portable typewriters under private label totaling almost \$1 million through a promotion run by Standard Oil of California in 1969 (RX 1742; Tr. 4447-48).

As a result of the accelerating trend toward mass merchandisers, independent office machine dealers represent a declining segment of the sale of portable typewriters in the United States. In 1967, dealers accounted for 28 percent of total United States portable typewriter sales and mass merchandisers and others for 72 percent. By 1969, the share held by the mass merchandiser group had grown to 74 percent and that held by dealers had declined to 26 percent (RX 1873). However, increasingly mass merchandisers are buying directly from foreign manufacturers, thus diminishing the importance of the traditional United States manufacturers of portables. Montgomery Ward buys directly from Brother; Kresge (K-Mart) has negotiated a direct purchase agreement with a Japanese firm; and Messa of Portugal entered the United States market in 1968 through a purchase agreement with Sears for portable typewriters.

Portable typewriter manufacturers and mass merchandisers alike find it advantageous to have a full line of electric portables to sell. It has been established that the consumer typically purchases a portable typewriter by selecting the unit that has the most features for the price he wanted to spend when he entered the store. Therefore, it is important to have a full price range of portable typewriters from which the consumer may choose, and to capture more shelf space in the retail store. Mass merchandisers, consequently, seek to purchase from the supplier with a full line of portable typewriters (Tr. 2559-2563, 2582-83, 2770, 7035-36, 7703, 7800). The only two companies presently offering a full line of portable typewriters in the United States are SCM and Brother (Tr. 1045-1046, 2581-82, 2770, 7096-98, 7701-7702; RX 336).⁸²

Mass merchandisers consider portable typewriters to be promotional "or football" items to be sold and advertised at extremely low prices in newspapers (sometimes below cost) in order to draw customers to their retail stores (Tr. 2384-88,

⁸² Royal does not have a full line of portables to compete with SCM, and Adler has only a limited portable distribution in the United States. Adler's flat portables (Tippas) sell at higher prices than competition and, with only one electric portable, Adler does not plan to build a line of electric portables to compete with SCM (Tr. 2770, 6801, 7096-98, 7701-7702).

2395, 2396, 2405, 2553, 2673, 2676, 2680, 2695, 2701-2702, 2719-2720, 2748-49, 2751, 2754, 2773-74, 2798-99, 2810, 3073, 3075-76, 3087-88, 5170, 5182-83; RXs 1664, 1666, 1669 A-C, 1677-1683, 1685, 1688-1694, 1696-99, 1701-1717, 1732-1734). When price promotions are run by mass merchandisers on portable typewriters, sales are substantially greater than usual, and a retailer's share of portable typewriter business fluctuates with the extent to which specials and advertised price reductions are run. For example, Alexander's features reduced prices, in some cases at cost or below cost, in nine out of ten of its newspaper advertisements of portable typewriters in order to draw traffic to its stores. Store traffic depends a great deal on price advertising in newspapers between competitors, and it determines who is going to get the volume of sales of portable typewriters at any given time (Tr. 3075-76, 3087, 3089, 5172-73). Approximately one-half of the portable typewriters sold by K-Mart in 1970, for example, were sold at a "double discount" (Tr. 2754-56, 2770-75, see 5172-73, 5182-83; RXs 1696-1699).

Price is the principal factor in the sale of portable typewriters. Thus, the principal sellers of portable typewriters offer quantity discounts, special promotions and special prices to mass merchandising customers able to buy portable typewriters in large quantities (Tr. 4440). SCM offers a discount on the purchase of 1000 portables or more, plus special promotions from time to time (Tr. 2271-73, 3035-36, 3042; RXs 1281, 1284, 1465). Brother offered low prices to Montgomery Ward in comparison to Triumph-Adler's prices to its dealers for comparable models in 1970. For flat manual portable typewriters, Brother charged Ward \$21.50 f.o.b. Japan for the Signature 8009 model which Ward advertised for \$37.88. Adler dealers paid \$36.50 for the Tippa, which is a comparable flat manual portable. Ward purchased standard manual portable Signature models 8136-8137 at \$37.75 and resold them at a retail price of \$87.95. Adler dealers were paying \$65.00 for the J-4 standard manual portable in 1970 (RXs 138 B, 1055 A-D, 1669 A-C).

As a consequence of these lower prices, mass merchandisers are able to retail portable typewriters at prices below which dealer-oriented companies can profitably sell them in the United States (Tr. 163-164, 806-807). Triumph-Adler's flat manual Tippa portable, for example, costs \$33 to manufacture, which is the same price at which it is sold to Adler dealers in the United States (Tr. 7281-84, 7294-95). Mass merchandisers, on the other

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hand, advertise flat manual portables for as low as \$29.95 (RX 101) and still make a profit (RXs 1657, 1658 E, 1664, 1665 A, 1665 D, 1682, 1692, 1693, 1694, 1705, 1707, 1709, 1721, 1726, 1727, 1732, 1733; Tr. 412-414, 2434, 2730, 2741, 2756-57, 2816, 3092).

As a result of this lack of price and promotional competition, mass merchandisers do not consider themselves to be in competition with independent office machine dealers in the sale of portable typewriters, and in determining their prices they look to advertising by other mass merchandisers and discount houses rather than independent office machine dealers (Tr. 2394, 2397, 2400-2402, 2574, 2677-78, 2696, 2722, 2736, 2750, 2771-72, 3086-87, 5171, 5190).

With the electric portable market capturing an increasing share of the total portable market, the probable introduction of a fully electric model that will sell to mass merchandisers at under \$100 will accelerate the decline in sales by independent office machine dealers. It was the opinion of mass merchandisers that a fully electric portable at a price point of under \$100 would enable the mass merchandiser to "maximize sales" (Tr. 2399); it would increase sales at the expense of standard manual portables and in all probability replace them (Tr. 2572-73); the \$100 price is called a "magic price" and a fully electric portable at \$99.99 would substantially increase sales volume (Tr. 2681-82); and a fully electric portable for under \$100 would enable a mass merchandiser to "scoop the market" with tremendous quantities (Tr. 2787).

Independent office machine dealers, therefore, cannot compete successfully with mass merchandisers in the sale of portable typewriters in the United States; consequently many dealers have abandoned all attempts at advertising and selling portable typewriters and carry portable typewriters merely as convenience items for walk-in retail trade (RX 39 A-B; DG 853-85, 805-807; Tr. 4452-54, 5899, 5905, 6301-03, 6444, 6587-6592, 6758-6761, 7836-37).

C. The Potential of IBM

By the end of 1969, IBM enjoyed 85 percent of the total sales of heavy duty office typewriters and its sales were trending upward. From 1968 to 1969, for example, its sales of heavy duty office typewriters increased by almost 6 percentage points, which alone was more than the Royal-Adler combined share of these

sales in 1969; its share of the total office typewriter market increased by over 8 percentage points (RXs 1848, 1852).

As the acknowledged leader and innovator in the typewriter industry, IBM has the momentum to perpetuate its dominance. It has insured its position in the typewriter industry through its policies regarding pricing and the single element typewriter, among other things.

1. *IBM's Pricing Policies*

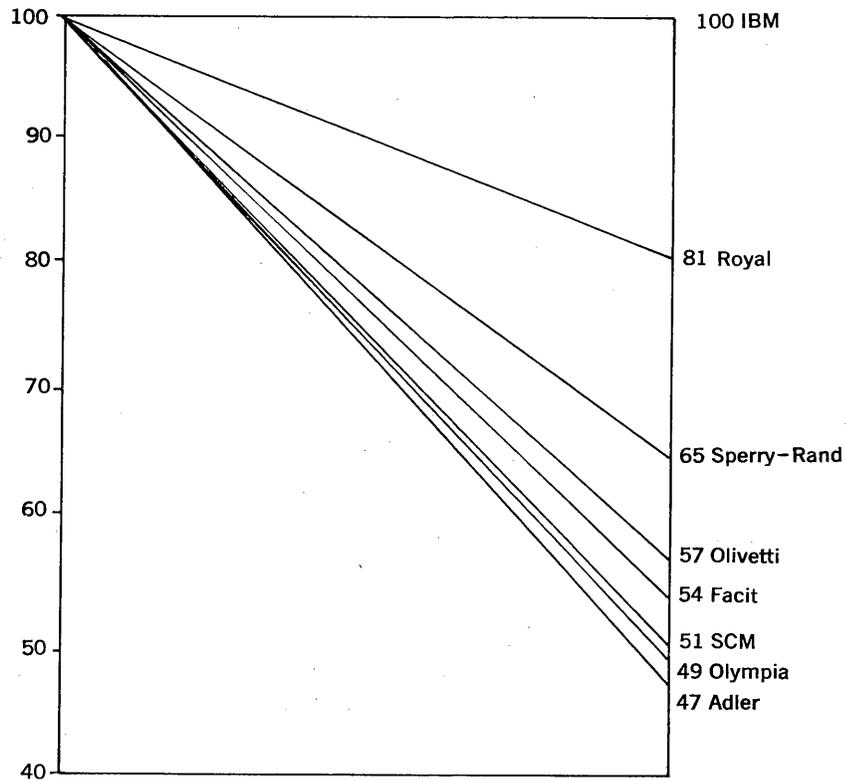
The degree of monopoly power that IBM exercises over pricing in the typewriter industry is indicated by evidence in the record showing how IBM set the rental price of its MC/ST prior to introduction. In December 1967, IBM forecast sales on the basis of monthly rentals of \$75, \$90, \$115, \$125, \$140 and \$150. It forecast sales of 337,484, 187,964, 83,220, 57,180, 41,250 and 35,850 units, respectively (RX 641 M-N). In January 1968, IBM forecast for the period of March 1, 1969 through February 28, 1974, sales of 190,000 units at a rental of \$75, 100,000 units at a rental of \$120, and 75,000 units at a rental of \$140 (RX 641 T). In June 1969, IBM studied purchaser reactions to MC/ST rental rates of \$150 and \$175 per month (RX 636 L).

The MC/ST was finally introduced by IBM in October 1969 at a rental of \$175 per month (RXs 481-482). These studies show that IBM had the market power to fix the rental price in accordance with the number of MC/ST's it wished to sell. In March 1969, a majority of the IBM sales representatives and managers believed "a low monthly rental is the key to unlock a vast potential market at individual typing stations." They were convinced that the average office has typing stations which could benefit from an increase in typing productivity if the cost of acquiring that improvement in output were low. However, such a price would result in MC/STs replacing a substantially greater number of IBM Selectrics or Model D's (RX 640 E, O-Q). IBM decided to limit the impact on sales of its Selectrics and Model D's and to increase overall profit by renting the MC/ST at more than double the price first considered.

IBM maintains a rigid policy of selling its heavy duty office typewriters to commercial accounts, where it has 86 percent of the market, at list price only. Its announced discount to schools is 20 percent below the commercial list price (Tr. 1478-1479, 3139-3140, 3169, 3178; RXs 343, 615-618). Competitors, however, to compete with IBM for school business, are forced to

CHART 11

**Comparative Averaged Realized Prices—U.S. Heavy Duty Office Electric
Typewriter Sales Excluding IBM MT/ST and Recons—
School Only, 1969**



Source: RX 1902

offer greater discounts. Chart 11 shows the average realized prices on sales to schools. Adler's price is only 47 percent of IBM's price.

In 1969, IBM's average realized price on sales to schools, excluding automatic and factory-reconditioned typewriters, was \$422 on sales of \$30.6 million, an increase from \$397 on sales of \$25.6 million in 1967. IBM's average price in 1969 was \$80 higher than any competitor's price. In 1969, on sales of \$800,000, Adler's average price to schools for its office electric typewriters was \$200, the lowest in the industry and \$222 below IBM's average realized price. Assuming that the Adler 21 office electric is as good as the IBM office electric, the fact that IBM's price is more than twice Adler's price to schools demonstrates that IBM's image transcends price. On the other hand, Adler's sales volume to schools is built on low price and not quality or image.

IBM began to expand its dominance of the commercial market into the school market by instituting a program of selling factory-reconditioned "demonstrator" typewriters to schools at prices approximately \$200 below commercial list prices of new typewriters (Tr. 6503-6505; RXs 599-603, 613-614). This program also assures IBM an increasing of commercial sales, since once a student is trained on a Selectric typewriter, "she virtually becomes a prisoner of the Selectric typewriter" (Tr. 6500-6501). From 1967 to 1969, IBM's sales of factory-reconditioned Selectrics to schools exceeded sales of IBM factory-reconditioned Model "D" and Executive typewriters to schools, and reconditioned Selectric sales to schools in each of the years 1967 to 1969 were greater than sales by competitors of new heavy duty office typewriters to schools (RXs 647 A, 1871). For schools and universities, the lower cost of IBM factory-reconditioned demonstrators and the higher IBM trade-in value in effect reduces the net cost of the IBM demonstrator typewriter below the net cost of new competitive machines (Tr. 2883-85, 5405, 5422-24, 5443, 6145-46, 6148-49, 6250). Georgetown University, for example, purchases reconditioned Selectrics from IBM at a price of \$330, which, after five years, can be traded in at a price of \$250 on the purchase of a new IBM Selectric (Tr. 2883-85).

To compete with IBM in school sales, IBM's competitors are forced to offer special stripped-down models to schools through

dealers at prices substantially below commercial list prices or else offer special discounts off commercial list prices to dealers to encourage school sales (Tr. 181-182, 299, 4275). Although sales of office typewriters to schools by dealer-oriented companies are generally unprofitable, they have emphasized school sales as a means of obtaining brand acceptance (Tr. 181, 771-772, DG 890-891, 4506, 5923-5926, 6599-6601, 6770-76). Some dealers, however, no longer seek school business (Tr. 5923-26, 6599-6601). Gilson-Ayres, for example, was successful in 1966 in selling a large number of Adler office manual typewriters to the Detroit school system, but due to the low bid required, and the maintenance and guaranty costs associated with servicing the machines, was unable to make a profit (Tr. 6599-6601; and see Tr. 6350-55, 6395, 6397-98, 6416-17, 6427-28).⁸³

The initiation of IBM's factory-reconditioned demonstrator program has affected the independent office machine dealers' ability to compete successfully for school business. For example, all of the local school systems in the Chicago area have discontinued the purchase of new standard office electric typewriters and now purchase IBM factory-reconditioned typewriters because of IBM's lower prices (Tr. 6356-59, 6450-52).

In 1964, IBM entered the competition for dealer sales by instituting a program of selling factory-reconditioned typewriters to dealers through four national distributors. By 1969, IBM ranked with Olympia and Adler in the sale of heavy duty office typewriters to independent office machine dealers. In fact, there are more IBM dealers in NOMDA than for any other typewriter manufacturer (Tr. 6550). IBM's total sales of factory-reconditioned typewriters, including its sales to schools, were \$13,545,000 in 1969, accounting for 3.8 percent of total industry sales of heavy duty office typewriters, a share which was exceeded only by IBM's sales of new heavy duty office typewriters (81.9 percent) and Olivetti's total heavy duty office typewriter share of 4.3 percent (RXs 1848, 1872).

IBM's new and factory-reconditioned typewriter pricing policy effectively brackets the prices of new typewriter companies. All competitors' suggested list prices are below IBM's sales price for new heavy duty office typewriters and, in addition, the competitors' list prices are discounted. As Chart 12

⁸³ In spite of the fact that dealer-oriented companies such as Triumph-Adler are awarded GSA contracts, many dealers do not bid for government typewriter business because it is unprofitable (Tr. 6598).

shows, for example, with the new IBM Selectric at 100, all other typewriter companies had average realized prices for their new heavy duty office typewriters ranging from 47 percent to 78 percent of IBM's price, with Adler, Olympia and Facit at the bottom of the range with prices 47 percent to 50 percent of IBM's price. The price of IBM's new typewriters sets the upper limit of competitors' prices.

Since successfully introducing its factory-reconditioned typewriters for the dealer trade, IBM has established a price structure for these typewriters which is below the prices of its competitors (RX 138 B; Tr. 1782-83). For example, IBM prices its 13-inch new standard electric typewriter at \$510, and its 13-inch factory-reconditioned typewriter has a suggested price of \$410. This pricing structure effectively brackets the new Adler electric suggested selling price of \$460 by \$50 above, in the case of a new IBM, and \$50 below in the case of a factory-reconditioned typewriter. The record shows that many customers prefer to buy a reconditioned IBM at \$410 rather than a new Adler at \$460 (RXs 1848, 1872). Consequently, many Adler dealers are selling reconditioned IBM's rather than new Adler's (Tr. 6724-25).

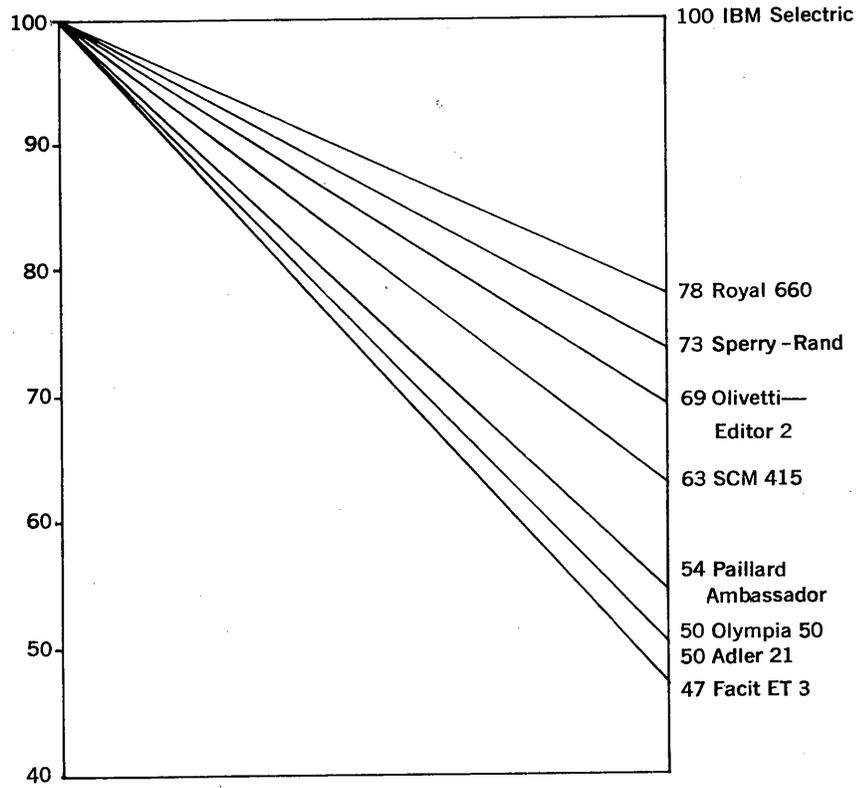
As the treasurer of NOMDA put it, an independent office machine dealer cannot compete with an IBM typewriter represented as equivalent to a new machine and sold at "low ball prices." "In other words, if they want to wipe out a small dealer, they can just move right in there and X him out. And I submit that this business is going to kill the office machine dealer if we allow it to progress. It's like a cancer" (Tr. 6457-58). As another dealer put it, "IBM dominates our industry, it absolutely rules it" (Tr. 5912-13).

IBM's factory-reconditioned program has caused independent office machine dealers to de-emphasize the sale of competitive new office typewriters, including Adler's, and to concentrate either on IBM reconditioned machines or to emphasize copiers, electronic calculators or other products where there are greater sales and profit potentials and where IBM is not such an overwhelming competitor (Tr. 4518, 6457-58, 6498-99, 6572-6575, 6616-17, 6713-14, 6716, 6724-25, 6744-45, 7833, 7865-66, 7935, 9055-56; CX 134 B).

The effect of dealers adding other products has further diluted the sales effort applied to the sale of Adler's office electric type-

CHART 12

Comparative Average Realized Prices of Certain Models of Office Electric Typewriters, United States, 1969



writers. This switch to products other than typewriters has been and will be increasingly harmful for the dealer-oriented typewriter companies such as Triumph-Adler. Most disturbing, however, is the fact that IBM has indicated that it may increase the dealer margins of the IBM reconditioned typewriter which are presently below those offered by other companies. Such an increase would encourage the dealers, even more, to push the sale of the IBM at the expense of the Adler and other brands (Tr. 6306-6307, 6498-99, 6505-6506, 8492-94, 8497, 8500-8502).

Testifying regarding IBM's entry into the dealer market, Dr. Weston concluded:

* * * This indicates that as the recon program continues to develop, that the ability of foreign typewriter companies to utilize the dealers to expand their sales of heavy duty office electric typewriters, either in absolute terms or relative terms, is, again, very unfavorable. The potential for their achieving any increase is unfavorable. The likelihood is that their positions will go down both in absolute and relative terms (Tr. 8501-8502).

2. IBM's Monopoly of Single Element Typewriters

The record indicates that IBM has protected the single element monopoly position of its Selectric typewriter, which was introduced in 1961, by its practice of surrounding the product with a multiplicity of patents for each operation involved. This has the effect of blocking efforts to develop alternate methods for manufacturing a single element printer. It has about 80 percent of the patents in the single element area which cover almost every development and every solution. Having thus effectively blocked internal development of a single element printer by other typewriter companies to date, IBM, which is now willing to license the manufacture of its single element printer, refuses to grant the essential technological know-how required. IBM, for example, refused in the early 1960's to license its single element patents to Triumph-Adler.⁸⁴ Moreover, its patents pose a

⁸⁴ Commission counsel claim that Triumph-Adler "was actively engaged in single element R&D work, and that these R&D activities demonstrate the vitality and alertness of this progressive company" (CCF p. 29 *in camera*). The record shows that at one time Triumph-Adler did some research on a single element printer which might be developed into a small computer or typewriter printer. As the development progressed, Triumph-Adler's management decided to concentrate on a printer for a small computer or bookkeeping machine, and dropped any development of a single element printer for a typewriter prior to acquisition (DG 336-340). The emphasis on bookkeeping machines by Triumph-Adler is shown by the allocation of R&D personnel. It had 36 employees working on bookkeeping machines and 15 working on typewriters (DG 419). Counsel for both parties and the hearing examiner toured the research and development facilities of Triumph-Adler in April 1970, at which time Mr. Krauss, the director of Triumph-Adler's research and development department, identified the research and development projects in which Triumph-Adler had been engaged.

constant threat of an IBM infringement suit against any company attempting to develop a single element typewriter without a license from IBM (DG 339-340, 347, 420-428, 430, 432, 457-458; RXs 74, 75 A-D).

When Royal sought to obtain a license from IBM to manufacture a single element printer in 1967-1968, IBM refused to grant the essential technological know-how required, and, in addition, sought to impose a royalty fee of \$6 million, which was more than it had spent itself on developing its single element typewriter (Tr. 4911-19, 4922-23, 4953-54, 4958-4962, 4963-69, 7180, 7252-54; RX 380).

In July 1969, Remington attempted to purchase Selectric typewriters from IBM without the IBM case so that it could place its own trademark and case on the machines. IBM, however, was unwilling to sell Selectrics to Remington except at list price with only a very slight price reduction for the case (Tr. 4568-4573, 4604).

The proof of the effectiveness of these practices is that to date no other typewriter company has been able to develop a successful single element printer to compete with IBM's Selectric.

The fact that IBM is the only typewriter company in the world which is able to offer the unique Selectric single element typewriter presents a most formidable obstacle to typewriter companies and independent office machine dealers in their efforts to obtain typewriter business. In 1963, sales of Selectrics were slightly more than one-half of the total United States sales of non-IBM heavy duty office typewriters. By 1969, Selectric sales had grown to two and one-half times non-IBM heavy duty office typewriter sales (RX 1911; Tr. 8592-95). Currently, sales of Selectrics by IBM are substantially greater than sales of their conventional Model D typewriter and IBM projects that its sales of Selectrics will increase almost twofold during the foreseeable future (RXs 631, 634 A, 1909-1910; Tr. 1454).

Chart 13 shows the sharp upward sales trend of the Selectric. It passed sales of IBM's Model D in 1968, and is continuing to climb at the rate of more than \$22 million per year (RX 1909). Chart 14, following Chart 13, shows that sales of IBM's Selectric and automatic typewriters was 55 percent of the total heavy duty office typewriter market in 1969 and moving

The hearing examiner observed that the only single element research and development project which Triumph-Adler had in progress at the time of acquisition was the small computer or bookkeeping machine printer which Mr. Krauss identified in his testimony (DG 432-433).

CHART 13
Source: RX 1909
Impact of the IBM Selectric on Total Sales of New IBM Model D and Executive Office Electric Typewriters in the United States
(\$ 000)

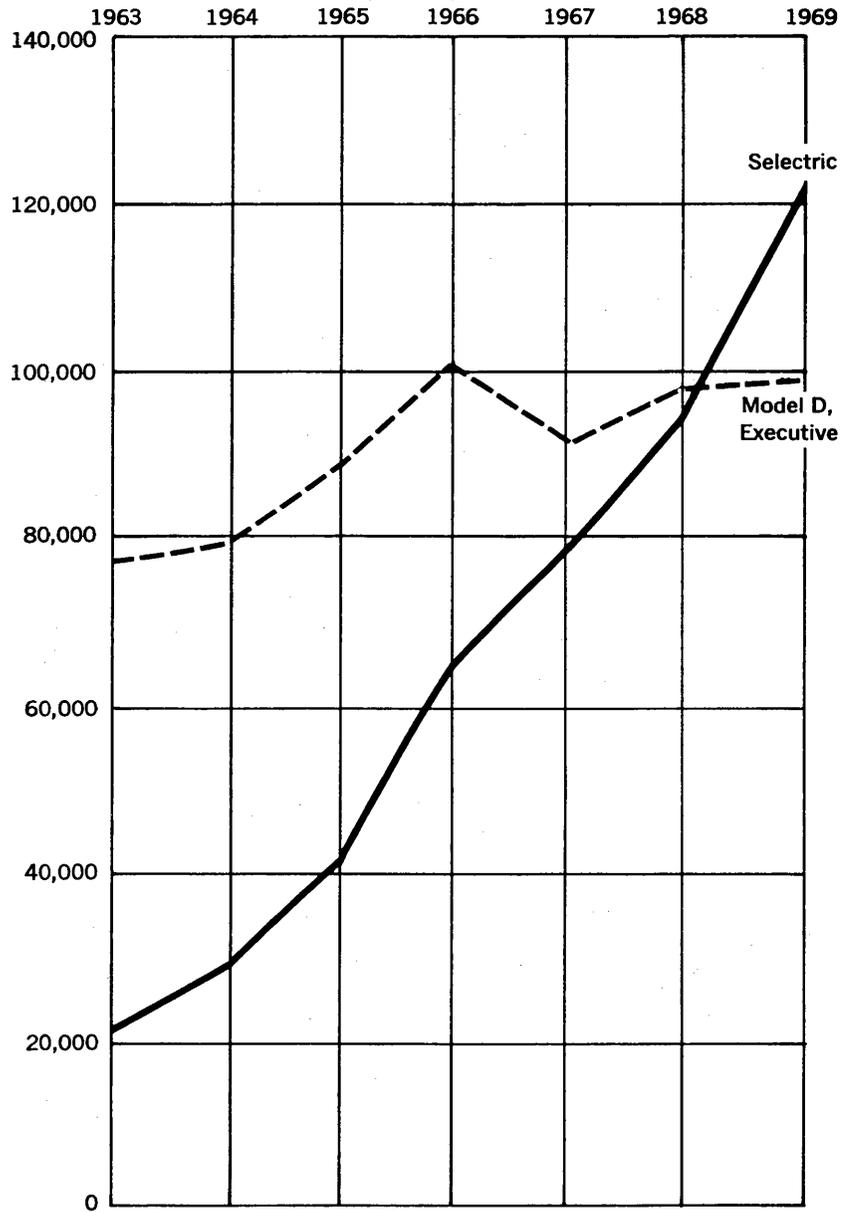
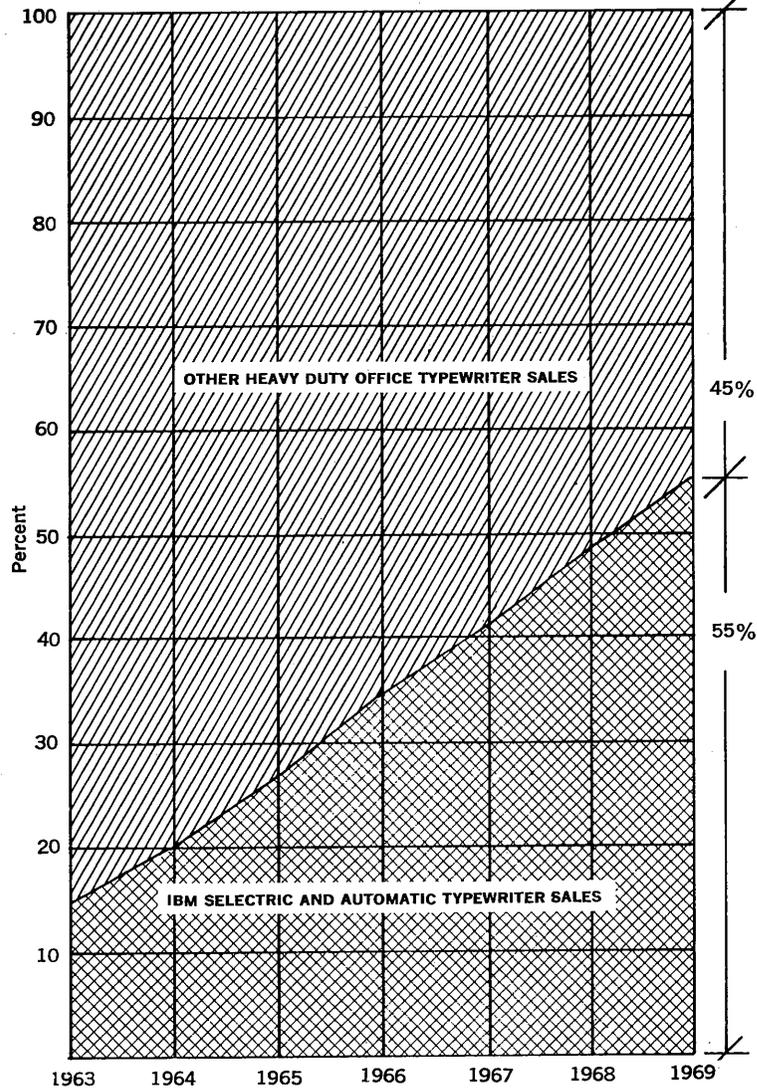


CHART 14

IBM Selectric and Automatic Typewriter Sales as a Percentage of the Heavy Duty Office Typewriter Market, United States

1963-1969

Source: RX 1891



upward at the rate of approximately 7 percentage points per year (RX 1891).

In 1971, IBM announced the dual pitch "Selectric II" electric typewriter. The new Selectric is designed to switch from pica to elite type without changing the font (RX 1741 A-Z75). It appears, therefore, that the trends established by the Selectric in 1969 will continue.

The advantages of the Selectric to large commercial users of typewriters are many. The interchangeable type font allows greater flexibility for companies who desire to use different type styles (Tr. 315, 1407, 2883, 5039-5040, 5270-72, 6255-56; RXs 484 B, 486, 489, 490-494, 1788 B). An increasingly important use for the Selectric is Optical Character Recognition (OCR). IBM's sales force stresses the OCR capability of the Selectric as compared to the conventional type bar typewriter in their sales presentations⁸⁵ (Tr. 6494-95; RX 627 A-L). IBM stresses three major unique advantages of its Selectric typewriter over type bar typewriters in OCR work: (1) better quality print work; (2) more accurate typing due to the absence of the "back-and-forth jarring of the paper carriage [that] can result in misalignment of the typewritten line;" and (3) increased typing speed (RX 627 E). One of the Selectric's principal advantages is that it can be used for OCR purposes and for normal typing by simply changing the font, which takes only a few seconds, therefore performing the work of two typewriters. Banks and insurance companies, in particular, find this feature to be attractive, and are increasing their purchases of Selectrics (Tr. 5067-68, 5150-52, 5712-14, 5736-37, 5786-88).

The majority of user witnesses testified to their increasing purchases of Selectric typewriters (Tr. 2881, 5011, 5039-5040, 5111, 5150-52, 5270-72, 5712, 5731, 5736-5737, 5785-88, 6255, 6289-6290). Not only are the purchases increasing, but they have reached significant levels: For example, Metropolitan Life doubled its number of Selectrics within eight months (Tr. 5150-52); Illinois Bell purchases 95 percent Selectrics (Tr. 5270); of the electrics purchased by Firemen's Fund Insurance Company, 75 percent are Selectrics (Tr. 5736-37); 50 percent of Union Carbide's electric purchases in New York are Selectrics (Tr. 5039-5040); over two-thirds of the IBM typewriters pur-

⁸⁵ Optical Character Recognition (OCR) refers to the use of optical scanning equipment to "read" word processing and data processing information prepared on typewriters with OCR type styles (RX 627 B).

chased by the Chase Manhattan Bank in 1970 were Selectrics (Tr. 5067); 75 percent of the electric typewriters purchased in 1971 by the General Telephone Company of California were Selectrics (Tr. 6289-6290); and all three witnesses representing secretarial schools testified that the majority of their typewriters in use or being purchased are Selectrics (Tr. 5402, 5432, 6143-44).

Not only has the Selectric had a substantial impact on the commercial office market as a standard typewriter, but it is better adapted to automatic typewriters and is the printer in most such typewriters (Tr. 315, 471-472, 1404-1407, 2882-83, 4525, 5039-5040, 6798). This also affords IBM an advantage no other typewriter company can match. Moreover, the advantages of a large typewriter population further enhances IBM's sales of automatic typewriters and input/output machines (RXs 632 J, 633 J, 1500).

D. Potential of The Typewriter Industry

There have been dramatic new developments in the typewriter industry within the past several years. The trend toward automation, which brought about an evolution in manufacturing, has now reached the office. The need for high speed quality typed copy at minimum cost is becoming a must in most commercial offices. This "need" is being met by technological improvements in printers and automation of the writing and recording process (Tr. 1440-41). To counter skyrocketing costs of stenographic services, the industry has introduced high speed, letter-perfect automatic typewriters with a net reduction in the cost of the typed page.

This innovation in the typewriter industry is frequently referred to as "word processing." Simply defined, "word processing" is "taking the spoken word and translating it in the most effective and efficient means at the lowest possible cost to final hard copy" (Tr. 6179); or as IBM defined it: "inputting to a typing station and outputting to the mailbox" (RX 586 0).

IBM pioneered the development of the "word processing" concept, and in its sales approaches constantly stresses that the combination of IBM dictation equipment and its automatic typewriters will result in lower costs and more productive "word processing." IBM's sales training manual entitled "Word Processing Systems" (RX 656 A-Z121) outlines the procedures the IBM salesmen follow in persuading a prospective customer to pur-

chase IBM "word processing" equipment. The customer is reminded of the current problems involved in the area of written communications: increasing paperwork, increasing secretarial and clerical costs, and the shortage of skilled secretarial help, necessitating the hiring of more people at greater costs with no noticeable increase in production. The businessman is told that "American business is in the computer age when it comes to collecting and processing information, but for the most part, it is still in the pencil age when it comes to communicating information" (RX 656 G). However, "one man using IBM dictation equipment as input to a system can get his thoughts recorded four times faster than he can by writing them in longhand and very nearly twice as fast as a secretary can by writing them in shorthand. With the IBM Magnetic Tape 'Selectric' typewriter, a typewriter that takes a secretary's rough draft and types it back error-free at the rate of a page every two minutes, a secretary can get those thoughts out the door in final form, including revisions, in half the time" (RX 656 G).⁸⁶

Once the customer agrees to an interview, these themes are presented to him more forcefully in slide presentations demonstrating that IBM can provide a better system for word processing than presently in use (RXs 656 J-P, 656 Q-29, 656 Z76-Z96, 656 Z 112). The IBM team then goes to work on a direct basis in a manner that cannot be duplicated by an independent office machine dealer (Tr. 6584; RX 586 A-Z7). In the case of Standard Oil of California, for example, the IBM salesman assigned exclusively to the account brought in a team of five specialists to survey Standard Oil's needs: three analysts from San Francisco, Los Angeles, and Houston, respectively, to survey Standard Oil's work flow and overall typing needs and two educational experts to observe work flow and operator techniques (Tr. 5830-34). This formidable array is pitted against the independent office machine dealer whose average size consists of 4.6 employees, including the dealer himself (Tr. 6584).

Word processing systems have been replacing standard office electric typewriters in business offices for a number of years. An example in point is IBM's proposal to the International Monetary Fund on November 3, 1969 (CX 379). After making a word processing survey of the secretarial and stenographic facilities,

⁸⁶ These themes are reiterated in IBM's advertising of "word processing" machines, including the MT/ST, MC/ST, and Selectric Composer (RXs 526, 527 A-B, 532 A-B, 533 A-B, 534, 535, 536 A-B, 537 A-B, 538 A-B).

IBM recommended establishment of a centralized word processing center utilizing an IBM Dictation System and IBM automatic typewriters (RX 657 A-Z3). IBM recommended three Mag-Card Selectric typewriters centrally located in the personnel division. By using these machines, " * * * three secretaries will be able to do 85 percent of the typing now being done in personnel—in effect, doing the typing of nine secretaries" (RX 657 B). IBM calculated that the leased rate for all of the equipment involved amounted to \$704.25 per month, but that the IBM Word Processing Center could process the existing volume of paperwork with 2.5 fewer people, thus resulting in a net savings of \$1500 per month (RX 657 C). As a number of end-users testified, the increasing costs of effective word processing in commercial offices are creating an increased demand for automatic typewriters because of the potential savings to industry that can be achieved by use of this more efficient capital equipment which effectively produces typed copy at lower costs per page (RX 359 L; Tr. 5217, 5224-26, 5731-32, 5752-57, 5810, 5851-52, 7723-24, 7733-35).

The traditional companies introduced automatic typewriters with the limited capability for repetitive typing many years ago. But it was IBM which pioneered the automatic typewriter with a memory. Companies which have entered the typewriter industry and capitalized on the trend to automation in typing include the Friden Division of the Singer Company with its Flexowriter, Itel with its Dura Word Processor, and Epsco Corporation with its Edityper (Tr. 2960-62, 2970-71, 2976, 6027-29, 6174-75, 6204-6206, 6214-16, 6222-23). The automation of the industry has encouraged entry.

A number of traditional typewriter companies are active in the development of word processing systems and their components. Facit is in the development stage of a word processing system (Tr. 287) and Paillard has obtained a patent on a high-speed ink jet impactless printer to insure itself of a place in the automatic typewriter market of the future (RX 1530 A-H; Tr. 7349). Olympia, which is working to develop new methods of word processing in its research and development section, has found that it is possible to put an image on paper, perhaps by spray ink, heat transfer, or laser beams, and that in all probability new printing mechanisms will be devised from the electronic calculator industry rather than the traditional

typewriter industry (Tr. 816-817, 832-833). And as previously stated, Royal is presently developing an automatic typewriter.

Mr. Irving Sachar, vice president in charge of sales for Facit Business Machines, testified:

A. Well, word processing is the new concept for office typing and that is the recording of a typewritten letter via magnetic tape and the relaying of the tape in order to make corrections, eliminating the necessity of typing after a draft * * *.

Q. In your opinion is the magnetic tape use for electronics part of the future for the office typewriter market?

A. The best judgment is for me to follow the IBM. They have done a fantastic job in that field. As usual, they got the jump. By doing so they have opened up a new vista for all of us and we are all going to climb into that horizon.

Q. In your opinion is it necessary that you follow them and approach that new vista or else fail as a substantial factor in the office typewriter?

A. No, I would say it is part of the upgrading of the typewriter, the typewriting concept. The potential market is there, the dollar return for a word processing system is much greater than that of a straight mechanical machine, and we will follow both paths because if we are to offer our dealers a total line concept and everybody else has word processing we certainly want to be there.

Q. In other words, the market is expanding to include word processing systems?

A. Yes * * *. (Tr. 285-286).

* * * * *

A. It will be another model of typewriter available (Tr. 288).

Witnesses were unanimous that sales of automatic typewriters will continue to increase at a substantial rate (RX 359; Tr. 285-286, 2613, 2931, 2960, 2967, 4527-28, 4547, 6062, 6135-36, 6202-6203, 7013-14, 7722-26). Mr. James J. Lee, national typewriter manager for Sperry-Rand, testified:

I see the word processing or automatic typewriter market, I'm referring to the one with editing and correction capabilities rather than just repetitive typing, as a very, very large market during the 70's.

I see it as a real growth area.

* * * * *

The potential is there.

Yes, I think the demand is there * * *.

The need.

* * * * *

I think it exists in all of the areas, that is, commercial, government and so on (Tr. 4527-28).

Prior to the introduction of the MT/ST by IBM, functions such as typing and storing stood alone. These functions are being compiled today into modular form and machines are being developed which will be able to perform the total job of going from a keyboard to a display unit or hard copy output, or from a keyboard to a record and storage mechanism and retransmission to a remote location (Tr. 7733-35; RXs 84-88, 351 A-Z64, 352 A-Z15, 354 A-Z35, 355 A-Z75, 357 A-P, 358 A-Q, 359 A-Z91, 360 A-B, 361 A-X, 362 A-U, 363 A-V, 364 A-Q, 369 A-V). Already, a number of companies are developing equipment which uses a cathode ray tube. Typed characters are stored in a memory and displayed on the cathode ray tube so that the typist can view what has been typed, and, if satisfied, can push a button that punches out the document on paper tape, magnetic tape or magnetic card. These can then be played back into the machine to make corrections, deletions or additions, and the typed page will come out letter perfect the first time (Tr. 4578-4580).

Word processing increasingly is taking over the market which has been served by electro-mechanical typewriters. An impactless printer will possibly become commercially available within seven years, and it will become part of the next generation of word processors (Tr. 7754-55, 7813-7814). The automation of office typewriters is part of the total automation of the business office in the United States. It is predicted that word processing in offices, which accounted for \$135 million market in 1969 and \$200 million in 1970, would increase to \$1 billion by 1975, making inevitable the increased sale of word processing machines (Tr. 2931, 4527-4528, 7813-14, 6203, 6224; DG 479-481).⁸⁷

It is predicted that the expansion in the development and use of automatic typewriters will encourage competition. The introduction of electronics into the typewriter will significantly reduce the heavy capital investment required for the manufacture of current electro-mechanical typewriters, thus creating incentives for new entry (Tr. 4527-28, 7735-37).

There are already companies engaged in applying computer technology to automatic typing. VIP Systems, Inc., for example, provides a typing service which is based on an IBM Selectric

⁸⁷ Mr. Krauss testified that a non-impact printer capable of good correspondence quality will be developed within 5 years and that it will be most readily accepted in offices having more than 5 typewriters because of the cost savings involved (DG 479-481).

typewriter terminal connected by telephone lines to a computer at VIP's location. It is possible, therefore, for the computer to type on the Selectric terminal, to transmit the information by telephone, and to simultaneously record the information in the computer's memory (Tr. 2599). The VIP system is capable of performing the same functions of capture, storage and recall which are performed by standard office electric typewriters, but at a much lower cost (Tr. 2633-34, see Tr. 6108-6109).

New developments in typewriter printers are expected to further increase sales of automatic typewriters. The testimony shows that the cost savings attainable from automatic typewriters is related to the speed of the typewriter, and increasing the speed of the typewriter printer would increase the efficiency and output of the automatic typewriter (Tr. 2604-2605, 6087-88, 7734-35).

The hearing examiner and counsel visited the 1970 Hanover Fair in Hanover, Germany, during the course of depositions, and made an inspection tour of the typing equipment on display. This fair presented a preview of the improved high-speed printers which will be used in the word processing industry in the near future. At the fair, a number of companies exhibited printers capable of correspondence quality output at extremely high speeds. For example:

(1) International Computers Limited exhibited its OEM 7074 Termini-Printer which it manufactured under license from the General Electric Company. The OEM 7074 Termini-Printer, designed for repetitive typing, is capable of a top speed of 30 characters per second with correspondence quality (RXs 1502 A-H, 1503; Tr. 7325-26).⁸⁵

(2) Standard Electric, a member of the ITT group, demonstrated its SP 300 printer which is capable of typing 22 characters per second in performing typing functions (RXs 1510 A-B, 1511 A-B; Tr. 7328-29).

(3) NCR demonstrated its Thermo Printer EM-T, an impactless printer, which is capable of printing 30 characters per second using a heat process at quality levels (RXs 1512 A-B, 1513; Tr. 7334-36).

(4) IBM demonstrated its matrix printer which is capable

⁸⁵ Standard electric office typewriters and IBM's Selectric are capable of from 12 to 15 characters per second (DG 435-436).

of producing print work at speeds of up to 60 characters per second. At the fair, this IBM printer kept printing material endlessly and was activated by a keyboard (Tr. 7341-43).

The potential for entry by a company into the typewriter industry as it has evolved in the past several years and as it is likely to develop in the foreseeable future is substantial.

E. Profit Trends in the United States

Profitability in the typewriter industry in the United States has a direct relation to market trends. Because of the high capital intensity of the industry, profitable operation is a factor of high production volume.

Of all the companies, over the last several years Royal has suffered the greatest losses. In fact, beginning in 1968, Royal, more than any other traditional company, suffered from the inability to market quality office and portable typewriters.

Royal's losses highlight its dilemma and demonstrate that, except for Litton, Royal could not have survived on its own (Tr. 4804-4809, 4851-53, 5181-82, 5368-69, 5827, 5877-78; RXs 394 A, 396 A). The total losses before taxes suffered by the Royal Division in each of its fiscal years 1968-1971 were (RXs 382, 1812):

<i>Fiscal Year</i>	<i>Profit (Loss)</i>
1968	\$ (7,902,000)
1969	(9,560,000)
1970	(9,157,000)
1971	(10,959,000)
Total Cumulative Loss	<u>\$ (37,578,000)</u> ⁸⁹

Two of the three traditional companies for whom profit data was available moved to a loss position as relative sales declined. SCM, on the other hand, with its concentration in the portable typewriter markets, showed substantial profits. The other companies for which data was available were marginal; some showed small profits, others small losses. No company had profits which will support any serious challenge to the dominant position of IBM in the office typewriter market or SCM in the portable typewriter market.

The dominance of IBM in the office typewriter markets and

⁸⁹ Litton's losses at Royal during the past four fiscal years were substantially greater than the total acquisition cost of \$29 million.

of SCM in the portable typewriter markets is clearly indicated in the comparison of the profits of these two companies for which data is available in this record. As shown on Charts 15, 16 and 17 on the following pages, the profit trends in the industry reflect the market share trends.⁹⁰ IBM's profits have soared from 1964 to 1969, and SCM's profits, limited primarily to portable sales, have trended upward. The profits of all other companies combined are trending downward.

IBM's profits have been increasing at the rate of more than \$10 million a year while the other companies' combined profits, except SCM, have been declining at the rate of approximately \$10 million a year since 1967. Considering the absolutes: IBM's cumulative profits were \$237.9 million; SCM's were \$58 million; and the remaining companies had cumulative profits of up to \$2 million, were marginal, or suffered losses (RX 1908).

The profit trends shown here are to be expected in an industry where two companies fully dominate their respective markets within the industry. These profit trends also show the importance of the heavy duty office electric typewriter market. Both companies enjoy a dominant position, but IBM in the office segment of the industry achieved a more profitable operation.

Considering these profit trends in connection with similar trends in the growth of market position, it is not likely that any of the other typewriter companies will be able to substantially increase their market position in the foreseeable future. Certainly Royal, with losses of over \$37.5 million in the fiscal years 1968 to 1971, cannot be expected to reverse the trend in its profits and its market position to any substantial degree in the foreseeable future.

Upon analyzing the profitability of the typewriter industry, Dr. Weston testified:

⁹⁰ It is clear from the record that Dr. Weston, who prepared these charts, was cognizant of their limitations, and that he weighed them in expressing his opinion (Tr. 8625, 8882-83). An examination of the testimony regarding the profitability of each of Triumph-Adler's typewriter products confirms the marginal operation of Adler Business Machines and Triumph-Adler in the United States. Some of the typewriters sold in the United States by Triumph-Adler were sold at or below cost. Further, its office electric typewriters were sold in the United States at prices considerably below prices in Germany. The suggested price in Germany for Model 21D in 1971 was \$539.50 as compared to Model 21D's suggested price in the United States of \$460 (RX 1814 A-D; Tr. 7252-53, 7279-7280, 7283-85, 7289-7290).

As explained by Dr. Weston, however, whether Triumph-Adler had overall profits on its United States typewriter sales, the order of magnitude of difference between the reported profits of IBM would still be so great that the economic significance of the profit data would be unaltered (Tr. 8625-26).

CHART 15

Reported Profit (Loss) by Selected Companies and Groups on Typewriter Business
United States, 1963-1969
(\$ in 000's)

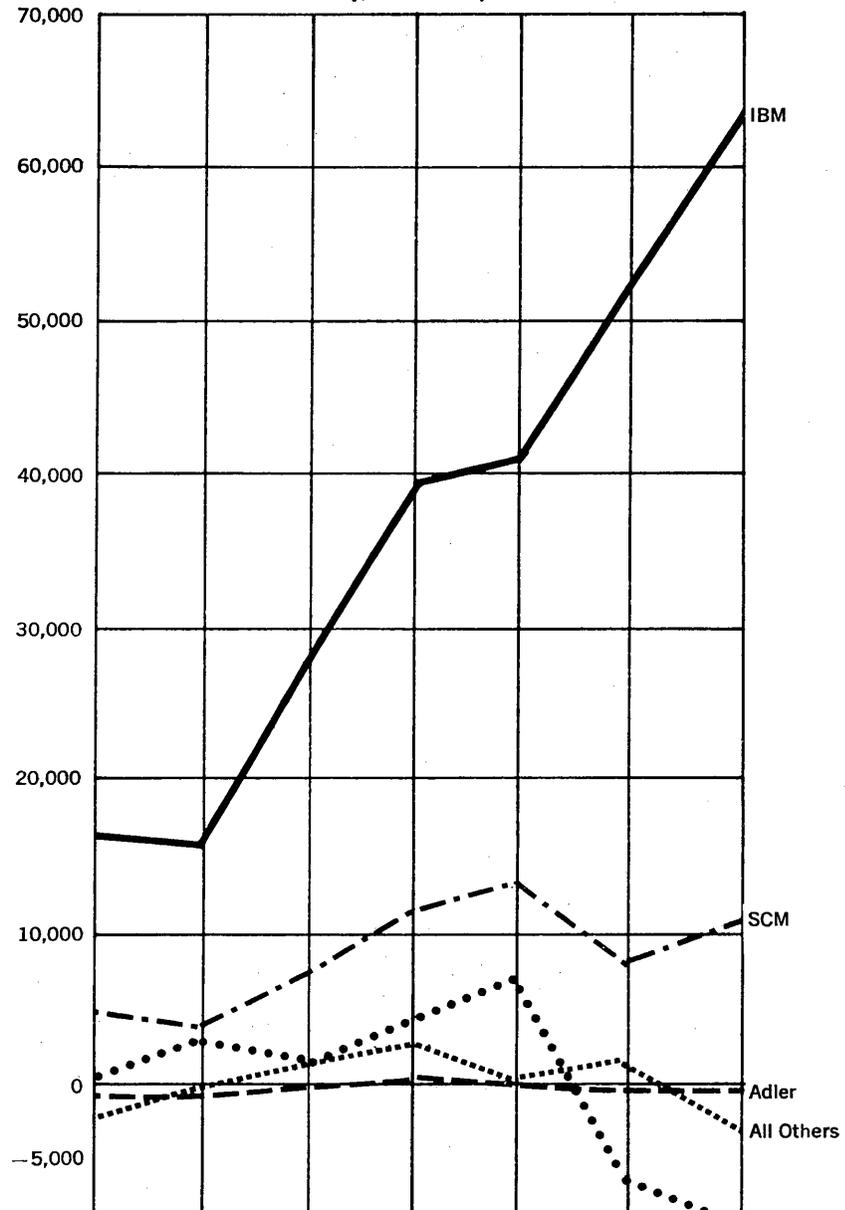
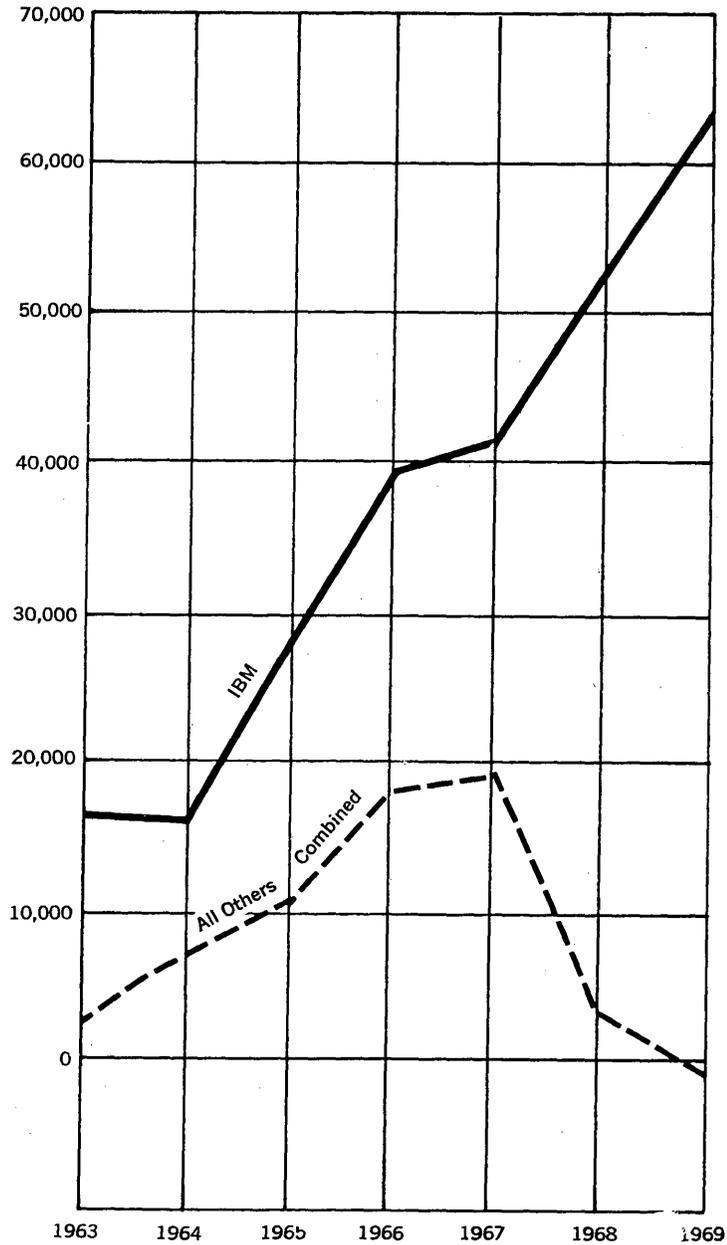


CHART 16
Reported Profit (Loss) of IBM
Compared with all other Companies*
United States, 1963-1969
(\$ in 000's)

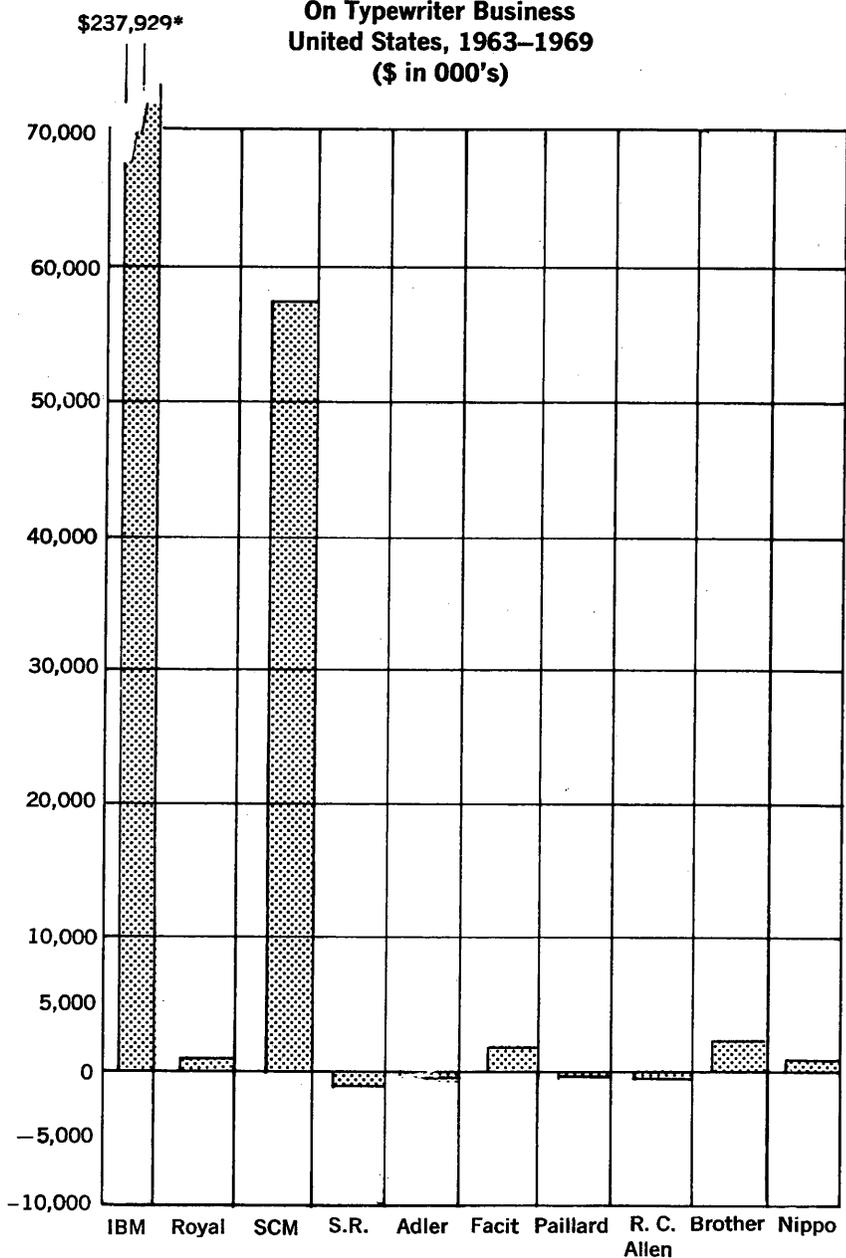


*Olivetti and Olympia did not provide data.

Source: RX 1907

CHART 17

Cumulative Profit (Loss) by Company
On Typewriter Business
United States, 1963-1969
(\$ in 000's)**



*IBM showed a profit too large to graph.

* * * [T]o achieve profitability in the typewriter industry means that a company must be a major factor in the two markets that have growth, that have size, that have pricing characteristics, that afford opportunities for profitability, and that is the main purport of the mosaic portrayed by RX-1884, 1885, 1906, 1908.

Q. Do these exhibits indicate the advantages of economies of scale which accrue to a company that has a volume substantial enough to take advantage of automation and high capitalization, and high productivity in a plant?

A. Yes, they do. And as I developed the tables on the level of sales by these companies, and analyzed the behavior of the relevant markets in the typewriter industry I commented that these data would have predicted the kinds of results that are shown in these RX-1884, 1885, 1906, '07 and 08. And they reflect the fact that these two leading companies of large absolute volume, of large relative size in markets that are large, with those large dollar volumes, are enabled to conduct operations on a scale to justify capital outlays, capital appropriations for the purchase of equipment that mechanizes or automates what otherwise would be performed by hand labor, and thus affords them the opportunity for producing products at costs that enable them to achieve profits (Tr. 8626-27).

IV. COMPETITORS AND INDEPENDENT OFFICE MACHINE DEALERS
WILL NOT BE ADVERSELY AFFECTED BY THE ACQUISITION OF
TRIUMPH-ADLER BY LITTON

Numerous witnesses in this proceeding from a broad cross-section of the typewriter industry testified that they could foresee no harmful effects to their business from the acquisition of Triumph-Adler by Litton, and that, indeed, there was a probability of beneficial effects flowing from Litton's increased ability to limit the domination of IBM (RXs 23 A-B, 132 A-B; CX 191; Tr. 818-819, 2490-2493, 4308-4309, 5306-5308, 5349-5350, 5373-74, 5722-23, 5930-38, 6016-18, 6367-69, 6410, 6429 6431, 6458, 6619-6621, 6622-28, 6688-6690, 6697).

A. Manufacturers and Dealers Testified That The Acquisition Would Have No Adverse Effects

The sales manager of Olympia, Triumph-Adler's principal competitor in the typewriter business, testified:

Q. In your opinion, Mr. Mattivi, has the acquisition of Triumph-Adler by Litton, considering the fact that Royal is also in the typewriter business, had any adverse effect on your business?

A. No, sir; I don't think so.

Q. To your knowledge has it had any effect on anyone's business in the industry?

A. Not that I can see.

Q. Based upon your knowledge of the industry and experience in the U.S. market in the sale and distribution of typewriters, do you anticipate that it will have any adverse effect on your company or any other company in the typewriter industry?

A. I don't think so (Tr. 818-819).

Similarly, the vice president in charge of sales for Facit, another company which sells exclusively through independent office machine dealers in the United States, could foresee no adverse effects on Facit's business as a consequence of Litton's acquisition of Triumph-Adler (Tr. 4308-4309).

Witnesses from ten typewriter companies testified both in the case-in-chief and in the defense. Not one of these witnesses testified or implied that the acquisition of Triumph-Adler by Litton would have any adverse effect on the business of their company. On the contrary, a number of these witnesses expected increased sales and market positions in the foreseeable future for their company (RX 1652 A-P; Tr. 538-539, 2490-93, 4445-46, 4469, 4515-16, 4535).

Independent office machine dealers have unequivocally endorsed the acquisition. The National Office Machine Dealers Association (NOMDA), an organization of approximately 3,000 independent office machine dealers (Tr. 6548-49), issued a public statement in July 1969, in favor of Litton's acquisition of Triumph-Adler, which reads in part:

In view of the steps undertaken by Litton Industries to insure the competitive structure of the office machine industry, the National Office Machine Dealers Association came out in favor of the acquisition of Adler Business Machines by Litton Industries * * * (RXs 23 A-B, 132 A-B).

Mr. Woletz, then president of NOMDA, stated that an important reason for this endorsement is that " * * * Litton's willingness to enter into perpetual agreements with both the Adler and Royal dealer network removes the possibility of either organization being eliminated or placed in a disadvantageous position either from the point of view of product or policy and insures the public of a continuing source of fine office products from both companies" (RXs 23 A-B, 133).

Mr. Ayres, the current president of NOMDA, testified that the Adler dealer agreement is superior to any other agreement between a manufacturer and its distributors—an opinion shared by other Adler dealers (Tr. 6367-68). Its outstanding features are its fair and equitable treatment to dealers, its binding effect

on successors and assigns, and the provisions for arbitration in case of cancellations and quotas. According to Mr. Ayres: "The agreement gives the dealers as much protection as they can reasonably hope for against being cut off by the manufacturer." Almost 100 percent of Adler's dealers have entered into this agreement with Litton—a percentage greater than any other manufacturer's dealer organization (Tr. 6622-28, 6688-6690).

Mr. Ayres testified that there have been no adverse effects as a result of the acquisition of Triumph-Adler by Litton (Tr. 6619-6620, 6625), but that, if Litton were forced to divest Triumph-Adler, the Adler dealers would be adversely affected:

Because in my judgment the only people standing around with that kind of money to buy it are going to be branch oriented * * * I'm afraid that we'll be looking at Burroughs of Addressograph-Multigraph or Xerox or somebody that wants a proprietary name out in front of the public, and those companies are going to be branch oriented, which is going to mean that Adler dealers are going to have to fight for their life or we're going to lose our product (Tr. 6626).

With regard to the fate of Royal dealers if Litton were required to divest Triumph-Adler, Mr. Ayres testified:

A. I think the whole mess will go down the tubes.

Q. Why?

A. Because Royal can't pull it out.

Royal doesn't have a product other than the Adler typewriter. As far as I know, anything else they have got is not too popular or too strong, too strongly salable, so the result, I'm afraid, would be a bad thing (Tr. 6627-28).

The national treasurer of NOMDA, and a Royal dealer for twenty years, confirmed Mr. Ayres' testimony as to the absence of adverse effects on dealers as a consequence of Litton's acquisition of Triumph-Adler, and testified that he would cease to be a Royal dealer if Litton were required to divest Triumph-Adler (Tr. 6434, 6458).

The president of the Northern California Office Machine Dealers Association (NCOMDA) and a governor of the World Office Machine Dealers Association (Tr. 5881), testified that Adler dealers would not be adversely affected if Litton were allowed to continue to own Triumph-Adler (Tr. 5932), but that they would be "worse off" if Litton were required to divest Triumph-Adler:

Well, I think the only chance we have in our industry with the tremendous developments which are coming along with the electronics develop-

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ment, with automation, with automatic machines, Adler is not able, either by the size of its operation or perhaps by its financial background, its interest is not able to do this (Tr. 5934).

* * * * *

At the risk of appearing to be omniscient, I would say no, I don't think so. I think definitely IBM would kill us. I think they would lean on us to beat us (Tr. 6018).

Other dealers also testified that Litton's acquisition of Triumph-Adler has had no adverse effects on their business; on the contrary, they believed that, if Litton were required to divest Triumph-Adler, their businesses would be adversely affected (Tr. 6368-69, 6410, 6429-6430).

Commission counsel called three independent office machine dealers but did not adduce any evidence that Litton's acquisition of Triumph-Adler would adversely affect competition in the typewriter business. Indeed, one of these witnesses, testified:

* * * I feel even as a dealer organization that to compete effectively with another giant (IBM) you almost have to have 2 big brother [Litton] (Tr. 6403).

Another of Commission counsel's witnesses testified that, since Litton's acquisition of Triumph-Adler, he has received an adding machine and calculator from Adler which have "helped" his business (Tr. 9070-H).

Based on the evidence, Doctors Weston and Bock concluded that there was no probability that Litton's acquisition of Triumph-Adler may be substantially to lessen competition or tend to create a monopoly in the production or sale of typewriters in any line of commerce and that, to the contrary, the acquisition would be procompetitive (Tr. 8404-8405, 8478-79, 8662, 8913, 8992-96).

B. The Litton-Adler Combination May Limit The Dominance of the Typewriter Industry by IBM and SCM

Dr. Weston characterized the acquisition of Adler by Litton as a "limiting firm" merger:

* * * This is a situation in which Royal is seeking to limit its continued erosion of market share, to limit the potential for erosion in Adler's share, to limit the erosion in their combined shares, to limit the erosion in the shares of all of the traditional American typewriter companies in this market. Indeed, to limit the continued expanding share of the leading firm in this market. To limit the continuing advantages and increasing advantages that the leading firm has had in this market with respect to all of the other companies in this market, and to limit the extent to which the portion of the market available to all of these companies, to limit the extent to which it would continue to shrink as it has been (Tr. 8569-8570).

Independent office machine dealers also testified that the combination of Royal and Triumph-Adler provides the best hope of limiting the domination of the typewriter industry by IBM (Tr. 5934-35, 6458, 6620-21).

The president of NOMDA testified that Royal's increased ability to compete with IBM would be a benefit to the typewriter industry because:

Well, it would just change it from a one-product industry or a one-manufacturer industry into a multi-manufacturer industry, and the economies that occurred in competition are really there, you know, but we don't have much competition today because we don't get in on most of the deals, most of the opportunities to sell a machine (Tr. 6621).

The treasurer of NOMDA testified that:

I think that Royal and Adler together present the only possible competition left in IBM's steam-roller way. They're the only ones left (Tr. 6458).

The president of NOMDA further testified:

So I think that if the suit or if Litton is permitted to acquire Adler, I think we will have all that more competition in the basic industry than we have without it; because the man who is restraining—the restraint of trade complaint is on IBM, and it is a very vicious thing that is happening * * * (Tr. 5935).

Typewriter users, large industrial firms, utilities, banks and insurance companies testified about the need for a competitive alternative to IBM in the United States typewriter industry and stated that to their view Royal, if it can successfully sell the Royal 970, provides the best hope of establishing new competition (Tr. 5306-5308, 5349-5350, 5373-74, 5722-23). Although large typewriter purchasers are reluctant to change typewriter suppliers unless there are advantages in terms of price and quality, the Royal 970 has been tested by a number of buyers and found to be an acceptable machine in terms of quality and performance (Tr. 5212, 5232, 5241, 5256-57, 5299-5300, 5740-43, 5806-5807).⁹¹

C. Without Triumph-Adler, Royal Would Not Be A Substantial Competitor

As previously found herein, Royal has closed its Springfield portable plant, discontinued the production of a heavy duty office typewriter, and substantially eliminated its remaining typewriter production at Hartford. It is dependent upon Triumph-Adler for a heavy duty office electric typewriter and upon the Japanese

⁹¹ The potential of Royal and Triumph-Adler together to be a significant competitor of IBM in the future is confirmed by IBM's own internal documents which identify Litton-Royal as one of IBM's "concerns" for the future (RX 635 Y).

manufacturers for virtually its entire portable line. Today, the Royal Typewriter Division of Litton is essentially a typewriter distributor in two markets, each dominated by a company whose market position has been increasing substantially over the past several years.

As the record shows, every reasonable effort has been made to revitalize Royal. Litton acquired it below book value for \$29 million in 1965, made cash advances of over \$26 million, and by 1971 had accumulated losses of \$37.5 million. All of its efforts to develop quality electric typewriters failed. If Triumph-Adler were divested, there is no reason to believe that Royal would have the capability of developing quality electric typewriters. The record supports the testimony of responsible Litton officials that, if it were ordered to divest Triumph-Adler, serious consideration would have to be given to closing the Royal operation (Tr. 7179, 7548). As Mr. Gray testified:

Q. And when you left the group as head of the business equipment group, based upon your knowledge of Royal's research and development capabilities, if Litton were required to divest Triumph-Adler, in your opinion, what would have been the results at Royal?

A. At the time I left, if we were required at that time to divest?

Q. Yes.

A. I think as a member of the board of directors, I would have voted to shut down Royal.

Q. Based upon your knowledge of Royal today, if Litton were required to divest Triumph-Adler, as a member of the board of directors, what would be your vote?

A. I would vote to close down Royal.

Q. Why?

A. Because Royal does not have the capability to be a viable company in the business. I said before, if this was an independent company, it would be absolutely on the auction block, it would have gone through Chapter 11 twice-over (Tr. 7548).

Mr. Ash confirmed Mr. Gray's conclusion:

Q. In your opinion, Mr. Ash, what would be the effect on Royal if Litton was required to divest Triumph-Adler and lose the office electric typewriter which is identified in this record as the 960 and also lose Triumph-Adler's research and development capabilities?

A. Well, we would probably have to go back to considering the very matter that we did before its acquisition, whether to close the whole of the Royal operation for not having a viable business.

Q. Considering the fact that you invested or put into Royal, as you said, some 16 to 18 million dollars and the fact that Royal has been operating at substantial losses, as shown in this record over the last several years,

in your opinion, if these losses continued would Litton have any alternative but to close Royal?

A. No alternative. One does not continue in business in loss forever. It is not a prudent businessman's decision—unless, I guess, he is a railroad and the Government won't let him go out.

Q. Could Litton really withdraw from the typewriter business?

A. Sure (Tr. 7179).⁹²

V. CONCLUSIONS

The hearing examiner has observed the demeanor of all the witnesses and has considered all of the evidence. The substantial weight of the reliable, probative evidence shows conclusively that the acquisition of Triumph-Adler by Litton has not lessened competition nor does it have any probability of lessening competition.

The acquisition of Triumph-Adler did not eliminate a substantial actual competitor, nor did it eliminate a company that was reasonably likely to become a substantial competitive factor in the future. To the contrary, the acquisition combined two companies that complemented each other and thereby created the possibility of increasing competition. All of Triumph-Adler's office typewriter sales were to independent office machine dealers who were not a substantial factor in selling national accounts. Royal, on the other hand, sold primarily on a direct basis, concentrating its sales efforts on national account business. Triumph-Adler's sales of portable typewriters to independent office machine dealers were not substantial and, with the increasing importance of mass merchandisers, had no potential to become substantial.

If Royal had not acquired Triumph-Adler with its heavy duty office typewriter, in all probability the decline of Royal in the office typewriter market would have substantially increased. The position of independent office machine dealers in the typewriter industry is limited, and, considering the evolution which is taking place in the industry, their potential for increasing the market share of the companies dependent upon them for distribution is limited. There is a substantial probability that IBM will increase its market position in the office typewriter market and that SCM will increase its market position in the portable typewriter

⁹² Litton has closed other businesses which proved to be unprofitable and impossible to turn around (Tr. 7175-7176). Similarly, in September 1971, RCA announced that it was discontinuing the manufacture of computers; and taking a write-off of \$250 million because of "the severe pressures generated by a uniquely entrenched competition [IBM] * * *" (RX 1918).

market. Their increased market positions will be, in part, at the expense of the independent office machine dealers.

The structure and concentration of the typewriter markets involved show that the acquisition of Triumph-Adler has not substantially lessened competition or tended to create a monopoly. The hearing examiner concludes, however, that the market behavior and characteristics of the typewriter industry in the United States are such that, even if the combined market position of Royal and Triumph-Adler were substantially greater, there is no probability of any substantial adverse effects related to the acquisition of Triumph-Adler. To the contrary, the market facts show that the acquisition has been pro-competitive.

The hearing examiner concludes from the record that an order requiring a divestiture of Triumph-Adler would substantially lessen competition and tend to create a monopoly in the typewriter industry. It would remove Royal from any likelihood of becoming a viable competitor.

Commission counsel have not established by the preponderance of the reliable and probative evidence the allegations of the complaint set forth at the beginning of this initial decision.

The acquisition does not violate Section 7 of the Clayton Act, 15 U.S.C. Section 18, as amended.

ORDER

It is ordered, That the complaint in this proceeding be, and it hereby is, dismissed.

CONCURRING STATEMENT

BY DENNISON, *Commissioner*:

I concur in the Commission's finding of violation of Section 7 and its order of divestiture. However, I think the question of violation in this case is a close one. For that reason I am setting forth my separate views.

If there is one thing clear from the record in this case, it is that the typewriter business has undergone, and is continuing to undergo, important technological changes which have had a pronounced effect on the structure of the typewriter industry and the fate of individual firms. For many years before World War II, the industry was dominated by four old-line firms which each

shared about 20 percent of sales: Royal, Smith-Corona, Remington, and Underwood. According to a leading economic study of this industry, about 80 percent of dollar sales were held in substantially equal shares by these four companies. Substantial barriers to entry were found to exist with a concomitant level of high profit margins. Although basic patents on typewriters had expired early in this century, entry barriers to new firms resulted mainly from product differentiation and economies arising from large-scale operations.¹

During the War, the four traditional companies were required to discontinue production of typewriters in order to produce war material. However, International Business Machine Corporation (IBM) was permitted to continue producing typewriters and during this period made major gains in developing electronic technology, including an improved version of the electric typewriter. The new IBM electric typewriter was placed on the market and soon proved successful. During the ensuing decades IBM gained a dominant position over all other firms in the office typewriter market. At the same time, of course, it became a leading seller of data processing machines, and has become one of the largest and most profitable of United States corporations.

With the demand for electric typewriters increasing, the old line companies, not having IBM's headstart in developing the technology for a quality office electric typewriter, attempted to convert to electric typewriters by adding a motor to their basic manual machines, rather than attempting to design an entirely new machine from the ground up. But they were largely unsuccessful in developing machines that competed in quality with IBM models. Failure to supply machines substantially free of mechanical failures meant that repeat sales to established customers, particularly large national accounts, were usually lost.

As IBM gained rapid ascendancy in electric office typewriters (as well as other lines of office machines) it developed a widespread marketing and service organization. As is established in the record of this case, an important aspect of successful "product differentiation" in this area is a reputation for providing quick and reliable service. This and a reputation for quality machines had a reinforcing effect. By 1963 IBM dominated the office typewriter market with sales of \$100 million which rep-

¹ Bain, *Barriers to New Competition* (1956), pp. 169, 285. The record in this case makes it clear that new technological barriers have developed after the advent of the electric typewriter.

resented nearly 50 percent of all office typewriters sold. Its rate of profit on sales of typewriters has far outdistanced those of its domestic rivals.

The traditional companies, unable to keep pace technologically, were forced to reorganize.² During the 1960's additional technological innovations by IBM had the effect of increasing its share of the market even more. In 1961, IBM developed its highly successful single-element typewriter, the "Selectric," which features a moving sphere with raised characters in lieu of conventional type bars and a moving carriage. "Selectrics" have become a top-selling model, and IBM has succeeded in monopolizing the single-element typewriter by way of patents and technological know-how in production techniques.

IBM has also been in the forefront of the development of automatic typewriters such as the Magnetic Tape "Selectric" (MT/ST) and the Magnetic Card "Selectric" (MC/ST) which contain memory units for automatic playback features.

The above briefly outlines developments in the *office* typewriter market. However, IBM did not choose to enter the home portable typewriter market. But in 1956, Smith-Corona (now SCM) seized upon the opportunity to introduce electric portable typewriters. Although electrics have not yet dominated manuals in the portable market, SCM has experienced a rise in this market analogous to that which IBM has enjoyed in the office market. Electric portable typewriters have increased from 15 percent of total portable sales in 1963 to 47 percent by 1969. Apparently because of its early start (until 1966 SCM was the only company selling electric portables in the United States), SCM has dominated the

² By 1960 Underwood was threatened with complete failure and was acquired by Olivetti, a large Italian firm that sold typewriters, calculators, and other office machines throughout Europe. Although Olivetti was to spend some \$100 million in an effort to rejuvenate Underwood's organization, its share of the office market continued to decline.

Remington merged with Sperry Rand Corporation in 1955, another large company that had electronic equipment divisions. Despite these technological and financial resources, Remington's share of the office market also declined in the wake of IBM's success.

In 1958 Smith-Corona merged with Marchant Company to become SCM Corporation, a large diversified firm. Its share of the office typewriter market nevertheless declined and it eventually withdrew from this market, although it succeeded in becoming the dominant firm in the portable typewriter market with a full line of electric portables.

R. C. Allen, formerly the Woodstock Typewriter Company and one of the old-line makers of office manuals, was unable to develop a successful electric typewriter and in 1970 withdrew from the production of typewriters, including the manual market.

Royal, which was eventually acquired by Litton Industries in 1965, was not able to develop a successful electric office typewriter, and beginning in 1963 its share of that market started to erode.

United States portable typewriter market. Between 1966 and 1969 its share of total sales (electric and manuals) increased from 48 percent to 57 percent. Its share of the market in 1969 was 3.5 times larger than the second-place firm (Royal) which had 16 percent of total sales.

Clearly then, because of the impact of the electric typewriter and the foresight of two companies in early development of their products, the structure of both the office market and the portable market have changed from the pre-War oligopoly of the four "traditional" firms to markets which can best be characterized as dominant-firm markets.

Not only has this development occurred, but it is continuing to take place, since the leading firms, IBM and SCM, have continued to increase their shares of their respective markets each year from 1963 through 1969. The following charts show this trend (a complete tabulation of sales and market shares for all firms in each year is found in the Initial Decision at pp. 107, 121 [pp. 889, 899 herein]):

U.S. OFFICE TYPEWRITER MARKET³
(Percentages of Market in Terms of Dollar Sales)

	1963	1964	1965	1966	1967	1968	1969
IBM	47.2%	47.9%	51.1%	53.8%	56.4%	60.8%	68.9%
Royal	20.6%	20.5%	19.2%	18.2%	16.9%	13.8%	11.6%
SCM	7.3%	6.3%	5.2%	4.2%	4.2%	3.2%	2.5%
Sperry							
Rand	6.7%	6.9%	6.8%	6.8%	6.5%	6.4%	4.3%
Olivetti	13.9%	12.3%	11.2%	10.9%	9.4%	8.7%	5.9%
Olympia	2.7%	3.5%	3.8%	3.2%	3.3%	3.2%	3.1%
T. Adler*	0.5%	1.4%	1.5%	1.5%	1.7%	1.9%	1.9%
Others**	1.2%	1.3%	1.2%	1.4%	1.7%	2.0%	1.9%

*Acquired by Litton-Royal in January 1969.

**R.C. Allen, Facit, Paillard, Brother (1966 and after).

³I have used actual sales dollars rather than unit sales or sales in terms of suggested retail dollars. It is clear to me that in measuring shares in a market of highly differentiated products such as typewriters, sales in actual dollars, if available, should be used in preference to unweighted units since the primary purpose in measuring market shares in Section 7 cases is to gauge the market power of firms. Revenue from sales is the most important criteria because it is revenue which firms use to expand capacity, advertise, etc.

The only problem presented with use of actual dollar sales is that in the office market, revenue from direct sales is mixed with revenue from wholesale sales. However, as noted by both parties in their briefs, since the normal wholesale price is 40 percent off suggested list price, the portion represented by wholesale sales can be adjusted upward by a factor of 40 percent. Subpoenaed evidence from the typewriter manufacturers shows the percent of their sales revenue from wholesale sales to dealers for the years 1967 through 1969 (RX 1872). Using these figures, IBM's share in 1969 would be adjusted downward less than 3

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U.S. PORTABLE TYPEWRITER MARKET
(Percentages of Market in Terms of Dollar Sales)

	1963	1964	1965	1966	1967	1968	1969
SCM	44.7%	42.4%	47.9%	47.6%	51.3%	51.7%	57.0%
Royal	24.5%	24.2%	20.9%	23.0%	21.5%	21.8%	16.3%
Sperry							
Rand	8.8%	6.3%	3.8%	3.6%	4.8%	5.6%	5.5%
Olivetti	8.7%	9.4%	9.0%	8.0%	7.7%	6.7%	5.8%
Olympia	7.0%	7.5%	6.5%	5.3%	5.1%	3.3%	3.5%
Brother	2.5%	6.3%	7.9%	8.7%	5.5%	6.8%	7.1%
Paillard	2.9%	2.5%	2.4%	1.9%	1.9%	1.7%	1.6%
T. Adler*	0.5%	0.7%	1.1%	1.0%	1.1%	1.0%	1.3%
Others**	0.5%	0.6%	0.6%	0.9%	1.1%	1.4%	1.9%

*Acquired by Litton-Royal in January 1969.

**Messa (1967-69), Facit, Nippo (1965-1969).

The Royal Typewriter Company had not been able to develop an electric office typewriter that could successfully compete with IBM. Apparently under the belief that it could impart new managerial skills and vigor to Royal, Litton Industries acquired Royal in 1965. Despite Litton's efforts to cause a turn around in Royal's declining position in the industry, Royal was unable to improve its office electric typewriter.

Beginning in 1968, the Royal division started to have net losses in operations. Between 1967 and 1969 its share of office typewriter sales dropped from 17 percent to about 12 percent and its share of the portable market declined from 21.5 percent to 16.3 percent. Finally, in January 1969 Litton acquired Triumph-Adler, a successful West German firm that had developed an office electric typewriter with a reputation for quality. Although Triumph-Adler was better known overseas, it had entered this country in 1950. In 1968 it had \$7 million in sales in this country through independent office machine dealers. One of Litton's avowed purposes in purchasing Triumph-Adler was to obtain an office typewriter that could compete in quality with IBM

percentage points. Royal's share would not change. Adler's share would increase 0.6 percentage points. Slight adjustments would be made in other firms' shares and corresponding adjustments would be made for the prior years. The result, however, does not change the over-all picture depicted in the chart in the text.

The only change from the majority opinion's definitional parameters for the office market is that I have included reconditioned office typewriters. I find insufficient economic reason for not including them since they are sold as quality products by office dealers, carry a new warranty, and take sales away from new office typewriters. Cf. *United States v. Aluminum Co. of America*, 148 F.2d 416, 424 (2nd Cir. 1945) and my dissenting statement in *Avnet*, FTC Docket 8775 [p. 442 herein].

machines and then sell it in the United States under the Royal name through its existing nationwide sales organization.

The Commission's opinion, after finding that office typewriters and portable typewriters constitute separate product markets, further divides the office market into several product submarkets: "office electric typewriters," "office manual typewriters," and certain types of automatic typewriters. Under the criteria announced in *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962), there can be little doubt that these can be defined as Section 7 "submarkets."⁴

Although I concur that the acquisition had anticompetitive effects in each of these markets and submarkets, I would prefer to examine the merger in the context of the two broad markets, office typewriters and portable typewriters, since demand is shifting fairly rapidly across existing product lines as new forms of improved typing machines come into the market. *Cf. United States v. Amsted Industries*, 1972 Trade Cases Section 73,902 (N.D. Ill. 1972). Thus, between 1966 and 1970 the value of factory shipments for office manual typewriters sold in the United States declined 43 percent and prices and profit margins of manuals dropped as sales of electric typewriters increased at a rapid rate. Automatic typewriters are now displacing a significant number of standard electric machines since users perceive them as realizing cost savings over standard machines for many typing stations.

In view of the increasing dominance of IBM and SCM in their respective markets, and Litton-Royal's declining position, it is difficult to attribute to Litton-Royal any great degree of market power. Nevertheless, at the time of acquisition it did possess a sizeable share of these markets as compared to the other nine firms. Thus, in 1968 it had 21.8 percent of the portable typewriter market as compared to the next ranking firm which had only 6.8 percent. In the office typewriter market, Litton-Royal

⁴The only differences I have with the Commission's definition of these markets and submarkets are not critical to the case. As I noted earlier, I would include factory-reconditioned electric typewriters as within the office typewriter market. Also, the Commission's opinion finds an "overall typewriter industry" product market for purposes of this case. I cannot agree. There are clearly two separate generic markets serving different customers: one centered in sales to offices and institutions (dominated by IBM), and one aimed essentially to the home user (in which IBM does not even sell). In the absence of substantial substitutability on either the demand side or the supply side of the market (clearly not present here), such diverse product groupings, although perhaps recognized as an "industry," do not thereby constitute an economic market. The cases relied upon by complaint counsel are distinguishable. See *Sterling Drug*, FTC Docket 8797 (Opinion and Order, April 7, 1972), p. 23 n. 19 [80 F.T.C. 477, 595].

in 1968 had 13.8 percent as compared to third-place Olivetti which had 8.7 percent.

In view of the asymmetry of market shares in these two product lines, I do not place great weight on increases in "2-firm" and "4-firm" concentration ratios.⁵ However, I agree that under the tests set forth by the courts, there is a showing of presumptive violation of the Clayton Act. I base this on (1) the market shares of the acquired and acquiring firm, and (2) elimination of one independent business unit in a market where there was a relatively small number of firms and little prospect for an increase in numbers because of entry conditions.

Despite its declining market position, Litton-Royal did possess a substantial portion of the relevant markets and it cannot be said that Triumph-Adler's share was *de minimis*. See, e.g., *Stanley Works v. Federal Trade Commission*, 469 F.2d 498 (2d Cir. 1972). Moreover, as the Commission's opinion notes, these markets are characterized by high entry barriers and at the time of acquisition there were only 11 firms in each of these markets making standard typewriters. Elimination of the independence of even one viable business unit at this time could make a significant difference for greater competition in the future. Although the typewriter markets are now dominated by IBM and SCM, and other typewriter manufacturers have not succeeded in eroding these two firms' shares, it is possible that through expiration of important patents or other means this situation could change in the future. In that event, Triumph-Adler as an additional independent firm in these markets could provide important competition.

In *United States v. Aluminum Co. of America*, 377 U.S. 271

⁵ Thus, there would be the same increase in terms of the 4-firm concentration ratio whether IBM purchased Triumph-Adler, or whether (as was the case) it was Litton-Royal or even fourth-place Remington (Sperry Rand) with only 6 percent of the market. Yet clearly such an acquisition by IBM with 60 percent of the market would be far more damaging to prospects for competition than the same acquisition by a firm having 6 percent. See Mann, "Asymmetry, Barriers to Entry and Rates of Return in 26 Concentrated Industries," 8 *Western Economic Journal* 86 (1970).

In attempting to take this into account the administrative law judge, relying upon respondent's economists, measured increases in concentration using the Herfindahl Index and concluded that there was an insubstantial increase. I see no error in use of the Index since economists use this or similar indices of disparity to measure concentration where there is asymmetry in market shares. However, it should be used with an understanding of its peculiarities. The law judge, I believe, failed to take into account that a statistical peculiarity of this Index (not shared by 2-firm or 4-firm concentration ratios which antitrust lawyers are more accustomed to) is that it tends to be skewed toward very small values. See in this connection Scherer, *Industrial Market Structure and Economic Performance*, 52 n. 38 (1971).

(1964), the Court condemned a merger between a firm possessing a substantial part of a concentrated market and a small competitor having only 1.3 percent. The Court noted the fact that the industry, although once completely monopolized by Alcoa, had progressed to the point where a number of firms, both small and large, had entered. However, at the time of acquisition there appeared to be a threat of diminution in the number of firms and the Court evinced concern over the disappearance of even a "small competitor" in an industry dominated by giants. The Court, quoting language from *Philadelphia National Bank*, stated: "[I]f concentration is already great, the importance of preventing even slight increases in concentration and so preserving the possibility of eventual deconcentration is correspondingly great."

Although, as is usual in merger cases, the facts here differ in many respects from previously decided cases, I believe that a *prima facie* showing of the statutory "substantial" lessening of competition has been made.

Respondent argues, however, that the acquisition should be approved because its purpose and effect was to rescue Royal from an impending crisis due to its inability to develop a quality office electric typewriter. Although consideration was given to the possibility that it might have been able to develop, from the "ground up," a new machine within five to seven years, this was at best problematical given the experience of other domestic firms, its officials assert, and in any event would have taken too long to save Royal. Respondent argues that only through acquisition of Triumph-Adler and its quality electric machine could it have hoped to prevent Royal's withdrawal from the typewriter business.⁶ Furthermore, it is said that removal of Triumph-Adler as an independent seller of typewriters was not really significant, because that firm did not have a direct marketing and servicing organization of its own in this country to make any further inroads in the typewriter markets. On the other hand, Royal did have an extensive sales organization, but only lacked a successful product.

Respondent argues that on net balance the acquisition was pro-competitive—that it combined the best aspects of two firms to produce a new entity that could better and more efficiently compete in the market, with the possibility that further increases

⁶ Attempts were made to purchase typewriters from Triumph-Adler for resale, but the owner of the latter company was not interested in entering into such an arrangement.

in IBM's and SCM's market shares would be limited. This, it is said, will not only benefit Litton-Royal but the other manufacturers and the purchasers of typewriters as well.

Arguments have been put forward in earlier cases that efficiencies arising out of economies of scale should justify certain mergers. Usually coupled with this argument is the contention that the merger will create a new firm that could compete more effectively against the leading firm in the industry. See, *e.g.*, *United States v. Bethlehem Steel Corp.*, 168 F. Supp. 556 (S.D. N.Y. 1958); *United Nuclear Corp. v. Combustion Engineering, Inc.*, 302 F. Supp. 539 (E.D. Pa. 1969); *American Crystal Sugar v. Cuban American Sugar Co.*, 152 F. Supp. 387 (S.D. N.Y. 1957). However, these arguments have consistently been rejected by the courts, generally on the ground that Congress in enacting Section 7 evinced overriding concern with preserving independent business units. In order to achieve scale economies firms have the alternative means open to them of expanding internally, thus enhancing the competitive process. See *e.g.*, *Ford Motor Co. v. United States*, 405 U.S. 462, 569-570 (1972).

Respondent's argument, although not based strictly on "economies of scale," is similar. As noted, it argues that the acquisition had "synergetic effects" beneficial to competition.

Although there is appeal in the argument that efficiency benefits should, in appropriate cases, be weighed against the anti-competitive effects of a merger,⁷ I agree with the Commission that the weight of judicial authority is to the contrary. The courts have made it clear that a possible trade-off between increased efficiency and loss of a significant competitor was not countenanced by Congress.⁸ To take a different position in this

⁷ Cf. Scherer, *Industrial Market Structure and Economic Performance*, 118:

"A benefit associated with product line extension mergers but not necessarily confined to them is the generation of so-called *synergetic effects* due to the complementarity of resources possessed by the merging firms. One firm may, for example, have two or three unusually creative research and development engineers, but lack the distribution network needed to derive full commercial benefit from the new products they conceive. Another may have superb distribution channels, but find its laboratories populated with unimaginative clods. Together they can make beautiful music, and numerous mergers are inspired by just such complementarities."

Scherer goes on to express the view that society is "much more likely" to benefit from synergetic mergers than mergers entered into simply for economies of scale, because creative talent and distribution cannot always be purchased like "turret lathes." Cf. *United States v. Lever Bros. Co.*, 216 F. Supp. 887 (S.D. N.Y. 1963).

⁸ In addition to the cases cited previously, in *Brown Shoe v. United States*, 370 U.S. 294,

case would be sanctioning administratively a defense that has been judicially rejected. Therefore, I join in the Commission's decision.

OPINION OF THE COMMISSION

BY JONES, *Commissioner*:

I. INTRODUCTION

On April 10, 1969, the Commission issued the complaint herein, charging Litton Industries, Inc. ("Litton"), with violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. Section 18, by its January 1969 acquisition of controlling stock interests in Triumph-Werke Nurnberg, A.G. ("Triumph") and Adler-Werke, A.G. ("Adler") and their associated corporations for about \$51 million. The complaint alleges that the effect of Litton's acquisition of Triumph-Adler may substantially lessen competition or tend to create a monopoly in the sale of typewriters generally, and in certain kinds of typewriters in particular. After extensive hearings, the hearing examiner, on February 3, 1972, dismissed the complaint. The case is before us on the appeal of complaint counsel.

Complaint counsel have alleged numerous errors, both in the hearing examiner's findings of fact and in his conclusion that the merger was legal. Adopting the bulk of respondent's proposed findings, the examiner rejected the product markets proposed by complaint counsel and held that the heavy duty office typewriter market and the portable typewriter market were the only two appropriate product markets. He concluded that the structure of the relevant markets showed that the acquisition did not substantially lessen competition or tend to create a monopoly in either of the two product markets. On the contrary, the examiner concluded that the "market facts" showed that the acquisition had been procompetitive.

We have carefully considered the examiner's initial decision and

344 (1962), the Court refused to consider efficiency arguments in support of a merger and stated:

"[W]e cannot fail to recognize Congress' desire to promote competition through the protection of viable, small, locally owned businesses. Congress appreciated that occasional higher costs and prices might result from the maintenance of fragmented industries and markets. *It resolved these competing considerations in favor of decentralization.* We must give effect to that decision." (Emphasis added)

the parties' arguments in the light of the whole record and controlling legal precedents, and have concluded for the reasons stated below that the examiner's findings inconsistent with our opinion should be rejected and his initial decision dismissing the complaint be reversed.¹

II. THE FACTS AND BACKGROUND

A. Litton, the Acquiring Company

Litton is a large conglomerate corporation with a broadly diversified product area and a worldwide operation. In 1954, the year following its organization, Litton's total sales amounted to about \$3 million dollars (CX 515 p. 6). In 1968, Litton's sales of products and services amounted to about \$1.9 billion and its assets were over \$1.2 billion (CX 273 pp. 38). In 1968, Litton reported profits of about \$102 million before taxes and had a cash flow of more than \$100 million (CX 14 C, Z-16). By 1969, Litton ranked 39th among the 500 largest industrial corporations in the United States (CX 200 pp. 4-5). Nearly half of Litton's growth has been achieved through more than 100 acquisitions since 1953 (Tr. 1254-56). One of Litton's numerous acquisitions was its 1958 acquisition of Monroe Calculating Machine Company, a manufacturer of computers, calculators and adding machines, which formed the basis of Litton's Business Equipment Group (CX 518 p. 4).

Litton is organized into four principal operating groups consisting of some 120 divisions (Tr. 1250, 7146). The Defense and Marine System Group includes the manufacture and sale of navigation and control systems, communications and electronic data systems, and marine engineering and production (CX 273 p. 39; Tr. 1250-51). The Industrial Systems and Equipment Group includes machine tools, materials handling, engineering and construction, electronic components, electric motors and power drives and controls (CX 273 p. 39). The Professional Services and Equipment Group includes medical products, educa-

¹ The following abbreviations are used for citations:

I.D. —Initial decisions of hearing examiner
Tr. —Transcript of hearing held in Washington, D.C.
D.E.—Transcript of depositions held in London, England
D.G.—Transcript of depositions held in Germany
CX —Commission exhibit
RX —Respondent exhibit

tional and professional publishing, resource exploration and food products and services (CX 273 p. 39). The Business Systems and Equipment Group includes business machines and systems, retail and revenue systems, typewriters, office copiers, specialty paper, printing and forms, and office furnishings and fixtures (CX 273 p. 39). In 1970, the Defense and Marine Systems Group accounted for 25 percent of Litton's total sales, the Industrial Systems and Equipment Group for 29 percent, the Professional Services and Equipment Group for 17 percent, and the Business Systems and Equipment Group for 29 percent (CX 273 p. 38).

Litton is considered a leader in developing and applying advanced management techniques and in combining managerial resources, technical capability and marketing skill, and research and development capability to build new businesses and to improve old businesses.

Litton was interested in entering the typewriter industry as early as 1958. In that year, Litton held a series of discussions with the top officials of Underwood Typewriter Company, but the negotiations failed (Tr. 1576-79, 8087-88).² Litton wanted to enter the typewriter industry mainly because its Monroe Division, (acquired in 1958) was the only major calculator company that did not sell typewriters (Tr. 904-05).

Litton entered the typewriter industry in 1965 when it acquired Royal-McBee Corporation. The acquisition was intended to satisfy its desire to complement its business equipment line. Litton believed that typewriters were a major business product which was destined to grow and become more important in the future (Tr. 1266-68). Subsequently, in 1966, Litton acquired Willy Feiler, GmbH, a German manufacturer of adding machines and cash registers. Willy Feiler also had a prototype of an electric portable typewriter. Tooling had been ordered for a limited production and trial marketing (RX 93 A-D; D.G. 946-48). Willy Feiler had invested about \$1 million in the development of this prototype electric portable typewriter (RX 92; D.G. 954-55).³

² Underwood Typewriter Company was later acquired by Ing. C. Olivetti & Company of Italy ("Olivetti").

³ The production of the Willy Feiler electric portable typewriter was transferred from Berlin to Royal's Leiden, Holland, plant and later to Royal's Hull, England, plant, and numerous design changes were effected in the fall of 1968. However, Litton encountered additional design problems and, as of May 1970, planned to phase out the production of the Willy Feiler machine entirely (D.E. 40-99).

In November 1966, Litton acquired Imperial Typewriter Company, Ltd. of England, in order to strengthen its position in the United Kingdom-British Commonwealth market (D.E. 192-93; Tr. 1275-76). Following the acquisition, Litton attempted to produce a new "light-weight, full-featured" portable typewriter at the Hull Plant (CX 13, pp. 20-21), which became a part of the Royal Consumer Product Division. Imperial Hull Plant became a part of Royal's Office Typewriter Division (D.E. 282).

In September 1968, just prior to Litton's acquisition of Triumph-Adler, Litton's Royal Division manufactured and sold office and portable typewriters, both manual and electric, and was "a substantial factor in the United States typewriter industry" (CX 260 A, D). In fact, in 1968, Royal ranked second in United States typewriter sales (CX 305 *in camera*). Royal's typewriter plants were located in Hartford, Connecticut; Springfield, Missouri; Leiden, Holland; Leicester, England; and Hull, England. Since 1967, Royal has also distributed worldwide "Mercury" portable typewriters manufactured by Silver Seiko, a Japanese company.

In 1968, Royal's Office Typewriter Division sales organization consisted of four major sales regions, headquartered at Palo Alto, California (West); Standard, Connecticut (East); Atlanta, Georgia (South); and St. Louis, Missouri (Midwest); 87 district offices and about 800 distributors who carried Royal typewriters exclusively and maintained a service center. Royal's total selling force numbered about 1,400, including 350 direct sales force (CX 54 Z-1-2). In 1968, Royal's office typewriter operation was profitable, but its portable typewriter operation was not.

B. Triumph-Werke Nurnberg, A.G.

The Acquired Company

Triumph-Werke Nurnberg, A. G. (Triumph) is a German company which manufactures typewriters, electro-mechanical bookkeeping machines and other small computers (D.G. 12-13). In 1957, Triumph was acquired by Max Grundig, who owns a controlling interest in the Grundig Group, a manufacturer and worldwide marketer of a host of electronic home entertainment products, including radios, tape recorders, television sets and dictating machines (CX 64 S; CX 190 p. 2; D.G. 25, 28). In 1958, Triumph acquired a controlling interest in Adlerwerke vorm Heinrich Kleyer A. G. (Adler) from Grundig. Adler, an old firm which introduced typewriters into Germany, concen-

trated on the manufacture of typewriters after 1958, discontinuing the production of motorcycles. In 1962, Adler introduced its office electric typewriter. By 1963, Triumph-Adler had captured the major portion of the typewriter market in Germany and was supplying about 45 percent of the typewriter demand in Europe. By 1968, Adler typewriters were sold in more than 100 markets around the world (CX 75 pp. 2-3; CX 190 pp. 2-3; D.G. 29-33).

Triumph's main plant is located in Nurnberg, where office electric typewriters, electric portable typewriters, bookkeeping machines and invoicing machines are produced (D.G. 139-42). The main typewriter plant of Adler is located in Frankfurt (D.G. 144-56). As of late 1968, Triumph-Adler produced all the typewriters they sold and both the Triumph plant and Adler plant were operating at full capacity during 1968 (D.G. 150). Triumph-Adler was a growing and profitable firm. In 1968, Triumph's total sales amounted to about DM 116.8 million (\$29.2 million), some 85 to 90 percent of which were typewriter sales (CX 187 p. 8; D.G. 232). In the same year, Adler's sales amounted about DM 76.4 million (about \$19.1 million), practically all of which consisted of typewriter sales (CX 188 p. 7; D.G. 232-33). In 1968, Triumph's profits were about DM 15.1 million (\$3.7 million) (CX 187 p. 31) and Adler's, about DM 5.9 million (\$1.48 million) (CX 188 p. 23).

In the early 1950's, Adler typewriters were sold in the United States through an agent (D.G. 65, 79). After the acquisition of Adler by Triumph in 1958, both "Triumph" and "Adler" typewriters were sold in the United States through DeJur, the United States agent for Grundig dictating machines (D.G. 65-66). During 1963, Adler established a sales office and warehouse facilities in New York City and Los Angeles, California, terminated its agency agreements, and undertook its own distribution of typewriters under the "Adler" name. During the same year, Triumph-Adler discontinued United States marketing of typewriters under the "Triumph" name, and began the establishment of a dealer network for the "Adler" typewriters in the United States (D.G. 69-71). By 1964, Adler established 400-500 dealers and the number doubled by 1968 (D.G. 73-74). Adler office electric typewriters are considered to be "right up there" with the best typewriters since they require fewer service calls (Tr. 6400-01). A large portion of United States users of Adler type-

writers are large "national accounts," and Triumph-Adler provides special assistance to its dealers in order to encourage this business (D.G. 99-101; Tr. 1185, 1215-17, 1229, 6396-400, 7861-63). Triumph-Adler's dealer system proved highly effective. The growth of Adler typewriter sales in the United States during 1968 was considerably larger than Adler's own forecast and expectations (CX 250 A). In order to keep up with the continuously increasing demand for Adler typewriters, Adler added new production facilities during 1968 (CX 242 A), and sales of Adler office electric typewriters exceeded the planned budget of 1969 by more than 15 percent (CX 139 A). Also, during the 1963-1969 period, Triumph-Adler's typewriter advertising expenditures steadily increased from about \$32,500 in 1963 to about \$160,000 in 1968 (CX 175 A).

In addition, Triumph-Adler maintained a substantial research and development (R & D) staff with proven capabilities. Between 1960 and 1970, its R&D staff was increased by 25 to 50 percent (D.G. 498). In 1968, the R & D expenditures of Triumph-Adler expressed as a percentage of sales were almost twice as large as that of Royal.⁴ In early 1956, Triumph-Adler undertook to design an electric typewriter "from the ground up," and it was this foresight and the basic machine which resulted that provided the foundation for Triumph-Adler's technological superiority in the office electric typewriter market (CX 260 Z-5). After 4 years of development work, Triumph-Adler announced a portable electric typewriter in 1967 and introduced it into the United States market in 1969 (CX 118 A-B; D.B. 109, 121; Tr. 6832). During the 1964-1968 period, Triumph-Adler, actively engaged in R & D work for the development of a single-element typewriting principle for application to small computers and, in September 1968, filed a patent application in Germany for an invention entitled "single prancing element positioning mechanism" (CX 420 A-C *in camera*; D.G. 330-39).⁵

In sum, at the time of its acquisition by Litton in early 1969, Triumph-Adler was a dynamic competitor with a strong international position and a substantial position in the United States typewriter market. Its new dealer distribution system in the United States had proven highly successful and was growing.

⁴ Derived from CX 186; CX 187 p. 8; CX 188 p. 7; CX 383 A; CX 388 A; CX 419 *in camera*.

⁵ After the acquisition, Litton's patent council filed an application for this patent in the United States (Tr. 4981-82 *in camera*).

The United States sales of Adler typewriters had experienced impressive growth, and the Adler office electric typewriter enjoyed a reputation for superior quality and reliability.

C. The Acquisition

On or about January 3, 1969, Litton acquired about 98 percent of the stock of Triumph-Werke Nurnberg, A. G. which in turn owned about 82 percent of the stock of Adlerwerke vorm Heinrich Kleyer, A. G. and several associated companies from Max Grundig of Nurnberg, Germany (Complaint, par. 23; Answer, par. 23; D.G. 27, 43; CX's 4-9). The consideration paid was DM 220 million, or approximately \$55 million. The associated companies and stock interests acquired by Litton were: Triumph-Werke Wohnungstau, GmbH (95 percent); Grundig Burotechnich GmbH, Nurnberg, Germany (100 percent); Grundig Business Machines (Australia) Pty, Ltd., Sydney, Australia (99.9 percent); Grundig Business Machines, New York, New York (100 percent); and Grundig S.A.R.L., Paris, France (100 percent) (D.G. 26-28; D.G. 511-12).⁶ After Litton took over Triumph-Adler in early 1969, the name of the latter's United States sales subsidiary was, in February 1969, changed from Grundig Business Machines, Inc. to Adler Business Machines, Inc. (CX 252 A). Adler pushed on with its dealer distribution system in the United States, reaching its goal of 1,000 dealers in 1969 (RX 60 G).⁷

III. AN OVERVIEW OF THE INDUSTRY

Remington was the first to manufacture commercial typewriters in the United States in 1873. Underwood followed in 1896. Underwood was in turn followed by L. C. Smith & Bros.

⁶ The acquisition agreement signed on August 1, 1968, was conditioned upon securing the approval of the Department of Justice or Federal Trade Commission and the Department of Justice or Federal Trade Commission and the Department of Commerce of the United States by October 31, 1968 (CX 4 R; CX 261 A). On August 15, 1968, the Commission received a request from Litton for an advisory opinion regarding the acquisition (CX 261 A-C) and a detailed presentation was received by the Commission staff at a conference on September 23, 1968 (CX 260 A-Z-18). By letter of October 30, 1968, Litton withdrew its application for an advisory opinion and, on the same day, announced its acquisition of Triumph-Adler (CX 272 A-E).

⁷ Under a protective agreement, dated March 21, 1969, between Litton and Commission counsel, Litton agreed to operate Triumph-Adler with separate business identities, books of account, separate management, separate marketing arrangements and personnel, not to interfere with the Triumph-Adler distribution organization in the United States, and to maintain it independent of any other Litton division.

Typewriter Company in 1904 and by Royal Typewriter Company in 1913 (Tr. 422, 1559; CX 15 Z-2; RX 1192 p. 19). Prior to World War II, these four historical typewriter companies controlled over 95 percent of the typewriter market in the United States (Tr. 1568-69, 1571-74).⁸ In addition to the four firms, the Woodstock Typewriter Company manufactured and sold manual office typewriters since the early 1900's (Tr. 512). IBM entered the typewriter industry in 1933 when it acquired the rights to manufacture the Electromatic typewriter (an electric typewriter) from the Northeast Manufacturing Company (Tr. 1386, 1567-68). Several European typewriter companies also began to sell typewriters in the United States prior to World War II.

During World War II, the four historical domestic typewriter companies were required by the United States Government to convert to war production and to discontinue the manufacture of typewriters (Tr. 1386-87, 1574-75, 2990, 2992, 4531). Only IBM and Woodstock were permitted to continue the manufacture of typewriters during the war years (Tr. 1386-87, 1570, 1574-75). After the World War II, the four historical typewriter companies resumed production of typewriters (Tr. 1569, 2993, 3001, 4531).

During the 1930's, the foreign-based companies (Hermes and Olympia) imported typewriters into the United States (Tr. 83, 1151). During the 1950's, two foreign-based firms (Adler and Facit) entered the United States typewriter market (Tr. 257, 1152), and two more (Nippo and Brother) during the 1960's (Tr. 225, 344).

In the early 1950's, the four historical typewriter manufacturers produced electric typewriters by adding a motor to their office manual typewriters, but failed to produce a fully electric typewriter until the mid-1960's (Tr. 519-20, 1575, 1970-72, 4513-14, 4551-52, 6995-96). In 1966, Royal introduced a fully-electric typewriter (Tr. 7068) to be followed by SCM in 1967 (Tr. 3007). In 1962, sales of office electric typewriters surpassed sales of office manual typewriters for the first time (CX 225, Table 1, pp. 2-3).

⁸ A Sherman Act case instituted by the United States against these four firms resulted in a consent decree enjoining them from engaging in price fixing and certain other restrictive practices. *United States v. Underwood Elliot Fisher Company*, Civil Action No. 8-317, April 23, 1940.

As a result of the introduction of electric typewriters and the new competition, the four historical typewriter companies no longer control the domestic typewriter industry. IBM has emerged as the new industry leader in the office electric typewriter market. In 1968, however, Royal ranked first in the office manual typewriter market with over 40 percent, second in the electric office typewriter market with 11.4 percent, and SCM and Royal dominated the portable typewriter market with 50 percent and 21 percent, respectively of the market. And, throughout the period 1963-1968, the United States typewriter industry remained highly concentrated, as did the various typewriter submarkets. See pp. 36-44 [pp. 1004-10 herein] *infra*.

During the period 1903-1968, twelve typewriter manufacturers competed in the sale of typewriters in the United States. They include the four historical typewriter companies, Remington, SCM, Royal and Olivetti; two other domestic manufacturers, IBM and R. C. Allen; and six foreign-based companies, Triumph-Adler (Adler), Olympia, Hermes, Facit, Brother, and Nippo.

A. Litton-Royal

Royal McBee Corporation was one of the four historical typewriter companies in the United States. After absorbing the McBee Company in 1954 (CX 15 Z-2), it was acquired by Litton in 1965 (CX 15 A). Subsequently, Litton acquired Imperial Typewriter Company of England in 1966 (D.E. 255), and Willy Feiler Zaehl-und Rechenwerke GmbH (Willy Feiler), a German subsidiary of Commodore Business Machines Limited of Canada (CX 61 B). At the time of the acquisition, Willy Feiler manufactured and sold adding machines and had a prototype for an electric portable typewriter (D.G. 943-45).

Litton is a widely diversified conglomerate corporation engaged in diverse product areas including microwave devices and systems, business machines, computers, guidance systems, tubes, navigation and communications equipment, and shipbuilding. In 1968, its total sales were over \$2.17 billion, which placed it 39th among the 500 largest industrial corporations (CX 200, pp. 4-5).

Litton regarded Royal as "the world's largest manufacturer of typewriters" (CX 15 Z-5). Royal became a part of Litton's Business Equipment Group in 1965. The production and sale of

office typewriters were consolidated into the Office Typewriter Division; and the production and sale of portable typewriters into the Consumer Products Division. (Tr. 7052-54; CX 11 pp. 4-6, 11). In 1968, Royal sold its office typewriters through 800 franchised dealers in its 87 sales districts and some 25 independent office typewriter dealers (CX 54 Z-1-2). Royal's typewriter plants were located in Hartford, Connecticut; Springfield, Missouri; Leiden, Holland; and Leicester, England (CX 260 A, U.V).⁹ Prior to its acquisition of Triumph-Adler in late 1968, Royal ranked second in the office electric typewriter market, first in the office manual typewriter market, and second in the portable typewriter market.

B. Remington Rand Division (Sperry-Rand Corporation)

Remington Rand has manufactured and sold typewriters since 1873. In 1955, it merged with Sperry Gyroscope Company to form the Sperry-Rand Corporation. In addition to office electric and office manual typewriters and portable typewriters, Sperry-Rand manufactures and sells throughout the world various office machines such as adding machines, calculators and copiers. It also manufactures computers through its Univac Division. In 1969, its total sales were \$1.6 billion, which ranked 60th among the nation's 500 largest industrial corporations. Remington's plant is located in Elmira, New York (Tr. 420-22, 492, 1569, 4493-95, 4501-02; CX 200 pp. 6-7; CX 286, CX 287, CX 288). Remington now manufactures all portable typewriters at its Denbosh, Holland, plant. (Tr. 422).

Remington sold its typewriters through company-operated branches until 1961, when it added independent office machine dealers to its distribution system. The latter includes 800-1,000 full-line dealers who handle all types of Remington's office typewriters. At present, about 52 percent of Remington's office typewriter sales are made by its company-operated branches. Remington sells its portable typewriters to mass merchandisers and five master distributors who resell them to approximately 5,000

⁹ Royal's Springfield, Missouri plant was closed in April 1969 due to a labor dispute and the production of portable typewriters was moved to its Hartford, Connecticut plant. Subsequently, the production of high-priced office electric typewriters at the Hartford plant ceased in the summer of 1969, that plant producing primarily office manual typewriters. In July 1972, Royal announced that the production of typewriters at the Hartford plant would cease (Tr. 910, 7070-74, 7762-63, 7769-70; CX 18, p. 4; Transcript of oral argument, 25-26). All of these events transpired after the challenged acquisition.

dealers who handle office machines and equipment and stationery (Tr. 442-47, 4381-86, 4467-69).

C. SCM Corporation

SCM Corporation (SCM) is the successor to the Smith-Corona Merchant Corporation, which, in 1958, absorbed L. C. Smith & Corona, one of the four historical typewriter companies in the United States. SCM manufactures and sells office electric and manual typewriters,¹⁰ portable typewriters, calculators and adding machines. In 1969, the total sales of SCM was about \$807 million, which placed it 137th among the nation's 500 largest industrial corporations. SCM's plant is located at Cortland-Groton, New York. SCM manufactures "flat" portable typewriters in England. (Tr. 580-82, 2198; CX 200 pp. 8-9).

Since World War II, SCM's typewriter marketing gradually shifted from a company salesmen-oriented system to a dealer-oriented system. From 1966 to 1971, the number of company-operated franchises decreased from 60 to 2, while the number of SCM dealers increased from about 800 to 12,000. In addition, mass merchandisers account for a substantial portion of SCM portable typewriter sales (Tr. 593-96, 627, 681-82, 2199, 3059-60).

D. Olivetti-Underwood

Ing. C. Olivetti & C., S.p.A. (Olivetti), headquartered in Iveria, Italy, manufactures and sells throughout the world a full line of business machines including typewriters, calculators, accounting machines and copiers. In 1963, Olivetti absorbed the Underwood Typewriter Company, one of the four historical typewriter companies of the United States which had fallen into a failing condition. The demise of Underwood was attributed to its failure to expend sufficient funds for research and development necessary to update its product lines. Olivetti-Underwood now manufactures and sells typewriters and other business machines in the United States through Olivetti Corporation of America, a subsidiary (Tr. 1575-80, 4751, 4760, 4766; CX 297 p. 19; CX 298 D, J). Olivetti's worldwide sales in 1969 amounted to about 161.2 billion lire (CX 297 p. 59). Olivetti manufactures office electric typewriters at its new plant in Harrisburg, Pennsylvania. It also manufactures most of its office manual type-

¹⁰ SCM does not manufacture office manual typewriters at present (Tr. 582).

writers sold in the United States at its Glasgow, England, plant, and the portable typewriters sold in the United States at its Barcelona, Spain, plant (Tr. 1516-17, 1581; CX 296).

Olivetti markets office typewriters in the United States through 90 company-operated branch offices, sales agents and about 10,000 independent office machine dealers, some 2,800 of which are servicing dealers. About 90 percent of Olivetti's portable typewriters are sold through office machine dealers and the remainder through mass merchandisers (Tr. 1522-27, 4765).

E. International Business Machines, Inc.

International Business Machines, Inc. (IBM), manufactures and sells throughout the world computers and the office machines, including office electric typewriters,¹¹ automatic typewriters, dictating machines, copying machines, magnetic-media machines, composer machines and supplies for these products. IBM's total sales of products and services in 1969 amounted to about \$7.2 billion, which placed 5th among the nation's 500 largest industrial corporations (Tr. 1291; CX 200 pp. 4-5). IBM office electric typewriters sold in the United States are manufactured at its Lexington, Kentucky, plant, and the magnetic-media typewriters and office machines at its Austin, Texas, plant (Tr. 1296-97; RX 629).

IBM entered the typewriter industry in 1933 by acquiring the rights to manufacture the Electromatic typewriter (an electric typewriter) from the Northeast Manufacturing Company. Electric typewriters, however, were not generally accepted until after the World War II. During the 1950's IBM became a modest factor in the typewriter industry, and during the 1960's established itself as the leader in the office electric typewriter market (Tr. 1293, 1386-87, 1567-68, 1574-75, 2993, 3001, 4531; CX 302, CX 307). IBM sells its office electric typewriters through company salesmen, who are assigned to a sales territory or to a large account (Tr. 1358-59).

In 1961, IBM introduced its "Selectric" typewriter, which is a single-element electric typewriter. This has been called the single most important development in the typewriter industry to date (Tr. 314-15), and since its introduction it has become the dominant machine in the office electric typewriter market and the

¹¹ IBM does not manufacture office manual typewriters or portable typewriters (Tr. 1292).

standard printer in code media automatic typewriters (RX 1909; RX 1911; Tr. 1415, 1454). In 1964, IBM introduced the Magnetic Tape Selectric typewriter (MT/ST) (RX 421 p. 11), and in 1969, its Mag Card Selectric typewriter (MC/ST) (RX 426 p. 18), both of which are code media automatic typewriters.

IBM sells and services its office electric typewriters and code media automatic typewriters (MT/STs and MC/STs) in the United States on a direct basis through its own sales organization. In 1969, it had over 200 IBM Office Products Division branch offices and employed 2,928 salesmen and 6,178 servicemen (RX 630 A-B; Tr. 1358-60). IBM's total sales of typewriters in the United States increased from about \$105 million in 1963 to about \$178 million in 1968 (CX 307 *in camera*).

F. R. C. Allen

R. C. Allen (Allen) entered the typewriter industry in 1950 by its acquisition of the Woodstock Typewriter Company. Allen is 53 percent owned by Guerdon Industries, Inc., which in turn is 53 percent owned by City Investing Corp., a firm which in 1969 had sales of \$364 million and ranked 266th among the nation's 500 largest industrial corporations (Tr. 511-12; CX 200 pp. 14-15). Guerdon is a diversified firm which had sales of \$170 million and assets of \$60 million in 1970. In addition to typewriters, Allen manufactures cash registers, adding machines, aircraft component parts, ground support equipment and gyroscopes (RX 1686 pp. 4, 9-10; Tr. 512).

Until 1970, when it discontinued the typewriter business, Allen produced office manual typewriters at its Woodstock, Illinois, plant, for sale primarily to the United States Government. In the early 1960's Allen's attempt to produce an electric office typewriter failed. In November 1970, it stopped producing office manual typewriters after it decided it could not compete on a profitable basis with foreign-based typewriter companies in the office manual typewriter market (Tr. 512-13, 517, 519-22).

G. Triumph-Adler

Triumph-Werke Nuremberg A. G. (Triumph), is a German company which manufactured and sold motorcycles, typewriters and bookkeeping machines. In 1958 Triumph acquired Adler-Werke, Vormals Heinrich Kleyer A. G. (Adler), a German

company which manufactured motorcycles and typewriters. Before they were acquired by Litton in 1969, both Triumph and Adler had terminated the production of motorcycles and concentrated on the production of typewriters. In that year, Triumph-Adler had assets of \$39.5 million and sales of \$49.5 million (CX 336 p. 10).

Triumph-Adler entered the United typewriter market in the middle 1950's (D.G. 65, 79), and sold office electric and office manual typewriters and portable typewriters through an agent (D.G. 65-66). During the period 1963-1965, it established a nationwide distribution system of its own in the United States and by 1968 had about 800-1,000 dealers in the United States (D.G. 68-75). Prior to its acquisition by Litton in late 1968, Triumph-Adler ranked sixth in the office electric typewriter market and fifth in the office manual typewriter market (CX 307 *in camera*; CX 308 *in camera*). Also see pp. 6-9 [pp. 982-85 herein], *supra*.

H. Olympia Werke, A. G.

Olympia Werke, A. G. (Olympia), is a subsidiary of A. E. G. Telefunken, which sells electric and electronic equipment with worldwide sales of \$1.6 billion. About 10 percent of its stock is owned by General Electric (D.G. 47, 614-15; Tr. 695-97, 764, 813-14). Olympia manufactures and sells typewriters, adding machines, calculators and dictating machines (Tr. 702-704). Olympia began to sell typewriters in the United States in 1952 when it introduced its portable typewriter. In 1956, it introduced an office manual typewriter, and in 1961, an office electric typewriter into the United States (Tr. 701-04). All Olympia typewriters sold in the United States are manufactured in Germany (Tr. 710).

Prior to 1968, Olympia distributed typewriters through its distributor, Intercontinental Trading Company (ITC) for sale to independent office machine dealers. In 1968, Olympia acquired ITC, formed Olympia U.S.A., and assumed direct responsibility for marketing typewriters to some 2,200 office machine dealers, about 800 of whom are "full-line" Olympia dealers who handle a full line of Olympia products including office and portable typewriters, adding machines and calculators (Tr. 698, 705-706, 724-26, 739-42, 762-63).

I. Paillard-Hermes

Hermes is a division of Paillard, Inc., a United States marketing subsidiary of Paillard S. A. of Switzerland, which manufactures and sells worldwide various business machines, including office electric, office manual and portable typewriters, calculators and adding machines. The parent company also produces and sells cameras and photographic equipment through the Bolex division. Paillard's 1968 worldwide sales were over 300 million Swiss francs (Tr. 82-83, 130-31, 142; RX 1102; RX 1103; RX 1915 B). Paillard has typewriter manufacturing plants in Germany, France and Switzerland, and a typewriter assembly plant in Brazil (Tr. 146-47).

Paillard entered the United States typewriter market in the 1930's when it introduced portable typewriters, and office manual and office electric typewriters were introduced into the United States by 1958 (Tr. 83-84; CX 274; CX 275; CX 276; CX 277). Paillard distributes typewriters through the Hermes division of Paillard, U.S. and about 1,400 independent office machine dealers who also handle the Hermes line of calculators and accounting machines (Tr. 122, 142).

J. Facit, A. B.

Facit, A. B. is a Swedish company which manufactures and sells worldwide typewriters, adding machines, office furniture and agricultural and chemical equipment. It has annual sales of about \$230 million. Facit A. B. markets office products in the United States through Facit-Odhner, Inc. (Facit) (Tr. 254-57). It entered the United States typewriter market in 1955 with office manual typewriters, and subsequently introduced a portable typewriter and in 1960 an office electric typewriter (Tr. 257). Facit, A. B., manufactures typewriters in Switzerland and India and exports typewriter sub-assemblies to plants located in Brazil, Columbia, Mexico and Poland (Tr. 281; RX 1534 J-L).

Facit distributes typewriters through 1100 office machine dealers in the United States. The number of such dealers has doubled since 1963. Facit also maintains five regional sales offices in the United States which are staffed by 26 salesmen and 40 servicemen who train dealers in servicing typewriters (Tr. 272-73, 283).

K. Brother Industries, Ltd.

Brother International Corporation (Brother), is a United

States marketing subsidiary of Brother Industries, Ltd. of Japan, which manufactures and sells typewriters, sewing machines, calculators, washing machines and small electrical appliances in over 100 countries (Tr. 343-349 CX 285 R, X). Brother's United States sales are about \$35 million (Tr. 368).

Brother began manufacturing portable typewriters in 1961 at the suggestion of Western Auto, one of its major United States customers for Brother's sewing machines, and supplied the latter with portable typewriters (Tr. 343-45). In 1965, Brother began to sell office electric typewriters in the United States through a wholesaler in New York City, and, in 1968, began the distribution of office typewriters through about 100 office machine dealers in the United States. Brother now employs four divisional sales managers and 15-20 salesmen, and has over 200 authorized service stations throughout the United States (Tr. 346-48, 353, 374-75, 383-84, 409-10). The bulk of Brother portable typewriter sales in the United States is made to mass merchandisers under various private labels (Tr. 4370-71; RX 1573 A-B; RX 1574 A-B). In 1969, Brother began to manufacture office and portable typewriters for Remington under the Remington trade name (Tr. 356).

L. Nippo Machine Company, Ltd.

Nippo Machine Company, Ltd. (Nippo), is a Japanese company and manufactures typewriters, time clocks and check writers. It began to manufacture portable typewriters for sale in the United States and introduced a portable typewriter in the United States in 1970 (Tr. 225, 231, 245; RX 1190 B-C). Spiegel, a Chicago-based mail order house, is Nippo's largest customer in the United States which purchases typewriters directly from Nippo's factory in Japan. Since 1971, about 20 dealers have distributed Nippo typewriters in the United States (Tr. 226, 234, 244, 251).

IV. THE RELEVANT MARKETS

A threshold issue is the determination of the product and geographic dimensions of an effective area of competition within which the legality of this merger must be tested. There is no dispute with respect to the relevant geographic market in this case. The parties agree, and the examiner found, that the nation as a whole is the appropriate geographic market.

The Product Markets

However, there is a sharp dispute regarding the product market. Complaint counsel contend that the office typewriter market, consisting of the office electric typewriter ("office electric") submarket and the office manual typewriter ("office manual") submarket, and the portable typewriter market are the appropriate product markets for the purpose of this case. Complaint counsel further assert that it is also appropriate to examine the effect of this merger on the overall typewriter industry. Respondent, however, vigorously contends, and the examiner found, that the so-called heavy duty office typewriter market, embracing certain automatic typewriters, high-priced office electric typewriters and factory-reconditioned IBM electric typewriters ("recons"), is the only economically meaningful product market for office typewriters. The examiner also found that the portable typewriter market is also an appropriate product market, but suggests that the electric portable typewriter market is economically more meaningful.

It is well settled that the outer boundaries of a product market are determined by the product and its close substitutes from the functional and economic standpoints. Within this broad market, however, well-defined submarkets may exist which in themselves constitute product markets for antitrust purposes. And, if there is a reasonable probability that the merger will substantially lessen competition in *any* economically significant *submarket*, the merger is proscribed by Section 7. *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). The Supreme Court has laid down authoritative guidelines for determination of submarkets in *Brown Shoe Co.*, 370 U.S. at 325:

The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors. * * *

See *Seeburg Corporation v. Federal Trade Commission*, 425 F.2d 124, 128-29 (6th Cir. 1970), *cert. denied*, 400 U.S. 866 (1970).¹²

¹² See also *Reynolds Metals Co. v. Federal Trade Commission*, 309 F.2d 223 (D.C. Cir. 1962), in which the court (per Burger, C.J.) stated, in analyzing the *Brown Shoe* decision, that distinct submarkets "may henceforth be the focal point of administrative and judicial inquiry under Section 7." *Id.* at 226.

We are also mindful that the relevant product market must be determined by the nature of the merging firms and by the nature of the competition they face. Submarkets are not a basis for the disregard of a broader line of commerce which has economic significance. Thus, the product market must be defined with sufficient breadth to include the competing products of the merging firms, consistent with trade realities, and no finer distinctions should be made which may obscure the competitive effects of the merger under examination. *Brown Shoe Co. v. United States*, *supra*, 370 U.S. at 326-327; *United States v. Continental Can Co.*, 378 U.S. 441, 456-457 (1964); *United States v. Phillipsburg National Bank*, 399 U.S. 350, 359-360 (1970). These cases teach us that, on the one hand, defining a product market only to include all substitutes may frustrate the congressional purpose by obscuring the true effect of a merger between sellers of any one of the substitutable products; while, on the other hand, defining it only in terms of a single product may equally frustrate the legislative intent by excusing mergers between sellers of substitutes. In order to effectuate the legislative purpose of Section 7 to prevent mergers which may substantially lessen competition in *any* line of commerce, the effects of a merger must be examined "in each economically significant submarket" as well as in the broader product market. Finally, we have said that, in order to effectuate the purpose of Section 7 to halt tendencies toward concentration in their incipiency, the product market in a merger case must be viewed in dynamic terms and not on the basis of a particular point in time. *Sterling Drug, Inc.*, 3 Trade Reg. Rep. ¶ 19,961 at 21,973-974 (F.T.C. 1972 [80 F.T.C. 477]); *United States v. Continental Can Co.*, *supra*, 378 U.S. at 466. With these guideposts in mind, we now turn to the case before us.

Both the merging firms in this case sold office electric and manual typewriters and portable typewriters in the United States. On the basis of the evidence, which we shall discuss in some detail, we conclude that office electric typewriters and office manual typewriters constitute separate submarkets within the broad office typewriter market, which also includes self-contained code media automatic typewriters. We further hold that portable typewriters constitute a separate market, and that the overall typewriter market consisting of office typewriters

and portable typewriters also constitutes a relevant product market in which the effect of this merger may be examined.

Simply stated, a typewriter is a writing machine which consists of a keyboard and a printer. The printer is activated by a pressure on a key by a finger. The action is either manual or electric. In the conventional basket typewriter, a series of rods carrying the letters or symbols are pivoted to keyed rods (RXs 1757, 1758). In the single-element typewriter, introduced by IBM in the early 1960's, the types are all fixed on a sphere, which revolves and strikes when a key is depressed (RX 430 at 7). The action of the single-element typewriter is electric. An automatic typewriter is a self-contained typewriter attached to a code media device, which is capable of automatically printing out the input on playback. See *infra*, [pp. 1001-03 herein].

The Office Typewriter Market—The Office Electric Typewriter Submarket

Office typewriters, both the manual and electric type, are designed for office use and sold to commercial users, schools and institutions, including the federal and local governments. In recent years, office electric typewriters ("office electric") have become popular and made remarkable inroads in the office typewriter market. However, office manual typewriters ("office manuals") have held their own in terms of both units and dollar sales. In 1968, the year prior to the acquisition, the sales of office manuals amounted to over 354,000 units and some \$90.4 million. The evidence also shows that office manuals are preferred by certain classes of users, and the office manuals are obviously here to stay. Although both office electric and office manuals perform similar functions and are functional substitutes for each other, an office electric has distinct physical characteristics which are economically significant. Most important, there is a substantial price differential between the two. For these reasons, we hold that office electric and office manuals constitute separate submarkets within the office typewriter market. *United States v. Aluminum Co. of America*, 377 U.S. 271, 276 (1964).

Respondent, however, vigorously contends, and the examiner found, that the only economically significant product market in this case is the so-called "heavy duty" office electric typewriter market, which, according to the examiner, consists of high-priced office electrics, factory reconditioned IBM office

electric typewriters ("recons") and automatic typewriters. The examiner would group low-priced office electrics (the so-called office compacts) and office manuals into a "light duty" office typewriter market. Putting aside the recons and automatic typewriters for the moment, we believe that segmentation of the office electric typewriter market into heavy duty and light duty markets is not warranted by the evidence. Certainly, to group *manual* typewriters and low-priced *electric* typewriters is unrealistic (I.D. 78 [p. 866 herein]).

The so-called heavy duty office electric typewriter is physically almost indistinguishable from the so-called light duty office electric typewriter. The latter is a full-featured office machine which offers the standard 13-inch carriage for office typewriters (Tr. 165, 396-400, 485-86, 685, 4461, 5260; CXs 32, 291, 329). They have the same capabilities and perform the same functions as those of the other more expensive office electrics (Tr. 218-19, 491, 685, 809, 826, 4514-15, 8775-76; CXs 32, 33, 270, 277 C, 285 R-S, 384). There is no significant distinction between heavy duty office electrics and light duty office electrics in terms of distribution channels. All of the manufacturers sell office electrics, both the heavy duty and light duty types, through their branch sales offices and dealers. The record also shows that most of the dealers carry both "heavy" and "light" duty typewriters as a full line.¹³ (Tr. 187-88, 442-47, 725-26, 823-24, 1522-24, 2203, 2365, 4397, 4553). Royal sold all office electrics through its Office Product Division and portable typewriters through its Consumer Product Division (Tr. 966). Also, what evidence there is in the record indicates that there are no unique production facilities for the heavy duty or light duty types (Tr. 421-22, 582, 600-03, 653, 2998-3000, 4495, 4501-02, 8745-50). Both the heavy duty and light duty office electrics compete in the same market and are sold to the same customer groups (Tr. 276-77, 588-89, 597, 708-09, 716, 727-28, 779, 1517-18, 4890, 5573, 6306-07). The manufacturers which do not sell light duty machines regard them as competitive office electrics (Tr. 276-77). Typewriter manufacturers do not break out heavy duty and light duty typewriter sales for internal sales analysis purposes (Tr. 4791-92, 4811, 4818, 6961, 6882).

¹³ IBM, which sells all typewriters directly through branch office salesmen, does not manufacture the light duty category.

Office electric typewriters are also reported in a single category both to the Business Equipment Manufacturers Association (BEMA), a trade association, and to the Census Bureau (Tr. 534-35, 1329-30). As a matter of fact, the Census product classifications were recommended in 1968 by the Market Research Council of BEMA¹⁴ to the Census Bureau and were adopted by the latter in 1969 (Tr. 1318-19). Most significant, the so-called light duty electrics are advertised and sold as full-featured office typewriters.¹⁵ Royal is no exception (Tr. 218-19, 396-400, 483, 582-89, 1516-17; CXs 32, 33, 270, 277 C, 291, 285 R-S).

The examiner's finding that "heavy duty" typewriters and "light duty" typewriters belong to separate markets is essentially based on certain user testimony to the effect that the so-called light duty or compact office typewriters do not stand up under heavy use (I.D. 75-76 [pp. 864-65 herein]). However, market studies introduced by respondent show that of all office typewriters in use only about 25 percent are used by secretaries, stenographers and receptionists, who spend an average of about three hours a day typing (RXs 636 I, 641 Z-17-18, 641 Z-20). It is therefore safe to conclude that typing is a part-time function at most typing stations, and that the heavy duty-light duty classification is not a critical one for most users of office typewriters. We believe the examiner attached undue importance to the durability factor. In our view, the record shows that the price, service and convenience factors are much more important from the user's point of view. The soundness of our rejection of the heavy duty-light duty dichotomy is underscored by the fact that Royal's internal market studies recognize the broad office typewriter market as comprising office manual, office electric and automatic typewriter segments and do not recognize the heavy duty-light duty distinction (RXs 362 G, 362 K, 363 G, 363 L *in camera*). Furthermore, the line of demarkation between "heavy duty" and "light duty" office electric typewriters appears to be fuzzy at best.¹⁶

¹⁴ The members of the Market Research Council included a representative of Royal as well as IBM, SCM, Remington and Olivetti (Tr. 1319).

¹⁵ One large user witness called by respondent likened the so-called "heavy duty" office electrics and the "compact" office electrics to different passenger automobile models offering many different features (Tr. 5233, 5242).

¹⁶ The record shows that Royal advertised and sold its 550 office electric typewriter as a "heavy duty" office electric typewriter (CX 38 G; CX 38 H; CX 302 *in camera*; CX 307 *in camera*). Litton's 1967 annual report described the Royal 550 as "the lowest priced, full-sized office electric typewriter" which "brings the efficiency and speed of electric typing to

For all of these reasons, we reject the examiner's conclusion that the "heavy duty" office electric typewriter market is an appropriate product market. The examiner's bifurcation of office electric typewriters into two segments would not only needlessly fragmentize the office electric typewriter submarket, but also obscure the true impact of this merger. *Brown Shoe Co. v. United States, supra*, 370 U.S. at 326.

We also reject the examiner's conclusion that the so-called heavy duty office electric typewriters constitute the *only* product market for office typewriters (I.D. 78-79 [p. 867 herein]). The examiner apparently accepted respondent's argument that, because "heavy duty" office typewriters (including factory-reconditioned IBM typewriters (recons) and automatic typewriters) account for the bulk of both the dollar sales and the market growth of all office typewriters, the "light duty" segment may be ignored. However, as noted earlier, *Brown Shoe* requires that we examine the effect of this merger in each economically significant submarket, and this merger is proscribed by Section 7 if its probable effect is to lessen competition substantially in any such economically significant submarket.

The examiner's inclusion of reconditioned IBM electrics ("recons") in the product market in a merger case is a novel one. He was evidently impressed by respondent's claim that IBM recons are equal in characteristics, features and service to new "standard" office electrics. We are not so impressed (Tr. 7930, 7963). In our view, it makes little sense to pick out recons of a single manufacturer and lump them together with new office electric typewriters. It may well be that IBM offers certain service features which are no doubt attractive to some prospective purchasers of used electric typewriters and that, for this reason, its recon program has met with a degree of success. However, we find no convincing evidence which shows that the IBM recons exercise any significant and direct influence upon the purchasing decisions of prospective buyers of new office electrics. The examiner erred in including reconditioned office typewriters in the product market in this case.

The Office Manual Typewriter Submarket

The respondent does not seriously dispute that by the well es-

routine and high volume office tasks." (Emphasis added; CX 13 p. 19) Yet, Litton now includes Royal 550 in the "light duty" category.

tablished *Brown Shoe* standards (370 U.S. at 325) office manuals constitute a separate submarket within the office typewriter market. The examiner, however, concluded that the office manuals is a declining market and therefore is not a relevant product market (I.D. 75 [p. 864 herein]). As we noted earlier, although office manuals no longer occupy the dominant position it enjoyed before the advent of electric typewriters, office manuals are by no means "obsolescent" (I.D. 74 [p. 863 herein]). On the contrary, they are clearly here to stay (CX's 224 A-C, 225 p. 1, 303, 308, 511 p. 1). The office manual typewriter market, while losing ground since 1968, still remains to be an important and profitable market, and the demand is expected to level off (Tr. 4902). The evidence also indicates that certain users will continue to buy office manuals in the future because of price or functional considerations (Tr. 2891-92, 2905, 4902-03, 4897, 5283-84, 5288-89). Furthermore, the office manual market is recognized as a separate entity by the industry. Office typewriters are reported to BEMA, the trade association, in a single category, which is divided into office electric and office manual typewriters. The BEMA forecasts of office typewriter demand list separate forecasts for office manuals (Tr. 502, 539-40, 746-91, 1326-30, 1546-51, 4902-03; CX's 224 A-C). Finally, the close attention Royal has paid to its opportunities in the office manual market in recent years underscores the economic importance of this market.¹⁷ Thus the record demonstrates that the office manual typewriters satisfy most of the "practical indicia" of a submarket set forth in *Brown Shoe*, *supra*.

The Automatic Typewriter Submarket

As we noted earlier, we agree with the examiner that certain types of automatic typewriters should be included in the product market in this case. However, we are of the opinion that only those automatic typewriters which are self-contained in a single unit and perform ordinary office typing functions should be included.¹⁸

¹⁷ *E.g.*, CX 39 (Royal Office Typewriter Division Opportunity Review, 1966) -L, 39-N, 39-O, 39-R-U, 39-Y, 39-Z-5, 39-Z-54, 39-Z-55, 39-Z-57, 39-Z-87; CX 40 (Business Review, 1966) -O-R, 40-Z-14-17; CX 50 E, CX 51 E, 51 F, 52 E, 52 F; 53 E, 53 F; CX 54 (Royal Typewriter Division, Interim Market Plan, Second Half, Fiscal Year 1967-68) -H, 54-Z-38; CX 56.

¹⁸ Thus, we exclude various typing systems which utilize terminal typewriters and remote computers interconnected by means of telephone wire. The examiner evidently included these systems in the "heavy duty" office typewriter market. Belonging to this category are:

An automatic typewriter we include in the product market is essentially a self-contained unit which consists of a keyboard and a printer (in the form of an electric typewriter) and an electronic code media control device. It can be used as a standard electric typewriter when the code media control device is not switched on. When the control device is switched on, as the keys are depressed, the input is coded on a magnetic or paper tape and the unit is capable of automatically printing out the input at a high rate of speed on playback. This type of code media automatic typewriter includes IBM Magnetic Tape Selectric Typewriter (MT/ST)¹⁹ (RXs 430 p. 73, 431 k, 431 z-1), Singer-Friden's Flexowriter (RXs 1764, 1766-1769), ITEL Corporation's Word Processors (RXs 1478), American Automatic Typewriter Company's Autotypist (RX's 1471-1475), and Editype Corporation's Edityper (RX 1491). They perform the same functions as standard office electric typewriters, but offer additional correction, revision and repetitive typing capabilities (Tr. 2453-60, 2469-72, 2498-2500, 2511-12, 2914-18, 6045-46, 6049-52, 6065-66, 6188-90, 6194-95, 6201-02, 6233; RXs 355 G, 355 I, 355 Z-1 *in camera*). It is true, as complaint counsel contend, that automatic typewriters are something more than conventional typewriters, far more expensive, and their market appeal is directed to a small segment of the office typewriter market at present. However, the manufacturers of automatic typewriters have apparently been able to offer them at attractive rentals and, as a result, automatic typewriters have enjoyed growing acceptance (Tr. 5079-84, 5214-15, 5219-24, 5231, 5833-34, 5841-46, 5851-52; RX 363 G *in camera*, RX 363 L *in camera*, RX 636 I, RX 641 Z-6, Z-71, Z-76, RX 643 B; CX 357 *in camera*, CX 361 *in camera*). We are persuaded that automatic typewriters have established a secure foothold in the office typewriter market, and that their importance will probably increase in the years to come.

the Advanced Administrative Terminal System (ATS), marketed by Proprietary Computer Systems, Inc. (Tr. 6108-09, 6116); the VIP com system marketed by VIP Systems Corp. (Tr. 2599; RX 1765); and other typing systems utilizing shared computer time.

We would also exclude automatic typewriters with various specialized applications. Belonging to this category are: composers, such as IBM Composer (RX 540); Varityper, made and marketed by Addressograph-Multigraph Corporation (Tr. 1320, 1391-93, 1408, 2925-30, 5229-31, 5333, 5342-43); and the so-called input/output typewriters, including terminal typewriters (CX 227 p. 4, RX 1486, RX 1775, Tr. 2599, 5123, 6108-09, 6197); communicating typewriters (Tr. 1495, 1498-99, 5128); and other specialized typewriters of various kinds (Tr. 1506).

¹⁹ IBM Mag Card Selectric (MC/ST), introduced in 1969, utilizes magnetic cards instead of magnetic tapes (RX's 530 A, 531 A).

Under the circumstances, we believe that a dynamic view of a Section 7 product market properly includes self-contained typewriters of code media type. *Sterling Drug, Inc.*, 3 Trade Reg. Rep. ¶ 19,961 at 21,973-74 (F.T.C. 1972 [80 F.T.C. 477]).

On the other hand, we shall exclude, for the purposes of this case, terminal typewriters which are connected to remote computers on a shared computer time basis. They are not self-contained office typewriters. Rather, they are typing systems or services which have specialized commercial applications (Tr. 2599-2600, 2975, 6108-09, 6111-12, 6116, 6134). Also see p. 32 [p. 1001] n. 18, *supra*. To include them would result in lumping a typewriter, a manufactured product, with a typewriting system or service which utilizes a typewriter. In our view this is unrealistic.²⁰

The Portable Typewriter Market

The examiner found, and the parties agree, that portable typewriters constitute a separate market distinct from office typewriters (I.D. p. 88 [p. 875 herein]). We adopt the examiner's finding with respect to portable typewriters as our own. We also agree with the examiner that electric portable typewriters may constitute a distinct submarket within the portable typewriter market (I.D. p. 88). However, both of the merging firms sold manual and electric portable typewriters (RX 1849; RX 1853), and we see no real benefit to be derived from the examiner's bifurcation of the portable typewriter market for the purposes of this case.²¹

²⁰ Another reason for excluding terminal typewriters of this type is lack of any record evidence showing price sensitivity between standard office electrics and terminal typewriters. The record does not show that terminal typewriters are *close* substitutes for standard office electrics. In contrast, the record shows a perceptible degree of cross-elasticity of demand between standard office electrics and self-contained code media typewriters (RX 641 Z-71-73, Tr. 8321-22. This was one of the reasons for including them in the broad office typewriter market. We do not imply that in every Section 7 case it is necessary to show a degree of cross-elasticity with mathematical exactitude before two products are found to be close substitutes. It has been our experience that complete data of this kind is seldom available. We are also mindful that price competition may be only one of the variables which influence cross-elasticity of demand overtime. *E.g.*, Kaysen and Turner, *Antitrust Policy* (1965), 102; Hicks, *Value and Capital* (1946), 48-50; Brennan, *Theory of Economic Statistics* (1970), 89-90. See generally Miller, "Measures of Monopoly Power and Concentration: Their Economic Significance" in *Business Concentration and Price Policy* (1955), 124-27; Ferguson, *A Microeconomic Theory of Workable Competition* (1964), 32-43.

²¹ The relative market positions of Royal and Adler were smaller in the electric portables submarket than in the overall portable typewriter market. But, for reasons discussed hereinafter, pp. 43-48 [pp. 1008-12 herein] *infra*, we find this acquisition to be in violation of Section 7 in the overall portable typewriter market. Under the circumstances, the question whether this merger is also illegal in the electric portables submarket becomes academic.

Finally, we believe that the overall typewriter industry also constitutes a valid product market for the purposes of this case for the simple reason that the impact of this merger may be felt in the typewriter industry as a whole. *United States v. Bethlehem Steel Co.*, 168 F. Supp. 576, 593-94 (S.D.N.Y. 1958); *A. G. Spalding & Bros., Inc. v. Federal Trade Commission*, 301 F.2d 585, 603-604 (3d Cir. 1962).

V. THE MARKET STRUCTURE AND THE EFFECT OF THE ACQUISITION

As noted earlier, this merger is proscribed by Section 7 if its effect may be to lessen competition substantially in any of the product markets we have determined in the preceding portion of our opinion. Generally speaking, market shares are the primary indicia of market power, and market structure and any changes in the structure are the keys to analysis of all mergers. *Brown Shoe Co., supra*, 370 U.S. at 322 n. 38; *Federal Trade Commission v. Procter & Gamble Co.*, 386 U.S. 568, 592, 598-99. This is a classic horizontal merger between two direct competitors. In a highly concentrated industry, the effect of such a merger is direct and immediate. No extensive economic analysis is required in such cases. As a matter of fact, in view of the clear congressional purpose to halt any merger which may result in higher concentration in the American industry, the Supreme Court held that any merger which brings about an undue increase in concentration is a presumptive violation of Section 7. *United States v. Philadelphia National Bank*, 374 U.S. 321, 362-63 (1963). Also, where the industry involved is highly concentrated, the "importance of preventing even slight increase in concentration and so preserving the possibility of eventual deconcentration is correspondingly great." *Philadelphia National Bank, supra*, 374 U.S. at 365 n. 42; *United States v. Aluminum Co. of America*, 377 U.S. 271, 279 (1964). Inherent in this view is the Court's basic belief that concentrated markets have inherently anticompetitive tendencies. *Philadelphia National Bank, id.* at 363; *Aluminum Co. of America, id.* at 280-81. We now turn to the merger at hand to see if it passes muster under Section 7 and the controlling cases.

An examination of the market structure of the individual product markets shows that these markets were highly concentrated, that this horizontal merger significantly increased the existing

high concentration, and that, therefore, this merger is clearly beyond the pale of Section 7.

1. The Office Electric Typewriter Market

During the 1960's, the office electric typewriter market was the most important segment of the typewriter industry in terms of both total dollar sales and market growth. In terms of dollar sales, office electric typewriter sales increased from 45.8 percent of all typewriter sales in 1963 to 53.3 percent in 1968 and accounted for over 65 percent of the total industry growth during the period.²² The dollar value of office electric typewriters sold in the United States in 1968 was \$307.2 million, an increase of about 88.5 percent from the 1963 figure of \$162.9 million.

During the period 1963-1968, ten companies²³ competed in the office electric typewriter market. The office electric typewriter market remained highly concentrated throughout the period (CX 302 *in camera*, CX 307 *in camera*). In 1968, the 4 top-ranking firms (IBM, Royal, Olivetti-Underwood and SCM), for 84.5 percent. In terms of unit sales, the corresponding figures were 62.2 percent and 81.9 percent, respectively.²⁴

This merger represents the absorption by the second-ranking firm with 11.4 percent of the highly concentrated market, of the sixth-ranking firm with 3.2 percent. As a result, the combined share of the top four firms increased from 84.5 percent to 87.9 percent. During the period 1963-1968, Royal reinforced its second position, increasing its dollar share from 9.7 percent to

²² Derived from CX 305 and CX 307 *in camera*.

²³ IBM; Royal; Olivetti-Underwood; SCM; Remington; Olympia; Triumph-Adler; Brother; Facit; Hermes.

²⁴ In measuring the market shares, the examiner relied exclusively on dollar revenues of the various firms from sales of typewriters. Thus, the examiner not only excluded any consideration of unit sales but also disregarded the admitted commingling of dollar sales at two different levels, namely wholesale and retail. The examiner believed that actual realized prices offer the *only* accurate measure of market positions of the various firms (I.D. 96-98 [pp. 881-83 herein]). We disagree. We are of the opinion that unit sales and dollar sales are both important means of measuring market shares and both should be taken into consideration in cases where, as here, such information is available, for one complements the other. We reject the examiner's view that typewriters are "highly differentiated products" as to render consideration of unit sales meaningless (I.D. 95 [p. 880 herein]). See *Brown Shoe Co. v. United States, supra* (pairage of men's, women's, and children's shoes). In this case, several witnesses testified that unit sales are the most "relevant" and "basic" system of market measurements expressing the "size and dynamics of the typewriter business." (Tr. 262-64, 297-98, 432-34, 515, 536-37, 743-40, 1295-96, 1340).

We also believe that suggested retail prices are a reliable means of measuring market positions of the industry members especially in cases where, as here, some firms sell primarily at retail while others sell primarily at wholesale or some combination in between (Tr. 998, 1326, 1340-43, 1542-43).

11.4 percent, while IBM's share gradually decreased from 64.6 percent to 58 percent. During the period, the five foreign-based companies selling office electric typewriters in the United States²⁵ increased their dollar shares from 2.2 percent to 10.2 percent. Adler's share increased from 0.9 percent to 3.2 percent during the same period. In these circumstances, the Royal-Adler merger is a clear violation of Section 7.²⁶

2. The Office Manual Typewriter Market

The examiner correctly pointed out that the sale of office manual typewriters have leveled off in recent years while the sale of office electric typewriters have steadily increased (I.D. 74-75 [pp. 861-64 herein]). However, we do not agree that office manual typewriters are "obsolescent," that the demand for office manual typewriters is "dying," or that the office manual typewriter market is not an economically significant market (I.D. 75). In 1968, the year before the acquisition, the sale of office manual typewriters amounted to over \$90 million and over 354,000 units (CX 303 *in camera*; CX 308 *in camera*). The value of factory shipments of office manual typewriters increased from \$27.5 million in 1969 to \$32.9 million in 1970, an increase of over 19 percent (CX 511 p. 1). We believe that the office manual typewriter market has sufficient economic significance to warrant the examination of this merger's impact in that market. *Brown Shoe Co. v. United States, supra*, 370 U.S. at 325.

During the period 1963-1968, nine companies²⁷ sold manual typewriters in the United States. The office manual typewriter market remained highly concentrated throughout the period

²⁵ Olympia, Triumph-Adler, Brother, Facit and Hermes.

²⁶ In *United States v. Aluminum Co. of America*, 377 U.S. 271 (1963), the Supreme Court struck down the acquisition of Rome Cable, the ninth-ranking firm with 1.3 percent of the aluminum conductor market, by Alcoa, the top-ranking firm with 27.8 percent of the market. In *United States v. Pabst Brewing Co.*, 384 U.S. 546 (1966), the Court invalidated a merger of the sixth and seventh-ranking firms with 5.84 percent and 5.48 percent, respectively, of the three-state market. In *Brown Shoe Co. v. United States*, 370 U.S. 294, 343-44 (1962), the Court indicated that a merger achieving 5 percent control of the market should not be approved. In *United States v. Von's Grocery Co.*, the Court invalidated a merger between the third-ranking firm with 4.7 percent and the sixth-ranking firm with 4.2 percent of the market, with the combined share of 8.9 percent. In *Stanley Works v. Federal Trade Commission*, 469 F.2d 498 (2d Cir. 1972), the Court affirmed the Commission's divestiture order on the sole ground that the acquisition combined a firm with one percent of the market with another with 22-24 percent in a concentrated market where the four leading firms controlled 49-51 percent of the market.

²⁷ Royal; Olivetti-Underwood; Remington; Olympia; Triumph-Adler; R. C. Allen; SCM; Hermes; Facit.

(CX 303 *in camera*; CX 308 *in camera*). In 1968, the two top-ranking firms (Royal and Olivetti-Underwood) accounted for 60.6 percent of the dollar sales and the top four firms (Royal, Olivetti-Underwood, Remington and Olympia), for 86.6 percent. In terms of unit sales, the corresponding figures were 60.3 percent and 85.3 percent, respectively. This merger represents the absorption by the top-ranking firm with 41.8 percent of the market, of the fifth-ranking firm with 3.9 percent of the market. As a result, the combined share of the top four firms increased from 86.6 percent to 90.5 percent, and the share of the top-ranking firm, from 41.8 percent to 45.7 percent. During the same period, the four foreign-based companies²⁸ increased their share of the market from 12.7 percent to 17.5 percent in terms of dollar sales. Adler's share increased from 0.5 percent in 1963 to 3.9 percent in 1968. In these circumstances, the Royal-Adler combination is a clear violation of Section 7. See p. 39 [p. 1006 herein] n. 26, *supra*.

3. The Office Typewriter Market

The broad office typewriter market includes, in addition to the office electric typewriter market and the office manual typewriter market examined in the preceding pages, automatic typewriters of code media type. See pp. 32-34 [pp. 1001-03 herein] *supra*. Because Royal discontinued the sale of automatic typewriters in 1968 and Adler did not sell automatic typewriters during the 1963-1968 period, we proceed to an examination of the effect of this merger in the broad office typewriter market.

We find that the market structure of the broad office typewriter market, including the automatic typewriter market, closely parallels those of the office electric typewriter market and the office manual typewriter market, except that the disparity in the market shares of the two top-ranking firms in the broad market is slightly larger.²⁹ From what we have said with respect to the office electric typewriter market and office manual typewriter market, it is clear that this merger cannot pass muster in the broad

²⁸ Olympia; Triumph-Adler; Hermes; Facit.

²⁹ When IBM's 1968 sales of automatic typewriters are added to IBM sales figure shown on CX 306 *in camera* and the 1968 sales of similar automatic typewriters by others is estimated at \$5 million (one half of 1969 estimated sales by others given by Dr. Weston, respondent's economic expert), IBM's share increases to 45.04 percent while Royal's decreases to 17.81 percent (RX 643 B; Tr. 8341-43).

office typewriter market. Also see p. 39 [p. 1006 herein] n. 26, *supra*.

4. The Portable Typewriter Market

During the period 1963–1968, ten companies³⁰ competed in the portable typewriter market. The sale of portable typewriters increased from about 1.2 million units and \$104.6 million in 1963 to about 1.9 million units and \$178 million in 1968. Throughout the period, the portable typewriter market remained highly concentrated (CX 304 *in camera*; CX 309 *in camera*). In 1968, the year prior to the acquisition in question, the two top-ranking firms (SCM and Royal) accounted for 71.5 percent of the dollar sales and the top four firms (SCM, Royal, Brother and Olivetti-Underwood), for 86.2 percent. In terms of unit sales, the corresponding figures were 64.9 percent and 84.4 percent, respectively. This merger represents the absorption by the second-ranking firm with 21.5 percent of the highly concentrated market, of the seventh-ranking firm with one percent of the market. As a result, the combined share of the top four firms increased to 87.2 percent, while the share of the second-ranking Royal increased to 22.5 percent. Adler's market share had doubled during the 1963–1968 period (CX 309 *in camera*). Under these circumstances, we believe this acquisition runs afoul of Section 7. See p. 39 [p. 1006 herein], n. 26, *supra*.³¹

5. The Typewriter Industry

The record shows that sixteen companies competed in the United States typewriter market during the period 1963–1968. They were IBM, Royal, Triumph-Adler, SCM, Olivetti-Underwood, Remington, Olympia, Brother, Hermes, Facit, R. C. Allen, Nippo, Singer-Friden, Itel Corporation, American Automatic Typewriter Company, and Editype Corporation. Of these, nine sold both

³⁰ SCM; Royal; Brother; Olivetti-Underwood; Remington; Olympia; Hermes; Adler; Facit; Nippo.

³¹ Even if we were to accept *arguendo* the product market definitions and market share tables advocated by Litton, this horizontal acquisition is clearly beyond the pale of legality under Section 7 and the controlling case law in the portable typewriter market. Litton's market share table for the portable typewriter market, which the hearing examiner adopted (I.D. 137 [p. 910 herein]), shows that in 1968, the year prior to the challenged acquisition, the four top firms controlled 87 percent of the market, that Royal was a strong second with about 22 percent, and that Triumph-Adler was a growing, dynamic competitor with one percent of the market. On this ground alone, we cannot permit this acquisition to stand. See p. 39 n. 26, *supra*; *Brown Shoe Co. v. United States*, *supra*, 370 U.S. at 325.

standard office and portable typewriters. Two (IBM and R.C. Allen) sold only office electric typewriters; one (Nippo) sold only portable typewriters; and four (Singer-Friden, ITEL Corporation, American Automatic Typewriter Company and Editype Corporation) sold only automatic typewriters. No domestic manufacturer entered the United States typewriter market since 1934 and two domestic manufacturers, Underwood, one of the four historical typewriter companies of the United States, and Woodstock have been absorbed by other firms.

The sale of typewriters increased from about \$355 million in 1963 to about \$586 million³² in 1968, a gain of about 65 percent. During the same period, the six foreign-based companies increased their dollar share of the overall typewriter market from about 8.4 percent to over 12 percent. Adler's share increased from about 0.6 percent to 2.6 percent. Throughout the period the overall typewriter market remained highly concentrated. In 1968, the year prior to the acquisition in question, the two top-ranking firms (IBM and Royal) accounted for about 50.3 percent, and the four leading firms (IBM, Royal, SCM and Olivetti-Underwood), for about 79.7 percent. This acquisition combined the second-ranking firm with the eighth-ranking firm, and increased the combined share of the top four firms from 79.7 percent to 80.3 percent. Also, as a result of this merger, Royal's second position in the overall typewriter market became secure. In our view, this is enough to make out a *prima facie* violation of Section 7.

The record also shows that the barriers to entry in terms of technological and marketing requirements are formidable, especially in the most important office electric typewriter market (Tr. 981-82). It took Royal and SCM 4-5 years and upward of developmental work before they successfully developed and marketed a fully electric office typewriter in the United States. It took Triumph-Adler over 5 years to develop and market an electric typewriter. Further, the task of establishing an effective marketing organization and achieving a degree of market penetration needed to attain competitive costs is both time-consuming and difficult as attested to by the history of long and laborious efforts of foreign-based manufactures in this respect. Finally, the field is already occupied by powerful, diversified firms, including IBM, Litton, Sperry Rand, Olivetti-Underwood and SCM. It appears

³² Includes sales of automatic typewriters. Derived from CX 305 *in camera* and p. 41 [p. 1007 herein], n. 29, *supra*.

no accident then that there has been no entry into the typewriter market by a domestic manufacturer except through acquisitions during the last several decades.

In sum, the typewriter industry as a whole and each of the submarkets we have examined are highly concentrated; Royal was the top-ranking firm in the office manual market, and the strong second in each of the other submarkets; and the combination of Royal and Triumph-Adler not only significantly raised the level of concentration but also entrenched Royal's leading position in these markets.

The examiner, however, would dismiss the complaint for the reason that, under the Herfindahl measure of concentration,³³ the effect of this merger on market concentration is insignificant. He rejected the traditional two and four firm concentration ratios as a "fallacy" which leads to "misleading and erroneous conclusions" in this case for the reason (1) that IBM controls a dominant share in the so-called heavy-duty office typewriter market, and SCM, in the portable typewriter market, and (2) that there has been a "fundamental competitive realignment" in the industry not reflected in the four-firm concentration ratio (I.D. at 128-130 [pp. 904-06 herein]). We reject the examiner's views in this respect. We believe that the traditional four-firm concentration ratio analysis is well suited for the purpose of merger law enforcement and see no compelling reason to ignore it in this case.³⁴

³³ The Herfindahl Index is the sum of the squares of the shares of industry sales possessed by each firm in the industry. Thus, it has a maximum value of 1 with monopoly and a minimum value of $1/n$ with n firms of equal size. See Stigler, *The Organization of Industry*, 31-32 (1968); Scherer, *Industrial Market Structure and Economic Performance*, 51-52 (1970).

³⁴ Ever since the pioneering study produced under the direction of Gardiner Means, *The Structure of American Economy* (1939), leading authorities of industrial organization have accepted the four-firm concentration ratio as a valid means of measuring the degree of business concentration. The Bureau of Census has supplied increasingly comprehensive measures of concentration, and economists have analyzed numerous industries in terms of the four-firm and eight-firm concentration ratios. *E.g.*, Senate Subcommittee on Antitrust and Monopoly, *Concentration in American Industry*, 85th Cong., 1st Sess. (1957); *Concentration Ratios in Manufacturing Industry 1958*, 87th Cong., 2d Sess. (1962); *Concentration Ratios in Manufacturing Industry 1963*, 89th Cong., 2d Sess. (1966); Kaysen and Turner, *Antitrust Policy* pp. 26-41 (1959); Bain *Barriers to New Competition* (1956); *Industrial Organization*, pp. 87-90 (1959); *Industrial Organization* (2d ed.), pp. 78-81 (1968); Nelson, *Concentration in the Manufacturing Industries of the United States*, pp. 62-77 (1963); Stigler, *The Organization of Industry*, pp. 33-34 (1968); Scherer, *Industrial Market Structure and Economic Performance*, pp. 50-51, 59-60 (1970); Mann, "Seller Concentration, Barriers to Entry, and Rates of Return in Thirty Industries, 1950-1960," 48 *Review of Economics and Statistics*, 273 (1966); Kilpatrick, "The Choice Among Alternative Measures of Industrial Concentration," 49 *Review of Economics and Statistics*, 258-60 (1967). Scherer refers to the four-firm sales concentration ratio as *the* concentration ratio. Scherer, *supra*, p. 51. Also, several merger decisions of the Supreme Court have relied on two-firm, four-firm, six-firm and

That the typewriter industry as a whole as well as the various submarkets within the overall market are highly concentrated is beyond dispute. The shares controlled by the top four firms ranged from about 80 percent to 85 percent, and those controlled by the top eight firms, from 97.9 percent to 100 percent. This high degree of concentration reflects both the large magnitude of shares controlled by a few sellers and the small number of sellers in the market as well as their size distribution within the market. As the Supreme Court has stressed, it is "the basic premise" of Section 7 that "competition will be most vital when there are many sellers, none of which has any significant market share" and that as oligopolistic condition develops, "the greater is the likelihood that parallel policies of mutual advantage, not competition, will emerge." *United States v. Philadelphia National Bank*, *supra*, 374 U.S. at 363; *United States v. Aluminum Co. of America*, *supra*, 377 U.S. at 280. And, the Court has also admonished time after time that, in view of the intense congressional concern with rising concentration embodied in Section 7, "if concentration is already great, the importance of preventing even slight increases in concentration and so preserving the possibility of eventual deconcentration is correspondingly great." *United States v. Philadelphia National Bank*, *supra*, 374 U.S. at 365, n. 42; *United States v. Aluminum Co. of America*, *supra*, 377 U.S. at 279; *Brown Shoe Co. v. United States*, *supra*, 384 U.S. at 276-77; *United States v. Pabst Brewing Co.*, *supra*, 384 U.S. at 552. The examiner's conclusion that the classical horizontal acquisition of Triumph-Adler by Royal in the highly concentrated typewriter industry should be left undisturbed because the effect measured in terms of the Herfindahl Index is not substantial; does violence to these governing principles of Section 7.³⁵

eight-firm concentration ratios for the purpose of analyzing the degree of market concentration as well as for the purpose of evaluating the effect of particular mergers in various industries. *E.g.*, *United States v. Philadelphia Bank*, *supra*, 374 U.S. at 321; *United States v. Von's Grocery Co.*, *supra*, 384 U.S. at 281; *United States v. Pabst Brewing Co.*, *supra*, 384 U.S. at 551; *Federal Trade Commission v. Procter & Gamble Co.*, 386 U.S. 568, 571 (1967).

³⁵ We recognize some validity in the examiner's view that the Herfindahl Index is capable of reflecting the size inequality of market shares among the industry members, I.D. at 130 [p. 906 herein]. Also see Stigler, *The Organization of Industry*, pp. 31-36. Thus, the use of Herfindahl Index may be useful in judging which of the two or more horizontal combinations within a particular market is likely to have the greater anticompetitive effect from a structural point of view. Obviously, however, the mere fact that the Royal-Adler combination may be less objectionable than some of the other possible combinations does not save the Royal-Adler combination where, as here, it is otherwise unlawful.

We also reject the examiner's view that the four-firm concentration ratio is fatally

We now turn to several defensive arguments advanced by Litton. First, Litton contends that it needed the office electric typewriters and portable electric typewriters produced by Triumph-Adler in order to prevent further decline in its position and remain competitive in the office typewriter market and the portable typewriter market.³⁶ The examiner accepted this argument as valid. However, the law is to the contrary. In a highly concentrated market such as those involved in this case, the fact that the market position of the acquiring firm, one of the leading firms in the market, may have declined but for the acquisition is not a valid defense. Rather, this case turns on the well established proposition that (*United States v. Philadelphia National Bank, supra*, 374 U.S. at 365 n. 42):

It is no answer that among the three largest firms * * *, there will be no increase in concentration. If this argument were valid, then once a market had become concentrated, further concentration would be legally privileged. On the contrary, if concentration is already great, the importance of preventing even slight increases in concentration and so preserving the possibility of eventual deconcentration is correspondingly great.

Also see United States v. Aluminum Co. of America, supra, 377 U.S. at 279; *General Foods Corporation v. Federal Trade Commission*, 386 F. 2d 936, 945-46 (3rd Cir. 1967), *cert. denied*, 391 U.S. 919 (1968).³⁷

Furthermore, the record shows that Litton, prior to its acquisi-

defective because it fails to reflect a "fundamental competitive realignment" within the market. I.D. at 129 [p. 905 herein]. The identity of the leading firms remained basically the same during the last decade. This is not a case where competition is clearly in a stage of flux or where there has been a rapid and constant realignment of the market position among the industry members so as to render any consideration of concentration ratio in any given year meaningless.

³⁶ Contrary to Litton's contention that Royal faced an imminent prospect of sliding into a bankrupt position, the record shows that Royal's 1967 sales, profits and return on gross assets were within Litton's criteria for satisfactory performance of a division (Tr. 8113); Royal's typewriter profit for 1967 was almost \$7 million before taxes (RX 394 A; RX 396 A); that Royal's office typewriter division was profitable throughout the 1968 fiscal year (Tr. 966-67); and that the 1968 loss in the portable typewriter segment was largely due to the Willy Feiler acquisition fiasco (D.G. 943-60; D.E. 4-31).

In sharp contrast to the pessimism voiced by Litton's management witnesses during trial of this case (*e.g.*, Tr. 1046-48, 7179), contemporaneous documents from Litton-Royal files clearly reflect confidence and optimism about Royal's future market opportunities in the United States and took for granted Royal's continuance as a substantial factor in the typewriter industry. (*E.g.*, CX 39; CX 40; CX 54; CX 55; CX 258.) It is well established that where such testimony is in conflict with contemporaneous documents, the testimony is entitled to little weight. *United States v. United States Gypsum Co.*, 333 U.S. 346, 395-96 (1948); *United States v. Fay*, 353 F.2d 56, 59 (2d Cir. 1965); *United States v. Corn Products Refining Co.*, 234 Fed. 964, 978 (S.D.N.Y. 1916).

³⁷ We reject the examiner's findings (I.D. 160-62 [pp. 927-29 herein]) which denigrate the competitive potential Triumph-Adler. See CX 64 R-Z-2; CX 64 Z-11-15; pp. 6-9 [pp. 982-85 herein], *supra*.

tion of Adler, carefully weighed possible alternatives and chose the acquisition route as the more economical, less risky more expedient course of action.³⁸ To be sure, from Litton's business point of view and honest judgment, the acquisition of Adler was a most expeditious, economical and least hazardous way of achieving its objective, namely, to maintain and re-enforce its second-ranking position in the office electric typewriter market. But, the Supreme Court was at pains to stress that honesty of purpose in making an acquisition and economic benefits flowing from it cannot immunize the acquisition from challenge under the anti-merger law. And so the Court held in *United States v. du Pont de Nemours & Co.*, 353 U.S. 586, 607 (1957), that the government's right to relief cannot be defeated because "all concerned in high executive post in both companies acted honorably and fairly, each in the honest conviction that his actions were in the best interest of his own company * * *." The Court has since consistently held that business reasons no matter how sound do not redeem an otherwise unlawful acquisition. *United States v. Philadelphia National Bank*, *supra*, 374 U.S. at 371; *United States v. Third National Bank*, 390 U.S. 171, 186 (1968); *Ford Motor Co. v. United States*, 405 U.S. 562, 569-570 (1972). We therefore reject Litton's defensive argument in this respect.

Finally, the examiner accepted Litton's argument that "the Litton-Adler combination may limit the dominance of the typewriter industry by IBM and SCM" (I.D. 208 [p. 969 herein]). This concept of "countervailing power" was emphatically rejected by the Supreme Court in *United States v. Philadelphia National Bank*, *supra*, 374 U.S. at 370-71:

* * * If anticompetitive effects in one market could be justified by pro-competitive consequences in another, the logical upshot could be that every firm in an industry could, without violating § 7, embark on a series of mergers that would make it in the end as large as the industry leader. * * *

³⁸ We reject the examiner's finding that, had Litton not acquired Adler, the only alternatives confronting Litton would have been either to let Royal degenerate into a bankrupt situation or to close it (I.D. 160 [p. 927 herein]). On the contrary, in the spring of 1968, Mr. Berry, then president of Royal, considered several alternatives, including (1) improvement of 350 Model office electric typewriter, (2) development of an office electric modeled after the IBM Model D, (3) securing a license to manufacture the IBM Model D or the single-element typewriter, and (4) selling comparable typewriter manufactured by another firm (Tr. 940-41). Subsequently, in June 1968, Litton's top management presented Mr. Ash with alternatives (Tr. 968-70) which included (1) internal development of an office electric machine, (2) distribution of an effective office electric machine, and (3) acquisition of a foreign manufacturer with a good electric machine and a strong market position abroad (CX 64-0). Litton's top management, however, saw "major drawbacks" to internal development and opted for the acquisition of Adler because the acquisition "could provide a reasonably quick answer to these problems" (CX 64 P).

This is not a case, plainly, where two small firms in a market propose to merge in order to be able to compete successfully with the leading firm in that market. * * *

The Court has reaffirmed this stand in subsequent Section 7 cases. *United States v. Phillipsburg National Bank*, 399 U.S. 350, 367-68 (1970) and *Ford Motor Co. v. United States*, *supra*, 405 U.S. at 569-570. Cf. *United States v. Topco Associates*, 405 U.S. 596, 610 (1972).³⁹

In sum, under the controlling Supreme Court decisions, none of the defensive arguments advanced by Litton saves its acquisition of Triumph-Adler.

VI. CONCLUSION

The evidence clearly indicates that the overall typewriter industry was highly concentrated as were the various submarkets within the overall market. The typewriter industry was a growing industry, with the single exception of the office manual typewriter market where the demand was expected to level off in a few years.

Litton has established a substantial market position in the typewriter industry since it entered the industry in 1965 through its acquisition of Royal-McBee Corporation, one of the leading typewriter manufacturers in the United States. Since its entry, Litton remained the top-ranking firm in the office manual typewriter market and the second ranking firm in the other various submarkets. (It was not in the automatic typewriter market, having withdrawn from that market in 1968, the year prior to the challenged acquisition).

Instead of maintaining and improving its market position through internal expansion, which would have been consistent with the merger law, Litton again chose the acquisition route as the most economical, expeditious and less risky alternative to internal expansion. Through its 1969 acquisition of Triumph-Adler, Litton not only eliminated a significant competitor in the

³⁹ In *Philadelphia Bank*, the countervailing power argument was presented in terms of geographic markets. However, the rationale of the Court's rejection of that concept applies here with equal force.

We also reject Litton's contention that its argument is based on the so-called limiting firm theory which is distinct from the countervailing power concept. Whatever the label, the substance of Litton's argument is that the Royal-Adler combination would be better able to compete against IBM and SCM, the leaders in the office electric typewriter market and the portable typewriter market, respectively, precisely the same argument rejected by the Court in *Ford Motor Co.*, *supra*, citing *Philadelphia National Bank*.

highly concentrated markets, but also exacerbated the concentration and entrenched its leading position in the various markets. This is proscribed by Section 7 of the Clayton Act. The typewriter industry is clearly in need of new competition, and the absorption of a significant competitor by any one of the leading firms is a clear violation of Section 7. The mere fact that IBM has enjoyed the leading position in the office electric typewriter market does not save the acquisition of Triumph-Adler, a dynamic and growing competitor, by a firm with Litton's market position.

VII. RELIEF

Fashioning an effective remedy is the most crucial phase of the proper disposition of any antitrust case, for the suit will have a futile exercise if the Government proves its case but fails to secure a remedy adequate to redress the violation. *United States v. Du Pont & Co.*, 366 U.S. 316, 323 (1961). In *Du Pont & Co.*, a case involving acquisition of stock, the Court decreed complete divestiture of the unlawfully held stock, saying (366 U.S. at 330-31):

* * * Divestiture has been called the most important of antitrust remedies. It is simple, relatively easy to administer, and sure. It should always be in the forefront of a court's mind when a violation of § 7 has been found.

There the Court said that "complete divestiture is peculiarly appropriate in cases of stock acquisitions which violation Section 7" (*id.* at 328). Further, complete divestiture of the stock is also the remedy called for by Section 11(b) of the Clayton Act. These rules compel a complete divestiture of the acquired stock in this case.⁴⁰

Respondent has argued, however, that to require Litton to divest Triumph-Adler would inure to the benefit of no one but IBM, the industry leader, and that the divestiture would force Litton out of the typewriter business entirely. These arguments are invalid. In our view, Triumph-Adler may be an attractive toehold acquisition⁴¹ candidate for a firm already in the broad

⁴⁰ The Commission and the courts have decreed divestiture of stock as a matter of course in numerous Section 7 proceedings. *E.g.*, *A. G. Spalding & Bros., Inc. v. Federal Trade Commission*, 301 F.2d 585 (3d Cir. 1962); *Consolidated Foods Corp. v. Federal Trade Commission*, 380 U.S. 592 (1965); *Crown Zellerbach Corp. v. Federal Trade Commission*, 296 F.2d 800 (9th Cir. 1961), *cert. denied*, 370 U.S. 937 (1962); *Federal Trade Commission v. Procter & Gamble Co.*, 386 U.S. 568 (1967); *General Foods Corp. v. Federal Trade Commission*, 386 F.2d 936 (3d Cir. 1967), *cert. denied*, 391 U.S. 916 (1968); *OKC Corp. v. Federal Trade Commission*, 455 F.2d 1159 (10th Cir. 1972).

⁴¹ See the Commission's opinion in *Bendix Corporation*, 3 Trade Reg. Rep. ¶19,288 [77

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information-processing industry. There is some evidence in the record which suggests that an electric typewriter may become an important component in a full line of information-processing equipment, including dictating machines, copiers, computers and calculators (Tr. 7733-37; 7814, 7817-18; RX 87; RX 88; RX 351 E, P, Y, Z-47 *in camera*; RX 352 j *in camera*; RX 355 A, C-D, R *in camera*; RX 369 A, L *in camera*). An entry into the typewriter industry by acquisition of Triumph-Adler by another firm capable of aggressively exploiting Triumph-Adler's potential would have a procompetitive effect and may contribute to eventual deconcentration in the highly concentrated typewriter industry.

For these reasons, we shall require Litton to divest its stock interest in Triumph-Adler. Also, since Litton entered the typewriter industry by acquiring Royal and occupies a substantial market position in the industry, we shall require Litton to seek our approval before it acquires any interest in another typewriter firm for a period of ten years.

ORDER

This matter has been heard by the Commission on appeal of counsel supporting the complaint from the initial decision of the hearing examiner, filed February 3, 1972, holding that the complaint charging respondent with violation of Section 7 of the Clayton Act, as amended, had not been sustained by the evidence and ordering that the complaint be dismissed. The Commission has determined that the appeal of counsel supporting the complaint should be granted, and that the findings of the hearing examiner should be adopted only to the extent consistent with the opinion accompanying this order. Other findings of fact and conclusions of law made by the Commission are contained in that opinion. For the reasons therein stated, the Commission has determined that the order entered by the hearing examiner should be vacated and a new order issued by the Commission as its final order. Accordingly,

It is ordered, That respondent, Litton Industries, Inc., and its officers, directors, agents, representatives and employees, subsidiaries, affiliates, successors and assigns, shall within one year

from the date this order becomes final, divest absolutely and in good faith, and subject to the prior approval of the Federal Trade Commission, all the stock assets, properties, rights and privileges, tangible or intangible, including but not limited to all properties, plants, machinery, equipment, raw material reserves, patents, trade names, trademarks, contract rights, marketing organizations and good will, acquired by said respondent as a result of its acquisition of the stock of Triumph-Werke Nurnberg, A. G. and Adlerwerke A. G., together with all additions and improvements thereto so as to assure that said companies are re-established as a going concern and an effective, viable competitor in the production, distribution and sale of typewriters and other such office communication products.

It is further ordered, That pending divestiture, respondent shall not make any changes or permit any deterioration in any of the plants, machinery, buildings, equipment or other property or assets of whatever description of Triumph-Werke Nurnberg, A.G. and Adlerwerke A.G., which may impair their capacity for the manufacture, sale or distribution of typewriters or their market value.

It is further ordered, That the divestiture ordered by Paragraph I shall include non-exclusive, royalty free licenses, without provision for grantback to Litton, on all patents of whatever description, and engineering production and marketing know-how and expertise relating to the development of typewriter or other such office communication equipment owned or controlled by respondent Litton Industries, Inc., or any subsidiary or affiliate thereof at the time of divestiture to the end that Triumph-Werke Nurnberg A.G. and Adlerwerke A.G. shall possess any and all patents, know-how and expertise in the development, production or marketing of typewriter and other such office communication equipment developed during ownership of stock in either company by Litton Industries, Inc., or any subsidiary or affiliate thereof.

It is further ordered, That, in accomplishing the aforesaid divestiture, respondent shall not divest the assets, property rights or privileges described in Paragraph I of this order, directly or indirectly, to any person who, at the time of such divestiture, is a stockholder, officer, director, employee, or agent of, or otherwise directly or indirectly connected with or under the control

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or influence of respondent, or to a subsidiary or affiliated corporation of respondent.

It is further ordered, That respondent for a period of ten (10) years from the date on which this order becomes final shall cease and desist from acquiring, directly or indirectly, through subsidiaries or otherwise, the whole or any part of the stock, share capital or assets (other than products sold in the normal course of business) of any concern, corporate or noncorporate, engaged at the time of such acquisition in the business of manufacturing typewriters or typewriter parts or accessories for sale within the United States without the prior approval of the Federal Trade Commission.

The prohibition on acquisitions in Paragraph IV of the order herein shall include, but not be confined to, the entering into of any arrangement by respondent pursuant to which respondent acquires the market share in whole or in part of such concern in any of the aforesaid product lines, (a) through such concern discontinuing manufacturing, or selling any of said products under a brand name or label it owns and thereafter manufacturing or distributing any of said products under any of respondent's brand names or labels, or (b) by reason of such concern discontinuing manufacturing any of said products and thereafter transferring to respondent customer lists or in any other way making available to respondent access to customers or customer accounts.

It is further ordered, That respondent shall, within sixty (60) days after the date of service of this order, and every sixty (60) days thereafter until respondent has fully complied with the provisions of this order submit in writing to the Federal Trade Commission a report setting forth in detail the manner and form in which respondent intends to comply, is complying, or has complied with this order. All compliance reports shall include, among other things that are from time to time required, a summary of all contacts and negotiations with any parties concerning divestiture of the specified assets and properties, the identity of all such parties, and copies of all written communications to and from such parties.

Chairman Engman did not participate for the reason that he did not hear oral argument. Commissioner Dennison filed a concurring statement. Commissioner MacIntyre abstained.