

Complaint

IN THE MATTER OF
LITTON INDUSTRIES, INC.ORDER, ETC., IN REGARD TO THE ALLEGED VIOLATION OF THE
CLAYTON ACT, SECTION 7

*Docket 8778. Complaint, April 10, 1969—Decision, March 13, 1973.**

Opinion and order requiring a Beverly Hills, California, large conglomerate corporation with a broadly diversified product area and a worldwide operation, among other things to divest itself of its stock interest in Triumph-Werke Nurnberg, A.G. and Adlerwerke A.G.; and to cease and desist for a period of ten years from making acquisitions in the typewriter or typewriter parts or accessories manufacturing industry within the United States without prior Federal Trade Commission approval.

COMPLAINT

The Federal Trade Commission, having reason to believe Litton Industries, Inc., a corporation subject to the jurisdiction of the Commission, has acquired 98.5 percent of the stock of Triumph-Werke Nurnberg, A. G., 82 percent of the stock of Adlerwerke A. G., and all of the stock of their associated companies (hereinafter collectively referred to as "Triumph-Adler") in violation of Section 7 of the Clayton Act (15 U.S.C. Section 18), hereby issues this Complaint stating its charges in those respects as follows:

I

DEFINITIONS

1. Typewriters are manual and electric, office and portable machines for writing in characters similar to those produced by printer's type by means of key-board-operated types.

2. (a) *Standard Typewriters* are typewriters designed primarily for ordinary office typewriter uses, excluding special purpose typewriters such as office composing, stencil-cutting, reproduction and continuous form handling typewriters.

*By order issued April 20, 1973, the Commission extended the effective date of the decision and order for seven days until March 20, 1973, and tolled for seven days until May 24, 1973, the statutory time period within which respondent may petition for review of the Commission's decision and order. The same order granted complaint counsel an extension of time until April 27, 1973, within which to file a reply to respondent's petition and brief for reconsideration of the order of divestiture. See p. 1424 herein.

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(b) *Office Electric Typewriters* are standard typewriters powered by electric motors.

(c) *Office Manual Typewriters* are standard typewriters powered manually.

3. Portable typewriters are typewriters designed primarily for non-commercial consumer users, generally sold with a case as a method of carrying or storing.

II

LITTON INDUSTRIES, INC.

4. Litton Industries, Inc. (hereinafter "Litton"), the respondent herein, is a corporation organized and doing business under the laws of the State of Delaware with its principal office and place of business located at 9370 Santa Monica Boulevard, Beverly Hills, California.

5. Litton ranks among the largest industrial corporations in the United States. In the year ended July 31, 1968, its sales and service revenues totaled \$1.9 billion and its assets were \$1.2 billion. In that year Litton reported profits of \$102 million before taxes and enjoyed a cash flow of more than \$103 million.

6. Litton's growth has been achieved in large part through a series of mergers and acquisitions. Litton represents that the direct contribution of acquired firm sales accounted for nearly half of its sales in 1967. Acquisitions and mergers secured for Litton leading positions in a number of industries, several of which are concentrated among relatively few firms. Litton ranks among the nation's eight largest sellers of cash registers, office calculating machines, power transmission equipment, A.C. electric motors, trading stamps, military and commercial ships, seismic surveys, store fixtures and refrigeration equipment, medical X-Ray equipment, elementary and high school textbooks, and a number of other products.

7. Litton represents that its multi-industry, multiple-disciplinary structure offers dramatic opportunities for new technical solutions and product innovations. Litton also represents that it is organized to create, develop and offer a flow of innovative products resulting from economies of technological scale.

8. In 1965, Litton acquired Royal McBee Corporation (hereinafter "Royal"), the second largest firm in the typewriter industry with 1964 sales of \$114 million. Royal held a strong position

in portable typewriters, had made advances in the office electric typewriter market, and dominated the office manual typewriter market. Litton represented that its experience combined with that of Royal in electromechanical technology would facilitate product innovation and development.

9. In 1967, Litton ranked first in domestic sales of office manual typewriters, with 40.8 percent; second in office electric typewriters, with 11.2 percent; and second in portable typewriters, with 23.1 percent. In total typewriter sales, Litton ranked second with a market share of 19.5 percent.

10. Litton recognized in 1965 a requirement for basic improvement in the typewriter products of Royal. Its response was to choose expedients that avoided commitment to original research and development. Acquisitions have been among the expedients chosen.

(a) In office electric typewriters, Litton replaced Royal's successful "GA" machine with its Models 550 and 660 typewriters differing from the "GA" largely in style and weight. By 1968, Litton recognized again the unfilled need for original research on a new office electric typewriter. It has estimated that an expenditure of \$3.6 million would be required to develop, start and tool for a machine based on patent licenses to replace its existing models. The acquisition of Triumph-Adler is an alternative to original research and to developing a suitable machine based on the present state of the art.

(b) Litton acquired Imperial Typewriter Company, Ltd. in 1966, discontinuing the latter's production of office electric and portable manual typewriters. Litton continues to produce as the "Model 80" Imperial's office manual typewriter.

(c) In portable typewriters, Litton introduced in 1966 an all-electric "Ultronic" portable developed by Royal. In 1966, it acquired Willy Fieler, GmbH, to obtain a similar typewriter known as the "All Electric." Litton has also obtained world-wide distribution rights on a low cost manual portable typewriter.

11. It all times relevant herein, Litton sold and shipped its products in interstate commerce throughout the United States; hence, Litton was, and is, engaged in commerce, as "commerce" is defined in the Clayton Act.

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III

TRIUMPH-ADLER

12. Triumph-Adler is the collective designation for Triumph-Werke Nurnberg, A. G., a German corporation with its principal office and place of business in Frankfurt, Germany; Adlerwerke, A. G., a corporation owned or controlled by Triumph-Werke Nurnberg, A. G., and subsidiary corporations of each, including Adlerwerke vorm. Heinrich Kleyer A. G., a manufacturing unit, Grundig Burotechnik GmbH, a distributing company, Grundig Business Machines, Inc., USA, Grundig Bureau-equipment SARL, France, and Grundig Business Machine Pty., Ltd., Australia. Triumph-Adler has its principal office and place of business located at Kurgartenstrasse 37 Furth/Bay, Germany, and is headquartered in the United States at 355 Lexington Avenue, New York, New York.

13. Triumph-Adler manufactures office manual and electric typewriters and portable typewriters and ranks among the leading international typewriter companies. Its sales in 1967 were approximately \$52 million, and its operations are profitable.

14. Triumph-Adler introduced its standard office typewriters and manual portable typewriters in the United States in the late 1940's. In 1967, Triumph-Adler ranked sixth in typewriter sales in the United States, accounting for about 2.3 percent of all typewriter sales. Triumph-Adler's share of office electric typewriter sales in the United States has grown to 2.6 percent of all such United States sales following introduction of its new model.

15. By 1968 Triumph-Adler accounted for 3.8 percent of manual office typewriter sales, 2.6 percent of electric office typewriters and nearly 1 percent of portable typewriter sales. Triumph-Adler announced a new portable electric typewriter to the trade in June 1968, and intended to market this product in the United States.

16. Triumph-Adler had recognized a requirement for basic development and engineering in the development of an office electric typewriter. Its development efforts culminated in 1962 with the introduction of an office electric typewriter judged by Litton to be superior to competitive machines. Triumph-Adler has continued a program of basic engineering development, spending proportionally more than Litton for typewriter research

and development efforts. Its research staff is judged by Litton to out-rank its own. Triumph-Adler is in advanced development stages of basic innovation for additional office electric typewriters, portable typewriters.

17. At all times relevant herein, Triumph-Adler sold or shipped its products in interstate commerce throughout the United States; hence Triumph-Adler was, and is, engaged in commerce, as "commerce" is defined in the Clayton Act.

IV

TRADE AND COMMERCE

18. Trade and commerce in typewriters is substantial, amounting to about \$569 million in 1967. Very high levels of concentration have prevailed in the typewriter industry over the last three decades, with the four and eight largest firms accounting for more than 75 percent and 99 percent of typewriter shipments respectively. Entry barriers into the typewriter industry are high, and the number of companies engaged in producing typewriters and parts therefor declined from 23 in 1947 to 17 in 1963. In recent years the principal source of new entry has been foreign typewriter producers.

19. Office typewriters constitute the largest segment of typewriter sales, representing \$403 million in 1967. Concentration in this segment of the industry is high. The acquisition by second ranked Litton of sixth ranked Triumph-Adler results in a combined market share of 20.9 percent of such sales, and, on the basis of 1967 data, increases concentration of such sales among the two largest firms from 64.3 percent to 67.1 percent.

20. Sales of manual office typewriters were \$93 million in 1967, with the two largest firms accounting for 68.9 percent of such sales. Combined first-ranked Litton and sixth-ranked Triumph-Adler hold 44.6 percent of such sales, increasing concentration among the two largest firms to 72.7 percent of such sales.

21. Office electric typewriters are a fast growing segment of the typewriter industry, with 1967 sales of about \$310 million. Combined, second ranked Litton and sixth ranked Triumph-Adler hold 13.8 percent of such sales, increasing concentration among the two largest firms to 73.8 percent of such sales. Triumph-

Adler was one of the few new entrants in the sale of standard office electric typewriters in the last six years.

22. Sales of portable typewriters, both manual and electric, totaled \$166 million in 1967. The combination of second-ranked Litton with Triumph-Adler results in a market share of about 24 percent of such sales, increasing the share of the two largest firms to about 67.5 percent of such sales. Triumph-Adler, a significant actual and potential competitor, was one of few firms exerting a restraining influence on competition in portable electric office typewriter sales.

V

THE ACQUISITION

23. On or about January 3, 1969, Litton acquired substantially all of the outstanding stock of Triumph-Adler for a consideration of approximately \$51 million.

VI

EFFECTS OF THE ACQUISITION

24. The effect of acquisition of Triumph-Adler by Litton may be substantially to lessen competition or to tend to create a monopoly in the sale of typewriters generally and in particular kinds of typewriters, throughout the United States, or sections thereof, in violation of Section 7 of the Clayton Act, as amended (15 U.S.C. Sec. 18). These effects may occur in the following, among other ways:

(a) Substantial, actual and potential competition between Triumph-Adler and Litton may be eliminated;

(b) The restraining influence of Triumph-Adler as an actual or potential competitor may be eliminated;

(c) The competitive benefits of internal expansion and innovation by Litton in the development of improved standard office electric and portable typewriters of the kind manufactured by Triumph-Adler may be eliminated;

(d) Litton may be entrenched in its leading position in office manual typewriters;

(e) Already high barriers to the entry of new competition in the typewriter industry, or in segments thereof, may be heightened and increased;

(f) Members of the purchasing public and the ultimate consumer may be denied the benefits of free and open competition;

(g) The cumulative effect of the violation charged, separ-

ately and in the context of the series of acquisitions alleged in Paragraph 10 may be to entrench or increase already high levels of concentration by encouraging tendencies for combination and merger by actual and potential competitors.

VII

THE VIOLATION CHARGED

25. Consummation of the acquisition of substantially all of the stock of Triumph-Adler by Litton constitutes a violation of Section 7 of the Clayton Act, as amended (15 U.S.C. Sec. 18).

Mr. Richard B. Lavine, Mr. Don M. Kaminsky and Mr. Murray L. Lyon supporting the complaint.

Howrey, Simon, Baker & Murchison by *Mr. J. Wallace Adair, Mr. Francis A. O'Brien, Mr. Edward W. Gass, Mr. Ralph Gordon, Washington, D.C., and Mr. Theodore F. Craver, Litton Industries, Inc., Beverly Hills, California* for respondent.

INITIAL DECISION BY WALTER R. JOHNSON, HEARING EXAMINER
FEBRUARY 3, 1972

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The Federal Trade Commission, on April 10, 1969, issued the complaint herein charging that the acquisition, on or about January 3, 1969, by Litton Industries, Inc., a corporation, of 98.5 percent of the stock of Triumph-Werke Nurnberg, A. G., 82 percent of the stock of Adlerwerke, A. G., and all of the stock of their associated companies for a consideration of approximately \$51,000,000 violated Section 7 of the Clayton Act (15 U.S.C. Section 18). The complaint states in part:

4. Litton Industries, Inc. (hereinafter "Litton"), the respondent herein, is a corporation organized and doing business under the laws of the State of Delaware with its principal office and place of business located at 9370 Santa Monica Boulevard, Beverly Hills, California.

5. Litton ranks among the largest industrial corporations in the United States. In the year ended July 31, 1968, its sales and service revenues totaled \$1.9 billion and its assets were \$1.2 billion. In that year Litton reported profits of \$102 million before taxes and enjoyed a cash flow of more than \$103 million.

6. Litton's growth has been achieved in large part through a series of mergers and acquisitions. Litton represents that the direct contribution of acquired firm sales accounted for nearly half of its sales in 1967. Acquisitions and mergers secured for Litton leading positions in a number of industries, several of which are concentrated among relatively few firms. Litton ranks among the nation's eight largest sellers of cash registers, office calculating machines, power transmission equipment, A.C. electric motors, trading stamps, military and commercial ships, seismic surveys, store fixtures and refrigeration equipment, medical X-Ray equipment, elementary and high school textbooks, and a number of other products.

* * * * *

8. In 1965, Litton acquired Royal McBee Corporation (hereinafter "Royal"), the second largest firm in the typewriter industry with 1964 sales of \$114 million. Royal held a strong position in portable typewriters, had made advances in the office electric typewriter market, and dominated the office manual typewriter market. Litton represented that its experience combined with that of Royal in electromechanical technology would facilitate product innovation and development.

9. In 1967, Litton ranked first in domestic sales of office manual typewriters, with 40.8 percent; second in office electric typewriters, with 11.2 percent; and second in portable typewriters, with 23.1 percent. In total typewriter sales, Litton ranked second with a market share of 19.5 percent.

10. Litton recognized in 1965 a requirement for basic improvement in

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the typewriter products of Royal. Its response was to choose expedients that avoided commitment to original research and development. Acquisitions have been among the expedients chosen.

(a) In office electric typewriters, Litton replaced Royal's successful "GA" machine with its Models 550 and 660 typewriters differing from the "GA" largely in style and weight. By 1968, Litton recognized again the unfilled need for original research on a new office electric typewriter. It has estimated that an expenditure of \$3.6 million would be required to develop, start and tool for a machine based on patent licenses to replace its existing models. The acquisition of Triumph-Adler is an alternative to original research and to developing a suitable machine based on the present state of the art.

(b) Litton acquired Imperial Typewriter Company, Ltd. in 1966, discontinuing the latter's production of office electric and portable manual typewriters. Litton continues to produce as the "Model 80" Imperial's office manual typewriter.

(c) In portable typewriters, Litton introduced in 1966 an all-electric "Ultronic" portable developed by Royal. In 1966, it acquired Willy Fieler, GmbH, to obtain a similar typewriter known as the "All Electric". Litton has also obtained world-wide distribution rights on a low cost manual portable typewriter.

* * * * *

12. Triumph-Adler is the collective designation for Triumph-Werke Nurnberg, A.G., a German corporation with its principal office and place of business in Frankfurt, Germany; Adlerwerke, A.G., a corporation owned or controlled by Triumph-Werke Nurnberg, A.G., and subsidiary corporations of each, including Adlerwerke vorm. Heinrich Kleyer A.G., a manufacturing unit, Grundig Burotechnik GmbH., a distributing company, Grundig Business Machines, Inc., USA, Grundig Bureau-equipment SARL, France, and Grundig Business Machine Pty., Ltd., Australia. Triumph-Adler has its principal office and place of business located at Kurgartenstrasse 37 Furth/Bay, Germany, and is headquartered in the United States at 355 Lexington Avenue, New York, New York.

13. Triumph-Adler manufactures office manual and electric typewriters and portable typewriters and ranks among the leading international typewriter companies. Its sales in 1967 were approximately \$52 million, and its operations are profitable.

14. Triumph-Adler introduced its standard office typewriters and manual portable typewriters in the United States in the late 1940's. In 1967, Triumph-Adler ranked sixth in typewriter sales in the United States, accounting for about 2.3 percent of all typewriter sales. Triumph-Adler's share of office electric typewriter sales in the United States has grown to 2.6 percent of all such United States sales following introduction of its new model.

15. By 1968 Triumph-Adler accounted for 3.8 percent of manual office typewriter sales, 2.6 percent of electric office typewriters and nearly 1 percent of portable typewriter sales. Triumph-Adler announced a new portable electric typewriter to the trade in June 1968, and intended to market this product in the United States.

* * * * *

24. The effect of acquisition of Triumph-Adler by Litton may be substantially to lessen competition or to tend to create a monopoly in the sale of typewriters generally and in particular kinds of typewriters, throughout the United States, or sections thereof, in violation of Section 7 of the Clayton Act, as amended (15 U.S.C. Sec. 18). These effects may occur in the following, among other ways:

- (a) Substantial, actual and potential competition between Triumph-Adler and Litton may be eliminated;
- (b) The restraining influence of Triumph-Adler as an actual or potential competitor may be eliminated;
- (c) The competitive benefits of internal expansion and innovation by Litton in the development of improved standard office electric and portable typewriters of the kind manufactured by Triumph-Adler may be eliminated;
- (d) Litton may be entrenched in its leading position in office manual typewriters;
- (e) Already high barriers to the entry of new competition in the typewriter industry, or in segments thereof, may be heightened and increased;
- (f) Members of the purchasing public and the ultimate consumer may be denied the benefits of free and open competition;
- (g) The cumulative effect of the violation charged, separately and in the context of the series of acquisitions alleged in Paragraph 10 may be to entrench or increase already high levels of concentration by encouraging tendencies for combination and merger by actual and potential competitors.

The answer of the respondent, filed on June 23, 1969, denied the material charges of the complaint and, as an affirmative defense, states in part:

26. Acquisition by respondent of Triumph-Adler will substantially enhance competition and be in the public interest; disapproval will substantially impede, injure and destroy competition in the typewriter industry.

27. The predominant typewriter market is the office electric market in which the overwhelming bulk of all typing is done. The state of this market is such that without some effective competition, IBM, which now has a virtual monopoly, will increase its lead and will gain a complete monopoly. By all judicially approved antitrust indicia, that company already possesses monopoly power. With the quality of its products, research programs, new product introductions, and the effectiveness of its sales and service organization, it has the power to sweep aside the few remaining weak obstacles to its complete monopoly of the office market. Neither respondent nor Triumph-Adler acting separately is or can become a realistic competitive force in the office market against this dominant concern.

28. Entry barriers to both domestic and foreign companies into the office market are virtually insurmountable.

29. Respondent's Royal Typewriter operations are sustaining heavy losses: \$6½ million in fiscal 1968 and at least \$6 million in fiscal 1969 ending July 31, 1969. Its sales organization has been declining through resignations of dealers, salesmen and servicemen. Triumph-Adler's United States business is barely profitable: less than 1½ percent in fiscal 1968. Only by the joint

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efforts of respondent and Triumph-Adler will respondent have any opportunity to continue in the typewriter business.

30. Triumph-Adler has an office electric typewriter which, from a quality standpoint, compares favorably with the older IBM basket-type office electric. Neither Triumph-Adler nor respondent has a machine comparable to or directly competitive with the IBM single element "Selectric" machine or the even newer IBM Magnetic Tape Selectric Typewriter (MT/ST). It is the hope of respondent that, by introducing the Triumph-Adler office electric into the Royal line in competition with IBM, Royal will be able to slow the continuing substantial decline of its sales of office electric typewriters and the decline of its sales and service organization and thereby obtain a base from which to develop products competitive with the IBM Selectric, the new MT/ST and other products inevitably to be introduced.

31. Only in this way can respondent remain in the typewriter business, gain the time required, and justify the expense of attempting to develop machines competitive to IBM's. If respondent is denied this opportunity, it will have no alternative but to withdraw completely from the typewriter business and leave the market to IBM, thus further enhancing and accelerating the trend towards complete monopoly. Disapproval of the Triumph-Adler acquisition by the Commission will have this effect.

32. Not only does respondent deny that the effects of its acquisition of Triumph-Adler will have a tendency to substantially lessen competition, but it affirmatively alleges that for the reasons herein pleaded to require respondent to divest Triumph-Adler would, itself, substantially lessen competition and tend to create a monopoly contrary to the intent and purpose of Section 7 of the Amended Clayton Act.

* * * * *

44. Prior to World War II, the world typewriter industry was centered in the United States and was dominated by United States manufacturers. Since then, however, typewriter production outside of the United States has increased substantially and imports of typewriters into the United States have also increased. The effect of typewriters imported into the United States by foreign manufacturers, however, has been limited primarily to portables sold in the home market through mass merchandising and discount chains. In the office electric typewriter market, the effect of machines imported by foreign manufacturers has been significantly less because of the necessity of selling through independent typewriter dealers, which, in turn, is dictated, among other things, by the prohibitive cost of building nationwide direct sales organizations.

45. Concurrently with the growth of foreign typewriter manufacturers, United States manufacturers increasingly have been establishing foreign production in order to compete successfully with the foreign manufacturers. In the home market, United States based manufacturers are finding it impossible to compete cost and pricewise against Japanese manufactured machines. All United States typewriter manufacturers, except one, have now ceased United States production of portable manuals. Respondent was the latest to stop when, on April 29, 1969, it closed its Springfield, Missouri plant. Although this was a relatively modern plant only 10 years old, it

sustained losses of \$3 million in fiscal year 1968 and would have lost approximately \$3.3 million in fiscal 1969 if operated for the entire year.

* * * * *

49. By the turn of the century the visible front strike basket design typewriter had been achieved. This upright manual typewriter was a mechanical device depending upon finger power for operation. For the next forty years the industry remained essentially static. By the mid-1920's and until World War II approximately 80 percent of domestic industry sales were concentrated in four companies: Underwood, Remington, Smith-Corona and Royal.

* * * * *

52. With the advent of World War II the major typewriter companies were required by the government to suspend all typewriter manufacture to concentrate on war production. Only IBM, located outside the critical war production zone and having successfully advanced the proposition that one IBM electric typewriter could do the work of two manual typewriters thus saving materials and labor, was permitted to continue its electric typewriter production, then in its infancy. IBM obtained raw material priorities for the manufacture of electric typewriters and placed tens of thousands of machines with government agencies and American industry.

53. This head-start during World War II has had the most profound and lasting impact upon the post-war developments of the office typewriter market. The advantages accruing to IBM as a result of the war years were many and important. IBM used its established product and nationwide sales and service organization to preempt the office market for electric typewriters. Introduction of IBM electric typewriters was accelerated; widespread public acceptance was obtained during the war. The old-line manual companies faced an uphill fight in returning to the market. They had to re-establish their production facilities and undertake substantial re-training of their work force. In addition, their product, manual office typewriters, had lost substantial favor in office use to the newer, faster electric IBM machines. Moreover, they had none of the new skills required to break into the electric typewriter market.

On July 10, 1969, counsel for the parties met with the hearing examiner in a reported non-public prehearing conference. As a result thereof, an agreed order was issued which was to control the subsequent course of the proceeding unless modified to prevent manifest injustice. Each party was required to file (and thereafter did file) trial briefs containing (a) a summary of the issues of fact and law; (b) the name and address of each witness whom it intends to call at the hearings, together with a statement of the nature of the witness' testimony; and (c) a list of the documentary exhibits to be offered. Thereafter, and before the commencement of formal hearings, a series of prehearing conferences were held, at which time matters relating to the conduct of the proceeding, including the receipt of documents in evidence, discovery, and the times and places of hearings, were discussed and resolved.

On June 5, 1969, upon request of complain counsel, the hearing examiner issued a subpoena *duces tecum* directed to respondent Litton, calling for the production of certain documents. Respondent filed a motion to quash the subpoena *duces tecum* on two grounds: first, that it was improper as seeking a post-complaint investigation; and second, that the documents called for were not in its possession, but in the custody of the German companies. Further, it was contended that the enforcement of the subpoena *duces tecum* would violate German law prohibiting improper disclosure of corporate information. At the first prehearing conference on July 10, 1969, the examiner, after hearing oral argument, denied the motion to quash and directed the parties to attempt to negotiate informal compliance (Tr. 19-21, 32). At a prehearing conference on September 23, 1969, counsel for the parties reported that they had conferred and were working out a procedure which would effect the production of the documents sought by complaint counsel.

Subsequent thereto, after a trip to Germany by one of respondent's counsel, who had discussions with the key officials¹ and the attorneys of the acquired companies, which resulted in an arrangement whereby the requested documents would be produced and the persons whose testimony may be needed would appear voluntarily, the hearing examiner, on December 5, 1969, authorized the taking of depositions² on behalf of Commission counsel in support of their case-in-chief, and the respondent in connection with its defense, at Frankfurt, Germany, and at London, England. On application of the hearing examiner, the Commission, on December 23, 1969, issued orders authorizing

¹ Mr. Gerd E. Weers, the managing director of the acquired companies, in a letter dated October 27, 1969 (attached to the application of the parties for the taking of depositions) to one of the complaint counsel, said in part:

"To the extent that any of the documents called for or testimony to be given may include confidential information, however, I am advised by my German counsel that under German law the information divulged must be accorded confidential treatment. In discussing the requirements of German law with Mr. Adair, he has informed me that the Federal Trade Commission procedures provide for *in camera* treatment of confidential information. With the understanding that confidential treatment will be afforded any documents or testimony which require confidential treatment under German law, such information will be made available at the depositions."

² In the application for the taking of the depositions, it is stated:

"Since the persons whose depositions are required herein will not be available for the ultimate hearing on the merits, both parties believe that the presence of the hearing examiner at the deposition proceeding is necessary and desirable so that he can observe the demeanor and credibility of the witnesses and, to the extent of his authority, make appropriate rulings."

and requesting the Consul or Vice Consul of the United States in Frankfurt, Germany, and in London, England, to administer the oath or affirmation to the individuals to be deposed and to appoint the hearing examiner to preside at the taking of the depositions.

Depositions were taken in Frankfurt, Germany, from April 12 to April 24, 1970, and in London, England, from April 29, 1970 to May 1, 1970, at which times twelve witnesses testified and numerous documents were identified and received. The depositions taken in Germany and reported on typewritten pages numbered 1 through 964, and those taken in England and reported on typewritten pages numbered 1 through 287, together with the documents, were subsequently received into the record of this proceeding (Tr. 9233-38, 9248).

On January 14, 1971, four days before the commencement of formal hearings on the complaint, the Federal Trade Commission brought an action against Litton in the Federal District Court in Los Angeles (*United States v. Litton Industries*, C.A. 71-113-FW) to compel Litton to comply with Section 6(b) orders to file Special Reports in the Commission's Conglomerate Investigation, File No. 691 0629. The orders seek the production of certain information relating to Litton's growth by acquisition and its position as a conglomerate firm. Due to the pendency of this complaint, which contains allegations relating to the size of Litton, its alleged growth through mergers and acquisitions, its behavior as a conglomerate, and its acquisition of typewriter companies other than Triumph-Adler (Complaint, Pars. 5, 6, 8, 10), Litton elected not to furnish the information requested pursuant to the Commission's Section 6(b) orders on the grounds that its production would jeopardize Litton's position in the pending proceeding.³

Litton contends that the Commission's role as investigator, prosecutor and adjudicator, inherently, and as exercised in this case, has deprived it of due process of law in contravention of the Fifth Amendment of the Constitution of the United States, the Administrative Procedure Act, and the Rules of Practice of

³ During the trial of this matter, Commission counsel introduced documents (CXs 10, 48, 299), and testimony relating to aspects of Litton's conglomerate activities to which respondent's counsel objected, and Commission counsel have proposed numerous findings with regard to Litton's financial size in relation to other United States industrial corporations and its growth by acquisitions unrelated to the typewriter business (CCF 3-4, 6-8, 9, 28-57).

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the Commission, and that any decision rendered by the Commission in this proceeding in the future cannot be the result of consideration by a fair and impartial tribunal based on the official record.

Commission counsel deny that they have injected into this proceeding the issues or evidence involved in the Commission's Conglomerate Investigation and that the conduct of the Commission's Conglomerate Investigation of Litton concurrently with this case would prejudice Litton in this case. However, Commission counsel have made the following contentions as to the relevancy of respondent's conglomerate history, organization and behavior to the issues in this case:

Respondent introduced evidence * * * to rebut whatever inferences may be drawn from the allegations of the complaint and the evidence offered by complaint counsel regarding Litton's financial size, behavior as a conglomerate and growth through acquisition * * * (Brief, pp. 5-6).

The inferences we urge from this evidence are the following: Litton is one of the largest, most diversified and most powerful corporations ever put together in the United States. On the basis of this record (CCF 1-14), it would tax the imagination to conceive of a mechanical or electro-mechanical or electronic venture which Litton could fail to undertake successfully if it were willing to allocate sufficient funds and resources. [Footnote omitted.]

Litton has acquired successful companies where that suited its purpose. And Litton has acquired unsuccessful companies and injected managerial capability, money and other resources to effect success where that has suited its purpose. Where Litton has encountered competitive and other resistance to its vigorous aggressive policies, it has time and time again overcome such resistance through the application of its huge reservoir of organization, talent, and money. (CCF 1-84; RPF 12-20).

This record shows that whatever serious mistakes may have been made in Litton's typewriter business, they are directly attributable to Litton management and not to some mythical intervention by outside forces.

* * * * *

In short, the inference that should be drawn from "Litton's financial size, behavior as a conglomerate and growth through acquisition" (Brief, p. 5), is that it is inconceivable, as a matter of fact and of law, that this \$2 billion company could not build an adequate office electric typewriter if it needed one, providing it was willing to take the internal initiative to do so and devote the necessary money and manpower to the task [CCR 18-19, 21].

The hearing examiner concludes that the issue raised by respondent in this connection creates a serious question as to the Commission's procedure in this case. The hearing examiner,

however, does not make a finding on this issue because it does not affect the initial decision.

Formal hearings in the United States were held at Washington, D.C., New York, New York, and Los Angeles, California, commencing on January 18, 1971, and concluding on June 21, 1971, at which time 93 witnesses were called by the parties, which testimony is reported in transcripts totaling 9248 pages, and approximately 1500 documentary exhibits totaling well over 10,000 pages were received in evidence. At the combined hearings in Europe and in the United States, 105 witnesses testified, of which Commission counsel called 18 witnesses in support of their case-in-chief and 4 witnesses for rebuttal, and respondent called 83 witnesses in connection with its defense.

A broad cross-section of representatives from every facet of the typewriter business were called as witnesses. In addition to officials of Litton, Royal and Triumph-Adler, witnesses included representatives from typewriter manufacturers doing business in the United States, a number of independent office machine dealers, and representatives of a number of purchasers and users of typewriters, including large commercial firms, banks, utilities, insurance companies, universities and secretarial schools. An economist of the Federal Trade Commission testified in support of the complaint, but not as an expert witness. Respondent presented two expert economic witnesses who submitted statistical and economic analysis of the issues involved in this proceeding and their appraisal as to the probability of any adverse effects which might result from the acquisition.

At the outset of the hearings, the hearing examiner announced that, in order to give adequate and fair consideration to all concerned, he would withhold ruling, until the record was closed, on what testimony and documents would eventually be accorded *in camera* status (Tr. 45-46). During the course of the hearings, respondent and third parties made requests for *in camera* treatment of certain documents and testimony, stating the justification therefor, and indicating the duration for which such testimony and documents should remain *in camera*. The same were then received into evidence on a temporary *in camera* basis (Tr. 45-47). At the request of the hearing examiner (Tr. 9091-92), counsel for the parties submitted memoranda containing their recommendations as to the documents and testimony received into evidence on a temporary *in camera*

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basis. Upon consideration of the foregoing requests and memoranda submitted, the hearing examiner, on June 21, 1971, entered an order on the record with reference to *in camera* treatment of documents and testimony and the *in camera* expiration date (Tr. 9238-9244).

The hearing examiner, on June 14, 1971, filed an application with the Commission for an extension of time within which to file his initial decision⁴ on the assumption that the record would be closed on June 21, 1971, and on June 16, 1971, the Commission issued an order granting an extension, but not all of the time requested. The record was closed on June 21, 1971, and on that day the hearing examiner, in compliance with the order of the Commission, on the record directed that Commission counsel file their proposed findings on August 20, 1971; respondent its answer thereto and its proposals on September 20, 1971; and Commission counsel their reply on October 11, 1971. Proposals were filed by the parties as directed.

On October 28, 1971, the respondent filed its petition for leave to file a "Rejoinder Brief" and to reopen the record of this proceeding for the limited purpose of receiving into evidence specified documents with reference to relevant matters occurring after the close of the record.⁵ Commission counsel filed a response thereto on November 3, 1971 opposing the receipt of the rejoinder brief but not objecting to reopening the proceeding. On November 4, 1971, the hearing examiner issued an order and directed (1) that the rejoinder brief be received; (2) that the record be opened; and (3) that a hearing be held on November 8, 1971. Hearing was held on the scheduled day, at which time exhibits offered by respondent were received into evidence without objection, the record was closed for the receipt of evidence, and the parties were authorized to file, and did file, supplemental proposed findings with reference to the new evidence received (respondent on November 15, 1971 and Commission counsel on November 22, 1971).

The proposed findings and conclusions not hereinafter specifically found or concluded are herewith rejected as not sup-

⁴ The Commission in its rules provides (Section 3.51):

"The hearing examiner shall file an initial decision within ninety (90) days after completion of the reception of evidence, * * * or within such further time as the Commission may by order allow upon written request from the hearing examiner * * *."

⁵ Section 3.51(d)(1) of the Commission's rules provides:

"At any time prior to the filing of his initial decision, a hearing examiner may reopen the proceeding for the reception of further evidence."

ported by the record or as involving immaterial matters. The following abbreviations have been used herein: "CX" for Commission's Exhibit; "RX" for Respondent's Exhibit; "Tr." for Transcript of Proceeding; "DG" for Depositions taken in Germany; and "DE" for Depositions taken in England. Upon consideration of the entire record herein, the hearing examiner makes the following findings of fact and conclusions:

I. LITTON INDUSTRIES, INC.

The respondent, Litton Industries, Inc., was incorporated under the laws of the State of Delaware in 1953, under the name of "Electro Dynamics Corporation." In 1954, the name of the company was changed to its present title. Litton's general offices are located at 9370 Santa Monica Boulevard, Beverly Hills, California (CX 15). It is a broadly diversified company ranging from microwave technology to shipbuilding, and over its 18 years has enjoyed enormous growth in sales, assets and net earnings. For the fiscal ending July 31, 1954, it had sales of approximately \$3 million (CX 515). For the fiscal year 1970, through its worldwide operations, Litton's sales, net earnings and total assets were \$2,404,327,000, \$68,751,000, and \$1,934,012,000, respectively (CX 273). For the year 1969, Litton ranked 39th by sales, 55th in assets, and 63rd in net revenues of the largest U.S. Industrial Corporations (CX 200). Nearly half of its growth has been achieved through more than 100 acquisitions since 1953 (Tr. 1954-56).

The majority of Litton's acquisitions have been small, and almost three-quarters of its growth since 1953 (the year of Litton's formation) has been through internal expansion and foothold acquisitions. Acquisitions involving \$10 million or more in assets have accounted for only 27 percent of Litton's growth in assets since 1953. In contrast, such acquisitions accounted for an average of 34 percent of the growth in assets of the fifty companies that became newcomers to the ranks of the 200 largest industrial and mining corporations between 1954 and 1968. The newcomers naturally would have higher growth rates than the companies that were among the 200 largest in both 1954 and 1968, because the newcomers had to start from lower asset bases in 1954 to join the ranks of the 200 largest in 1968 than did the old-line corporations that were already among the 200 largest in 1954. Litton's percentage growth between 1954 and 1968 due to

large acquisition was also smaller than the median per cent of asset growth due to large acquisitions for the newcomer corporations in various sub-groups of the 200 largest that have outstanding growth records over the same period of time (Tr. 8190-8193, 8231-34).

Thus, Litton's growth from large acquisitions was less than the median percentage for the newcomers among the 29 corporations with increases in assets of 1,000 percent or more, the 32 "major conglomerates" identified in the "Celler Subcommittee" investigation of conglomerate corporations in 1970, the 25 "most active acquiring companies" defined in the Federal Trade Commission's 1969 staff "Economic Report on Corporate Mergers," the 54 corporations with increases in assets of 25 percent or more attributable to large acquisitions, and the 11 "new conglomerates," also identified in the FTC's 1969 staff Economic Report. Further, evidence introduced by Commission counsel shows that Litton's acquisitions since the company's formation have brought it into competition with over 40 of the 200 largest industrial corporations in 38 separate product lines with many of the companies being substantially larger than itself (Tr. 8202, 8205, 8207, 8211-13, 8224-25).

Dr. Betty Bock, who appeared as an economic expert, testified as follows concerning Litton's growth:

Among the newcomers, Litton's high rate of growth resulted from the fact that its origin dates only from the early 1950's. And no matter how one views the figures, it is plain that Litton's growth in assets occurred primarily through small acquisitions and internal investment. Large acquisitions have played a minor role in Litton's growth. * * * But to the extent that large acquisitions have contributed to Litton's growth, they have helped bring Litton into competition with the country's largest industrial corporations. * * * In 15 years it grew from virtually nothing to the point where it was competing in almost 40 [markets]. * * * These facts do not suggest that Litton was seeking by acquisition to avoid competition or to reduce the competitive impact of its encounters with other companies. The fact that Litton now faces a broad range of the country's largest corporations in an equally broad range of markets suggests that its growth has served to increase competition, not the reverse (Tr. 8232-33).

Dr. J. Fred Weston, who also appeared as an economic expert, analyzed a variety of performance measures and concluded that conglomerate firms have outperformed industrial and non-industrial firms by a substantial margin and have "made a positive contribution to economic efficiency;" that Litton and the other companies that entered the group of 200 largest corpora-

tions between 1954 and 1968 represented increased competition; and that, while some conglomerate firms have grown by increasing their ratios of debt to total assets and debt to equity, Litton has maintained relatively conservative debt ratios in line with other industrial firms (Tr. 8259, 8268, 8282, 8284).

Litton is organized into four major operational groups comprising approximately 120 divisions (Tr. 1250, 7146). In 1970, the four major operational groups were: (1) Defense and Marine Systems, (2) Industrial Systems and Equipment, (3) Professional Services and Equipment, and (4) Business Systems and Equipment (CX 273; Tr. 1250). The Defense and Marine Systems Group, which formed the nucleus of Litton's initial business, includes the manufacture and sale of navigation and control systems, communications and electronic data systems, and marine engineering and production (CX 273; Tr. 1250-51). The Industrial Systems and Equipment Group includes machine tools, material handling, engineering and construction, electronic components, electric motors and power drives and controls (CX 273). The Professional Services and Equipment Group includes medical products, educational and professional publishing, resource exploration, and food products and services (CX 273). The Business Systems and Equipment Group includes business machines and systems, retail and revenue systems, typewriters, office copiers, specialty paper, printing and forms, and business furnishings and fixtures (CX 273). This group, with which we are principally concerned in this proceeding, had its beginning in 1958 when Litton acquired the Monroe Calculating Machine Company.

In 1970, the Defense and Marine Systems Group accounted for 25 percent of Litton's total sales and service revenues; the Industrial Systems and Equipment Group accounted for 29 percent; the Professional Services and Equipment Group accounted for 17 percent; and the Business Systems and Equipment Group accounted for 29 percent of Litton's total sales and service revenues (CX 273).

Mr. Roy L. Ash,⁶ Litton's president, who has been with the

⁶ Mr. Ash served as chairman of the President's Advisory Council on Executive Organization which in early 1970 issued a report recommending reorganization of the executive branch of the federal government, including some recommended changes in the Federal Trade Commission. Mr. Ash refrained from participating in any way in the investigation, discussions, deliberations or recommendations with respect to the Federal Trade Commission. Mr. Ash testified to this effect when called as a witness by Commission counsel (Tr. 1283-84; RX 1541).

company from the outset, described the concept of management which has been applied to its business. He testified in part:

Our basic concept is one that attempts to bring the general management responsibilities as close to the product and as close to the marketplace as possible. In effect, these 120 divisions are business units of themselves (Tr. 7146).

* * * * *

Some companies would form them into a more monolithic structure with functional responsibilities being the prime ones.

We, instead, prefer to form around successive levels of general management on the theory that we can be much more knowledgeable about the markets, the technologies to serve them and with that—and having more efficient total operation that way than if we had just a monolithically-structured organization where there was only one general manager and everybody else would only be a functional manager (Tr. 7147).

* * * * *

Our method of management is one where the top level of management considers itself more a management of managers rather than a management of operations.

We attempt to bring the general management structure as near to the product in the marketplace as possible, and, therefore, successive levels of management are much more oriented towards the selection, training, evaluation, assistance to managers in their managerial capacity, rather than assuming away from them their functional operational responsibilities (Tr. 7149).

* * * * *

Each division manager is responsible for the totality of his business enterprise, all the way from research and development to manufacturing to marketing to the investments necessary to carry out his business to the point of responsibility for the profit from doing so (Tr. 7150).

* * * * *

Then, another method of management control by corporate management is that certain decisions and judgments are reserved for corporate management to make. We, in effect, parallel the concept of the Constitution: All rights and responsibilities not reserved are hereby delegated (Tr. 7151).

Under Litton's concept, each of Litton's 120 divisions is a "profit center," with a manager responsible for operating the division as a total business enterprise. This includes accountability for research and development, marketing, making investments necessary to run the business, and, ultimately, for making a profit. Litton executives are expected to circulate among the divisions under their jurisdiction as much as possible. They spend about three-quarters of their time in the field. This is one of the most important parts of Litton's management process. When a Litton division is operating poorly, corporate and divisional management provide extra assistance. A Litton management consulting

group is available to work with division management and, if this is not successful, the division management may be changed (see CCF 18, 21, 23).⁷

Litton has no single measurement of divisional performance. Performance is measured by many factors, including profits, reductions of losses, improvements of positions, and return on gross assets, sometimes referred to as "ROGA." While all of these are important measurements, no one is determinative. The direction of Litton's divisions is sometimes charted in Opportunity Review sessions. Mr. Ash, generally, and others in Litton's management meet directly with division managers to hear expressions of their understanding of the business environment ahead and to discuss business strategies they might undertake (see CCF 20, 22; Tr. 8113).

Litton is considered a leader in the forms of management that a number of industries are using today. Numerous publications, including both the news press and the professional press, have identified Litton as being in the forefront of some of the newer modern management techniques. Mr. Ash testified that Litton's concept of management provides it with a reservoir of managerial talent and Litton is adept at applying established or evolving technology in creating new businesses and improving old businesses (see CCF 12, 13).

As to the operations of Litton's divisions, Mr. Ash said that, of the 120 divisions, 100 are excellent, 16 or 18 are acceptable, and there are always two or three that require corporate attention (Tr. 7153-54).

Monroe Calculating Machine Company, in business for 47 years, acquired in 1958, was Litton's largest acquisition as of that time, and was the basis of the Litton Business Equipment Group. After the acquisition, Monroe developed electronic calculators with the use of electronic techniques from Litton's Data Systems Division. This was accomplished by Litton's moving an electronic specialist from its Data Systems Division to Monroe to become head of research and development. This provided an infusion of Data System's technical competence in electronics into the Monroe organization (see CCF 56; Tr. 7222). The merger brought to Litton a network of 325 sales and service branches in the United

⁷ A number of the findings in this initial decision are taken from or are summarized from Commission counsel's proposed findings and respondent's proposed findings. For ease of reference, Commission counsel's proposed findings are cited by paragraph number as "CCF" and respondent's proposed findings are cited by paragraph number as "RPF."

States, five wholly-owned foreign subsidiaries with dealer outlets throughout the world, and a modern manufacturing plant in Amsterdam, Holland. By 1970, Monroe's products included full keyboard electric adding machines, advanced electronic display and printing calculators, and electro-mechanical printing calculators (CXs 14, 273, 518; Tr. 1263).

The November 1959 acquisition of controlling interest in Sweda (Svenska Dataregister, A. B., of Stockholm, Sweden) and of 100 percent ownership of that company's American, Swiss, Canadian and Mexican distributing companies marked Litton's entrance into the field of cash registers and point of sale recording equipment, a field which up to now has been the domain of a limited few manufacturers (CX 520).

Mr. Ash, after testifying that both Sweda and Monroe were examples of Litton's very successful operations, continued (Tr. 7154-56):

When we acquired Sweda in 1959, its product was electro-mechanical cash registers, had a very small part in the market.

National Cash really dominated the market, well, around the world, and they were just like IBM is in office electric typewriters.

* * * * *

We entered in a very, very small way and are now going to be already on the way to be one of the significant companies, along with three or four others that will provide a new kind of competition in the market that one company had all to itself for 80 years.

Litton explored the possibility of entering the typewriter market as early as 1957 or 1958 through the acquisition of the Underwood Company (Tr. 8087-88). A series of discussions was held between top officials of Litton and Underwood, but the negotiations failed and Underwood was later acquired by Ing. C. Olivetti & Company of Italy (Tr. 1576-78).

In February 1965, Litton acquired Royal-McBee Corporation. Royal manufactured manual and electric typewriters for offices and schools, portable typewriters for the home, typewriter supplies and, through its McBee organization, accounting forms and related products (CX 11; Tr. 915, 1271, 6918-19, 7228; see CCF 66, 68, 70).

Litton's acquisition of Royal was its entry into the typewriter business. The acquisition was intended to satisfy Litton's desire to complement its business equipment product line. Litton believed that typewriters were a major business product that was des-

tined to grow and become more important in the future. Mr. Ash, called as a witness by Commission counsel, testified:

Our view at that time was very parallel to that that we had about Monroe at an earlier time and of course what we have had about other industries at earlier times. But to get to that one particularly, at that time we saw, and the public generally saw, the typewriter business as one making free standing products, electro-mechanical in nature, used broadly in a market, but we were absolutely convinced that in the future there would be a major change, a major revolution, not just evolution, in that industry where again the potential of electronics would be brought to bear not in just making another free standing product but making products that even today we haven't yet seen. Word processors of various kinds, composing machines in effect, where the whole process of preparing correspondence, preparing typed documents of various kinds, would be done by a completely different approach than just a free standing desk electro-mechanical product.

That evolution has already begun. In another five or another ten years I think we will see around us in many offices these kinds of different products that will just change the whole nature of what an industry is and what its products are.

This was our belief as we entered that business just as in parallel it was a similar belief as we entered the calculating machine business. Fortunately—it does not matter whether it is fortunate or not—but because of the different nature of calculating, dealing in numerical data rather than alphabetical data, the technology has an earlier application and can more readily be brought into the marketplace. Yet we are absolutely convinced even now that there will be a quite different complex of machines serving the data recording market, the data transmission market. There will be input devices, transmission devices, hard and soft copy, storage and retrieval systems, all an integral part of a new form and a new dimension of an industry and out of which of course will come a lot of change and a lot of different compositions of the industry in general. That was our basic belief that we had then, that we still hold to (Tr. 1266-68).

In March 1966, Royal acquired Willy Feiler, GmbH, a small manufacturer of adding machines in West Berlin, Germany. Willy Feiler also had a design of a portable electric typewriter which was in a pre-prototype stage and had never been marketed (Tr. 8123-24; see CPF 73).

In November 1966, Litton acquired Imperial Typewriter Company Limited of Leicester, England, to give Royal an entry into the United Kingdom-British Commonwealth market (Tr. 937; see CPF 74). Imperial manufactured office and portable typewriters which it sold in the United Kingdom and British Commonwealth countries (DE 130-131). The company had been declining since 1960 and a number of attempts to strengthen it through diversification had been unsuccessful (DE 105-110, 171-173, 176-181, 206, 210-213, 219-220, 223-224, 232-233, 251, 253).

Its management determined that liquidation or sale to Litton were the only alternatives available to the company (DE 187-189, 230-231, 233-234, 239-240). Its office electric typewriter was of inferior quality and was not successful; it had not been successful in developing a portable electric typewriter; and, shortly after the acquisition, Imperial's production of office electric and portable manual typewriters was discontinued (DE 125-127, 134-136, 161, 168, 185).

The acquisition challenged by the complaint was the purchase on or about January 3, 1969 by Litton of about 98 percent of the stock of Triumph Werke Nuernberg, A.G., which in turn owned approximately 82 percent of the stock of Adlerwerke vorm Heinrich Kleyer A.G. from Max Grundig of Nuernberg, Germany (Complaint, Par. 23; Answer, Par. 23; DG 27, 43; CXs 4-9). Litton paid Grundig a total of 220,000,000 German Marks, or approximately \$55 million, for the stock involved (Tr. 958). In fiscal 1968, Triumph Werke had gross sales of \$29.3 million and Adlerwerke had gross sales of \$19.1 million (CX 187, p. 30; CX 188, p. 7). As of December 31, 1968, the total consolidated net worth of the Triumph-Adler companies acquired by Litton was \$16,237,112, and the consolidated net income of the companies was \$3,272,709 (DG 531, 533; RX 70 B-C).

In determining whether the acquisition of Triumph-Adler by Litton violates Section 7 of the Amended Clayton Act, the hearing examiner will direct his attention first to the typewriter businesses of the two companies in the context of the typewriter industry, worldwide and in the United States. Thereafter he will analyze market trends within the defined relevant markets, and then, of most importance in this case, examine the changing market characteristics and behavior in the typewriter industry over the past ten years, including the decline of the traditional typewriter companies in the sale and distribution of office typewriters, the growth and importance of automatic typewriters, and the ability of Royal to survive as a viable typewriter company.

II. TRADE AND COMMERCE

A. Companies Engaged in the Typewriter Business in the United States.

1. *Introduction*a. *Worldwide*

In analyzing the United States typewriter industry and considering the actual and potential effects of the acquisition in the United States, it is necessary to consider the United States markets in relation to the sales and production of typewriters in the rest of the free world. There are a number of reasons why the typewriter industry must be looked at in its worldwide dimensions. All typewriter companies sell throughout most of the free world, and most of them have production facilities in more than one country, based on comparative production advantages (RXs 29, 632 E-6, I, K, 819, 1039, 1534 H-O, 1555 A-D, 1571 B, D, H-M, 1582 A-D, 1611-13; Tr. 146-147, 151-152, 422-423, 975-976, 1517, 4493-95, 4498-5000, 4714).

As the import-export data in this record show, the trade and commerce in typewriters is international in scope. Typewriter parts, sub-assemblies, and complete typewriters are imported to and exported from and assembled in various parts of the free world and sold in all parts of the free world. This case, which is one of the few litigated cases in which the acquired company was a foreign-owned company, highlights the international scope of the industry. Eighty-one percent of Triumph-Adler's sales are made in Europe and other parts of the world and only 19 percent were made in the United States. It considered its major world competition to be IBM and the European-based typewriter manufacturers. Indeed, its exports to the United States in 1969 were less than \$10 million (RXs 645 A-B, 1534 J-O, 1571 E, H-M, 1617; Tr. 146-147, 422-423, 796, 1517, 4493-95, 4714, 4745; DG 897).

The international trade and commerce in typewriters is shown by the substantial shift in production away from the United States and to the rest of the free world. Before World War II, the production of typewriters in the United States accounted for the major share of the total free world production (Tr. 1567, 1573). Now, however, production in the rest of the free world substantially exceeds production in the United States. This movement of typewriter production abroad is significant in assess-

ing the ability of United States typewriter companies to produce effectively in the United States (Tr. 8545-8550). The switch of United States production abroad is demonstrated by a comparison of the import-export ratios. In 1965, the ratio of imports to exports was 1.6 to 1; by 1969, it was 3.1 to 1 (RX 1882, and see RXs 62, 632 A-1, 1527 D, 1528 B, 1531, 1534 H-L, 1536 A, 1555, 1556 A-C, 1564 C, 1567, 1571 H-J, 1573, 1582, 1611-13, 1667, 1718, 1821).

A most significant development has been the increasing trend of imports into the United States by the traditional American typewriter companies.⁸ While in 1963, the dollar value of imports of typewriters by the traditional companies amounted to \$24.1 million, by 1969 this figure had grown to \$41.4 million. While the traditional companies were importing 3.2 typewriters into the United States for each typewriter they exported in 1963, by 1969 they were importing almost 8 typewriters for each one they exported from the United States (RX 1883; Tr. 8545-46).

IBM is the only typewriter company whose typewriter exports have consistently exceeded its imports. In 1963, IBM exported \$6.7 million of typewriters from the United States, while importing only \$9,000 of typewriters. In 1969, IBM exported over \$20 million of typewriters as against imports of slightly more than \$500,000, or approximately 40 typewriters for each typewriter it imported (RXs 1882, 1883).

The low wage rates in foreign countries in relation to United States wage rates have been a principal reason for the movement of typewriter production abroad. As of 1968, the approximate hourly wage rates in various countries in Europe, Japan and the United States were as follows: Germany \$1.75; England \$1.50; Italy \$1.56; Sweden \$2.83; The Netherlands \$1.93; France \$1.86; Japan \$.78; and the United States \$4.49 (RX 328; Tr. 7365-67, 8545-46).

The high wage rate differential between the United States and other countries can be offset only if a company has a sufficient volume of typewriter production in the United States so that it can automate its production lines to the point of reducing the per unit labor costs. Of the United States manufacturers of heavy duty office electric typewriters, only IBM is in a position

⁸ For ease of reference, Underwood, Smith-Corona, Royal and Remington are referred to herein as the "traditional" typewriter companies.

to achieve economies of scale necessary to manufacture profitably in the United States (Tr. 8545-47). The efficiency of its high production at its Lexington, Kentucky, plant results in cost savings that outweigh the relatively high cost of labor.

In fact, a number of typewriter plants in the United States have been closed. R. C. Allen ceased its office typewriter production in November 1970 (see CCF 526; Tr. 512). SCM closed its Orangeburg, South Carolina, typewriter plant in June of 1970, and ceased the production of office manual typewriters and heavy duty office electric typewriters at its Cortland, New York, plant at the same time (Tr. 582, 652-655, 2359-2360).⁹ Royal closed its Springfield, Missouri, portable typewriter plant in April 1969, shortly thereafter began phasing out production of office typewriters at its Hartford plant, and began purchasing portable typewriters from Japan (RXs 403, 405 A-D; Tr. 7070-74, 7769-70). Olivetti closed the Underwood typewriter plant in Hartford, Connecticut, in June 1968, replacing part of its production capacity with a factory in Harrisburg, Pennsylvania, which, along with typewriters, also produces desktop computers (RX 695, pp. 9, 14; Tr. 4744-45, 4747-49). Remington had ceased production of portable typewriters in the United States in the 1950's, and it closed its Glasgow, Scotland, plant in 1968 which had been making office manual typewriters. Remington now imports all of its portable typewriters from either Holland or Japan (Tr. 4390, 4435, 4498-4502, 4537-4538). In September 1971, Remington announced that it was discontinuing production of office manual typewriters at its Elmira, New York, plant at the end of its current fiscal year, reducing the production of office manual typewriters outside the United States, and reducing the production of office electric typewriters at its Elmira plant (RX 1917 A-B).

As a consequence, the United States, which accounted for over 31 percent of world typewriter production in 1968, accounted for only 26 percent in 1969 even though the overall production of typewriters has expanded. The United States share of total free world typewriter production declined over one-third in 1966 to barely more than one-quarter in 1969. During this period, the rest of the free world increased its production share from 63.6 percent

⁹ SCM's 1970 Annual Report stated that the company had "discontinued production of manual and deluxe electric office typewriters * * * since the return on further investments required would not meet our standards" (RX 1193, pp. 6, 30, 35).

to 74 percent. Excluding IBM, the United States share of total free world production has declined from 28.4 percent in 1966 to 17.8 percent in 1969. Thus, typewriter production has moved overseas at an increasing rate since 1966.

United States production of portable typewriters declined drastically from 59 percent of total production in 1966 to 31 percent in 1969. European portable typewriter production remained constant at 20 percent, while Japan increased its share of free world portable typewriter production from 27 percent to 45 percent (RXs 62 C-D, 1527 D, 1528 B, 1531, 1534 L, 1555 A-D, 1556 C, 1564 C, 1571 H, 1573 B, 1582 A-D, 1613, 1667, 1718, 1821).¹⁰

As the above findings show: (1) the traditional United States companies have been forced to seek foreign sources of production to compensate for their inability to manufacture typewriters economically in the United States; and (2) by 1969 the Japanese manufacturers had captured almost one-half of the total free world production of portable typewriters.

b. United States

Remington was the first commercial manufacturer of typewriters in the United States, introducing its first model in 1873. Underwood Typewriter Company was formed in 1896. It was followed in 1903 by L. C. Smith & Bros. Typewriter Company, and in 1904 by the Royal Typewriter Company, Inc. (see CCF 473, 512; Tr. 422, 1559; RX 1192, p. 19; CX 15 Z-2).

In the early 1930's, Underwood was the dominant typewriter company with over 50 percent of the world market for typewriters (see CCF 498; Tr. 1566-67). Prior to World War II, Remington, Underwood, L. C. Smith and Royal controlled over 95 percent of the typewriter business in the United States (see CCF 455; Tr. 1568-69, 1573). The principal business of each company was the sale of typewriters (Tr. 2991-92). In addition to the four traditional typewriter companies, the Woodstock Typewriter Company also had manufactured and sold manual office typewriters since the early 1900's (Tr. 512). IBM entered the industry in 1933 when it acquired the rights to manufacture the Electromatic typewriter from the Northeast Manufacturing Company (RX 488; Tr. 1386, 1567-1568). Several European

¹⁰ For the first ten months of 1969, Japanese exports of typewriters amounted to 768,428 typewriters, which was an increase of 21 percent over the previous year's exports (RX 94, p. 4).

typewriter companies also began to sell typewriters in the United States prior to World War II.

With the advent of World War II, the four traditional typewriter companies were required by the United States Government to convert to war production, and to discontinue the manufacture of typewriters (see CCF 457; Tr. 1386-87, 1569, 1574, 2990, 2992, 4531). Underwood manufactured carbines; Remington produced small arms; and Royal and Smith-Corona produced military hardware of one form or another (see CCF 457, 490, 499, 513; Tr. 1574).

Commission counsel contend that these companies were required to convert to war production as punishment for having been charged with a conspiracy (CPF 457). On April 20, 1940, the Department of Justice brought an antitrust action against the companies charging them with conspiring to restrain trade in the sale of typewriters. Concurrently with the filing of the complaint, the government and each of the defendants consented to the entry of an order settling the case. No testimony was taken, there were no findings of fact and no admission or adjudication that any violation of law had occurred. *United States v. Underwood Elliott Fisher Co.*, CCH 1940-1943 Trade Cas. ¶ 56,027 at p. 81 (S.D.N.Y. 1940).

Commission counsel's argument that the four companies were required to discontinue the manufacture of typewriters as punishment for alleged price fixing is totally without support in the record and appears to have been an unfounded attempt to discredit Royal in this case. In fact, the change to war manufacture by Royal and the other typewriter companies was only one of many similar occurrences of the time. The War Powers Act of 1940 (Act of June 28, 1940, Pub. L. 671, c. 440, 76th Cong., 3rd Sess., 54 Stat. 676), as amended, gave the President power to order the discontinuance of the manufacture of products deemed non-essential, and the shift to the production of products deemed essential to the war effort. Orders issued by the War Production Board halted the manufacture of many products not essential to the war effort. Among these products were "automobiles * * * refrigerators, laundry equipment, vacuum cleaners, cast iron tubular radiators, *typewriters*, oil burners, outboard motors and sewing machines" (CCH War Law Service [copyright 1943], Pars. 30, 424-30, 426).

Only IBM and Woodstock, which was acquired by R. C. Allen

in 1950, were permitted to continue manufacturing typewriters during the war years from 1942 to 1946 (Tr. 1386-87, 1570, 1574-75). Woodstock manufactured an office manual typewriter, and IBM manufactured an office electric typewriter. During this period, IBM was given attractive research and development contracts in electronics by the government, which enabled it to gain a head start toward developing the products that utilize electronic technology (Tr. 1387-88, 1574-75).

As a consequence of the freeze on the sale of typewriters during World War II, a large demand was built up for typewriters. To meet this demand, the traditional companies re-entered the typewriter business with the same manual typewriters that they had been producing prior to the war. They made little effort to develop an electric typewriter (see CCF 458; Tr. 519-520, 1575, 2993, 6995).

In the early 1950's, with the demand for the electric office typewriters increasing, the traditional companies began to convert to office electric typewriters by adding a motor to their office manual machines. With this approach, throughout the 1950's they failed to produce a quality electric typewriter that could compete with IBM (Tr. 519-520, 1575, 1970-72, 2993, 4513-14, 4551-52, 6995-6996).

Although the electric office typewriter made substantial inroads into the manual typewriter business during the 1950's, due to their strong positions in the manual markets and the built-up war demand, the traditional companies were able to maintain a degree of profitability without a quality electric typewriter. By the mid-1950's, however, the inability to develop a successful office electric typewriter and the failure to invest the necessary money and time placed the traditional companies at a substantial competitive disadvantage with IBM (Tr. 519-520, 1575-76, 4512-14, 4551-52).

IBM had been successful in designing its office electric typewriter from the ground up as an electric typewriter with the proper geometry and physics to harness the flow of electric power to produce reliable and consistent quality printwork. The traditional typewriter companies, hobbled by a lack of electric typewriter design capability, placed reliance on manual typewriter technology and tried to incorporate an electric mechanism into a manual typewriter frame, which simply could not work under electric power. IBM's typewriters, therefore, became

established as the standard for performance and reliability that all competitive electric typewriters were measured against, and today IBM is still the standard in the industry (RXs 80-83; Tr. 930-931, 1971-72, 1974, 1999, 2010, 2104-2105, 4551, 6995-96; DG 394-396).

2. *The Traditional United States Typewriter Companies*

In the 1950's, the traditional United States typewriter companies ceased to exist in their old form, and by the mid-1960's had been relegated to a minor role in the office electric typewriter business.

a. R. C. Allen (Woodstock Typewriter Company)

R. C. Allen Company, which acquired the Woodstock Typewriter Company in 1950, is 53 percent owned by Guerdon Industries, Inc., Louisville, Kentucky, which is 53 percent owned by City Investing, New York, New York, the nation's 266th largest industrial corporation (see CCF 525; Tr. 511-512; CX 200, p. 14). Guerdon is a diversified company whose sales for the fiscal year ending April 1970 were in excess of \$170 million and whose assets exceeded \$60 million (RX 1686). In addition to typewriters, Guerdon's R. C. Allen division manufactures cash registers, adding machines, aircraft component parts, ground support equipment and gyroscopes (RX 1686, p. 8; Tr. 512).

Until 1970, when it discontinued its typewriter business, R. C. Allen produced only office manual typewriters at its Woodstock, Illinois, plant, for sale primarily to the United States Government (see CCF 526; Tr. 512, 517; RX 1536 A). In the early 1960's, R. C. Allen's attempt to produce a quality typewriter with a manual carriage and an electrified keyboard failed. It was unwilling to invest the required capital necessary to produce a quality electric typewriter that would be competitive with IBM, and discontinued its typewriter business in November, 1970 (Tr. 512, 519-520).

b. SCM Corporation

Smith-Corona-Marchant, which became SCM Corporation in 1962, is the result of the 1926 combination of L. C. Smith & Brothers Typewriter Company and Corona Typewriters, Incorporated, the 1956 acquisition of Kleinschmidt Laboratories, the 1958 acquisition of Marchant Calculating Machine Company, the 1966 acquisition of Proctor-Silex Corporation, the 1967 acquisi-

tions of the Shetland Company, the Glidden Company, and Allied Paper Corporation, and the 1969 acquisition of Melabs (see CCF 484; RX 1192, pp. 18-19). SCM had net sales of \$854 million and net income of \$1.9 million in fiscal 1970 (RX 1193, p. 5).

While before World War II, 70 percent of SCM's sales were of typewriters, by 1959 this percentage had dropped to 40 percent (RX 1580). SCM is now a diversified company selling a wide variety of products in addition to typewriters. The Smith-Corona-Marchant division manufactures typewriters, calculators, electronics, copiers, and copier papers; the Proctor-Silex division manufactures home electric appliances, floor care products, and industrial process equipment; the Kleinschmidt Telecommunications division manufactures telecommunications equipment and data terminals; the Allied Paper division operates pulp and paper mills and manufactures, among other things, business forms; and the Glidden-Durkee division manufactures industrial coatings, foods, and building materials such as resin-based adhesives, caulks and sealants (see CCF 484; RX 1192, p. 14, RX 1193, pp. 8-26).

After World War II, Smith-Corona, like the other traditional typewriter companies, resumed the sale of the same models of typewriters it had been selling prior to the war. It had a line of manual portable typewriters which it sold principally to typewriter dealers and an office manual typewriter, which it sold on a direct basis to commercial and government offices and schools (see CCF 490; Tr. 2993, 2997, 3006-3007, 3016).

SCM's office manual typewriter was discontinued in 1970 because profits were insufficient to maintain marketing, service, and supply functions. The profit failure was due to competitive pricing and a decline in the overall demand for office manual typewriters (Tr. 582, 654, 2230, 2243-2244).¹¹

In 1955, Smith-Corona introduced its first office electric typewriter, which had the same keyboard, platen arms and platen as its office manual typewriter (Tr. 2999-3000). This was followed in the early 1960's by the Model 400 series of heavy duty office electric typewriters. After being improved, the 400 was reintroduced as Model 410 and later Model 415 office electric typewriter (Tr. 650-651, 3021). Model 415 was produced until June

¹¹ SCM's sales of office manual typewriters had declined from over 40,000 units in 1960 to under 13,000 units in 1969 (RX 1585 A-D).

1970, when it was withdrawn from production and existing inventories were sold (RX 1647; Tr. 650-651).¹²

In September of 1956, SCM introduced its first portable electric typewriter. In 1959, SCM introduced its 200 series electric portable typewriter. In the intervening years, this model was gradually improved and in 1962 was called the 250 series and designated as a compact office typewriter (Tr. 626-627, 3021-22).¹³ The 250 was followed by the Model 315 in 1967 and the Model 500 in 1969. Production of the 315 was discontinued when the Model 500 was introduced; the Model 500 has since been discontinued (Tr. 607-609, 617-618). SCM currently manufactures and sells full lines of electric and manual portable typewriters (see CCF 487-488; Tr. 581, 3007-3009, 3018-19, 6996).

In the early 1960's, SCM introduced an automatic typewriter called the Typetronic which was a paper tape unit connected to SCM's heavy duty office electric typewriter. The product line was sold in the late 1960's (Tr. 2468).

At the beginning of 1970, SCM's Orangeburg, South Carolina, plant was closed and its facilities consolidated at Cortland to increase efficiency and reduce manufacturing costs (RX 1193, pp. 6-9; Tr. 2360-61). SCM is in the process of disposing of the Orangeburg plant (Tr. 2359-2360). By 1970, all remaining SCM typewriters were manufactured at Cortland-Groton, New York, except for the flat portable typewriter, which was manufactured in West Bromwich, England (see CCF 485, 487; RXs 1322, 1589 D; Tr. 581-582, 3023-24).¹⁴

In 1955, Smith-Corona was selling office typewriters directly to end users through branch salesmen except in small outlying towns where it was too costly to open a branch office. In those areas, office typewriters were sold to dealers. In the populated areas, however, where the sales volume permitted the use of a direct sales force, Smith-Corona sold on a direct basis. The advantages of selling office typewriters to the end user on a direct basis are that the typewriter manufacturer has direct control

¹² SCM's 1970 Annual Report stated that the company had "discontinued production of manual and deluxe electric office typewriters * * * since the return on further investments required would not meet our standards" (RX 1193, p. 30 and pp. 6, 35).

¹³ The term "compact" was conceived by Mr. Wales, vice president of sales, Consumer Products, Smith-Corona-Marchant Group because the term "Intermediate" seemed to indicate less than something. Compact was a word at that time that was being popularized by automobiles (Tr. 576, 626-627).

¹⁴ The flat portable was formerly produced at Cortland (Tr. 581-582).

over the salesmen and the company's products do not have to compete with the products of other companies for the salesmen's time (Tr. 2995, 2998-99, 3006-3007). Therefore, as long as sales volume permitted, office typewriters were sold on a direct basis by SCM's Office Typewriter division to major and national accounts such as insurance companies, motor companies, banks and mortgage companies, and also to government agencies and schools. They were not sold to dealers because large companies wanted to deal directly with the manufacturer; they did not want to buy from dealers (Tr. 2993-94, 3006-3007, 3016, 2199).

In 1962, SCM had about 75 branch offices selling office typewriters directly to end users (Tr. 627). In 1966, it had about 60 branches with about 100 retail salesmen calling on accounts (Tr. 593-594, 2199). As its relative position in office typewriters declined in 1967, SCM began to close its branch operations until 1970 when it had only two branch offices for direct sales, one in New York and the other in Washington to handle government sales (see CCF 491; RX 1848; Tr. 2200-2201).

As a consequence of its drastic decline in sales of office typewriters, in August 1968 SCM's Office Typewriter division was merged into its Consumer Products division in order to effect economies in sales coverage for its sales force. Prior to that time, there had been a separate Office Typewriter division and a separate Consumer Products division which sold portable typewriters and other consumer products (Tr. 578, 641-643).

In 1947, SCM began to sell portables to department stores, mass merchandisers, and discount houses, and its portable sales increased steadily thereafter (Tr. 2996, 3002-3003, 3010). In fiscal 1969, almost 75 percent of SCM's total sales of portable typewriters, including typewriters sold under private labels, were to mass merchandisers (RX 1593 B; Tr. 3067).

Recognizing the increasing importance of mass merchandisers and discount houses, SCM expanded its portable typewriters into three basic lines: the Executive, Custom and Specialty lines. The Executive line is a full line of SCM's highest priced portable typewriters which are sold to non-franchised dealers who handle only portable typewriters and to franchised dealers who handle both office and portable typewriters (Tr. 2225, 2226, 2242, 2361-63, 3028). The Custom line is a full line of portable typewriters that is lower priced and sold primarily to department stores and mass merchandisers (Tr. 628-629, 2251-52, 2363, 3028-

29). The Specialty line of typewriters includes the Pride line, and is sold to premium houses, direct mail merchandisers, and for sales incentive programs; and the Jewelry line is sold through jewelry stores (Tr. 632-634, 2252, 3036).¹⁵ In addition to these lines of typewriters, SCM also sells typewriters under private label brands to Sears, J. C. Penney and other mass merchandisers. SCM began selling private label portable typewriters to Sears in 1957; it offers Sears a full line of portable typewriters.

c. Remington Rand Division (Sperry-Rand Corporation)

Remington, the first company to produce typewriters for commercial use in 1873, was merged with the Sperry Gyroscope Company in 1955, and it now operates as part of the Remington Rand Division of the Sperry-Rand Corporation (Tr. 421-422, 492-493, 4381; see RXs 1747, 1748). Other Sperry-Rand divisions are the Remington Shaver division, the Univac division, which manufactures computers, the Systems division, which makes filing and retrieval equipment, the New Holland division, which manufactures farm equipment, the Vicker's division, which makes hydraulic equipment, the Sperry Gyroscope division, which makes gyroscopes and guidance control systems, and the Ford Instrument division, which makes flight systems (see CCF 473; Tr. 492-493; RXs 1747, 1748).

Sperry-Rand is a large United States industrial corporation with net sales of \$1.7 billion and net income of \$81 million in 1970 (see CCF 473; RX 1748, p. 30). Its sales of office machines and consumer products, including typewriters, copiers, calculators and personal care products, represented 12 percent of its total sales in 1970; its sales of typewriters which represented almost 30 percent of its total sales of office machines and consumer products in 1968 fell to 23 percent of these sales in 1970 (RXs 1562 B, 1747, p. 20, 1748, p. 20).

Prior to World War II, Remington was manufacturing and selling two models of office manual typewriters: the Remington standard manual and the Remington "Noiseless" manual, which were sold on a direct basis to commercial offices. There were no

¹⁵ An increasingly successful method of portable typewriter distribution is through petroleum companies who advertise the availability of the typewriters in their credit card mailings. SCM sells the machines under the petroleum company's name or some other brand name selected by the petroleum company or the direct mailing house. Promotional sales through petroleum companies have been successful in the past couple of years. For example, a promotion with the American Oil Company in 1970 resulted in the sale of 7,000 to 9,000 units amounting to \$210,000 to \$270,000 worth of business (RX 1730; Tr. 2206, 2209, 2252, 2372, 3037-38).

sales of office manual typewriters made by Remington to dealers during this period. During the war, Remington discontinued the manufacture of typewriters and began to produce armaments for the war effort. After the war, Remington re-introduced the same two office manual typewriter models on a direct sales basis (see CCF 477; Tr. 2987-88, 2990, 2992-93, 4531).

In 1948, Remington introduced an office electric typewriter. In 1951, it sold 12,534 office electrics and 129,123 office manuals, but by 1959 its sales of office manuals had declined to 46,871 and its sales of office electrics had only increased to 15,430. Remington's decline in the sale of manual typewriters was not matched by a corresponding increase in the sale of office electrics because of quality problems it encountered with its electric typewriters and because IBM, which from 1940 to 1948 had been the only manufacturer of office electric typewriters, had developed into a strong factor in the marketplace (Tr. 4511-14).

Remington did not develop what it considered to be a quality office electric typewriter until 1964, when it introduced the Model 25 (Tr. 4513, 4530; RXs 942, 944 A-D). At or about the same time, it discontinued the Remington "Noiseless" office manual typewriter, which was a higher priced manual typewriter, because the market for office manual typewriters had declined drastically due to the shift to office electric typewriters (Tr. 4507-4508; RX 1563 A-B). In April 1970, the Model 25 was replaced by the Model 26, which is Remington's present heavy duty office electric typewriter (Tr. 4515; RXs 949 A-B, 950). In September 1968, Remington introduced its L-25 light duty office electric typewriter which was designed to compete in the low-priced market (Tr. 4510-11, 4514; RX 948). The L-25 series was subsequently discontinued (Tr. 4515).

With SCM's substantial lead in electric portable typewriters, Remington found it necessary to purchase Brother Models 711 and 713 light duty electric typewriters from Japan in order to enter the marketplace in the shortest possible time (see CCF 475; Tr. 423, 496-499, 4456-57, 4486-87; RXs 960, 963).¹⁶ It currently imports all of the portable typewriters it sells in the United States, importing standard manual and flat manual portables from Holland and electric portable typewriters from Brother (see CCFs 475, 482; RX 1563; Tr. 422-424, 4390, 4435,

¹⁶ These are the same machines that Brother sells under its own brand and private labels as compact office electric typewriters (RX 1046 B).

4501-4502).¹⁷ According to Remington's sales manager, the advantages of having a full line of portables are that a broad line can be more effectively merchandised through advertising and other promotional activities, and the customer is afforded a wide price range of machines from which to choose (Tr. 4456-57).

Remington engaged in development work on an automatic typewriter in the late 1930's, but the business was subsequently sold. Ultimately it became part of the Friden Company and has evolved into the Flexowriter now sold by the Friden Division of the Singer Company. Remington introduced an automatic typewriter again in the 1950's but subsequently that product line was discontinued (Tr. 2467-68).

Remington has typewriter manufacturing plants located in the United States, Italy, Holland, Argentina, Brazil and India, and typewriter assembly plants in Mexico, Brazil, Canada, and Colombia. Office manual typewriters are produced in Italy, Argentina, Brazil and India. Manual typewriters are assembled in Mexico, Canada, and Colombia from sub-assemblies manufactured in Italy and Brazil. In September 1971, Remington announced the discontinuance of production of office manual typewriters, and the curtailing of production of office electrics at its Elmira, New York, plant due to high costs and excessive inventories (RX 1917 B). Some manual portable typewriters are manufactured in Holland and assembled in Brazil for sale in South America from subassemblies made in Holland. Beginning in 1969, it has imported electric portable typewriters from Japan (see CCF 474: RXs 1039 A-B, 1564, 1746 A-B; Tr. 422-424, 4390, 4495, 4501-4502).

After World War II, Remington, like the other traditional typewriter companies, resumed the sale of office typewriters directly to end users through branch salesmen operating out of branch offices located in major metropolitan areas within the United States (Tr. 446-447, 4516-17). In the 1960's, Remington began selling some of its office typewriters through dealers. In 1969, Remington's Office Machines division had 75 branch offices for the direct sale of its office typewriters; 72 percent of its office typewriter sales were made on a direct basis and 28 percent through dealers (RX 1870). Remington's experience demonstrated

¹⁷ Remington has recently contracted to purchase manual portable typewriters from Citizen in Japan (Tr. 4473-77, 4481-86).

that a direct sales organization is the most effective means of selling office typewriters to large accounts (Tr. 4516-4520).

Remington sells portable typewriters through its Consumer Products division, which has sales representatives who call on approximately 5,000 dealers, including department stores, discount stores, mail order catalog firms, jewelry chains, hardware stores, electric appliance dealers, camera shops, office machine dealers, office equipment dealers, stationers, drug stores and appliance houses (see CCF 481; Tr. 444, 447-448, 4386-88, 4397-99, 4467-69). The majority of the 850 to 1,000 office machine dealers handling Remington typewriters, however, carry portable typewriters only as convenience items for customers who walk in off the street (Tr. 4452-54). Only about 16 percent to 18 percent of Remington's 1969 sales of portable typewriters were made to office machine dealers (Tr. 4457-58; RX 1565 A-B).

Remington sells the bulk of its portable typewriters on a direct basis to mass merchandisers and discount chains such as Sears, Ward's and Spiegel's. Increasingly important outlets for the sale of portable typewriters are fulfillment houses, which handle mail order promotions of private brand portable typewriters for oil companies and other accounts (Tr. 4446-48, 4451-52). A 1969 promotion sponsored by Standard Oil of California, for example, resulted in the sale of 26,000 portable typewriters totaling almost \$1 million (RX 1742 A-B). Remington heavily promotes portable typewriters to mass merchandisers and discount houses. Such promotions include one typewriter free with the purchase of five and one typewriter free with the purchase of ten (Tr. 4440-42, RXs 970, 974, 975, 982-984).

d. Underwood Typewriter Company ¹⁸

The Underwood Typewriter Company was established in 1895. In 1927, Underwood merged with the Elliott-Fisher Company, a manufacturer of bookkeeping machines (see CCF 498; Tr. 1559, 1565-66; RX 735 B).

Underwood manufactured office manual typewriters at its factory in Hartford, Connecticut, and by the early 1930's had over 50 percent of the world typewriter market (see CCF 498; Tr. 1562, 1567-68).¹⁹ During World War II, Underwood discon-

¹⁸ Where appropriate, references to Olivetti will be included in these findings.

¹⁹ But by the late 1950's Underwood, due to its management's failure to invest time and money to develop a new product and its abortive attempt to enter the computer business, was on the brink of financial disaster causing it to seek merger with a number of companies.

tinued production of typewriters and began to manufacture carbines for the war effort. After the war, Underwood resumed the production of the same office manual typewriters and, due to the built-up demand for typewriters, it, like Royal, Remington and L. C. Smith, operated on a profitable basis in the immediate post-war period. The Underwood management, however, failed to develop a successful electric typewriter and, as late as 1957, Underwood was still producing essentially the same office typewriters that it had produced for 20 or 30 years (see CCF 60, 500-501; Tr. 1574-75; RX 1623, p. 7).

In the late 1950's, Underwood also had an automatic typewriter but it was subsequently discontinued (Tr. 6914-6915).

In the mid-1950's, Underwood's financial position began deteriorating rapidly, and it began an aggressive search for a company to acquire it (see CCF 501; Tr. 1577; RX 1625, p. 3).²⁰ Although it engaged in informal discussions with various companies about possible acquisition, the only serious discussions were had with Litton and Olivetti. After Litton's proposal in September 1959 was rejected, Underwood was acquired by Olivetti with clearance from the Antitrust Division of the Department of Justice (see CCF 501; Tr. 1568-1580, 4751, 8087-89).

Upon the acquisition of Underwood, Olivetti's United States sales organization, which was established in 1950, was integrated into the Underwood organization, and Olivetti attempted to rejuvenate Underwood's product line and its marketing force. It added calculating, accounting machines and its office electric typewriters to the Underwood line (RX 684 B). In an effort to create a new marketing organization, it conducted a survey of the typewriter population to estimate the potential as a basis for adding new branch offices and salesmen throughout the United States (RX 685 B). In those areas where Olivetti's survey indicated that potential sales volume would not justify company-owned branches, agents were used (RX 685 B-C).

In spite of these efforts, Underwood continued to suffer substantial operating losses as well as loss of market position.²¹ Olivetti's attempt to rejuvenate Underwood cost the Olivetti

²⁰ To overcome its failure to keep abreast of the times, in 1955 Underwood brought in an ex-IBM executive as president. "He tried to make Underwood over into the image of IBM," but 18 months and \$18 million later Underwood's board of directors dismissed him (Tr. 1576).

²¹ Underwood's financial condition in 1959-1960 was described by Mr. Ash as being comparable to the direction of Royal's financial condition in 1965 (Tr. 7174, 7229-7230).

group of companies approximately \$100 million during the period 1960 to 1964 (Tr. 4755-56; RX 690, p. 29). Due to the extraordinary expenses of maintaining Underwood (RX 687, pp. 18, 35-36), the owners of the Olivetti Corporation over-extended themselves financially and eventually had to be rescued by an Italian consortium, consisting of IMI, a corporation sponsored by the Italian Government, Pirelli, the largest tire company in Italy, the Fiat Automobile Company, and several banks (Tr. 4756-61).

Prior to acquisition by Olivetti, Underwood manufactured electric and manual office typewriters at its plants in Hartford, Connecticut, and Toronto, Canada, and portable typewriters at its Toronto plant. It also operated a plant in Brighton, England, which manufactured office manual typewriters (see RXs 684 B, 685 E).²² Currently, Olivetti typewriters sold in the United States are made at typewriter plants located at Harrisburg, Pennsylvania, Toronto, Canada, Ivrea (Torino), Italy, Barcelona, Spain, and Glasgow, Scotland (RX 819; Tr. 4713-14). Olivetti also has typewriter plants in Argentina, Brazil, Mexico, South Africa, Colombia and Italy that do not serve the United States (see CCF 504; Tr. 4714; RX 1556 A-D).

Underwood's Hartford, Connecticut, plant, with 985,000 square feet of floor space devoted almost exclusively to typewriters, was closed in 1968. When Olivetti announced the impending closing, the city and state governments offered to assist Olivetti in the construction of a new factory in Hartford and to intercede with the labor unions on Olivetti's behalf, but it was not economically feasible to maintain a typewriter factory in Hartford even with government assistance (RX 695, p. 9; Tr. 4744-45, 4747-49).²³ The Editor II office electric typewriter is manufactured at Olivetti's new Harrisburg, Pennsylvania, plant which has 250,000 square feet of floor space, partially devoted to the production of computers. The Praxis light duty electric typewriter is manufactured at Olivetti's Italian plant (see CCF 504; Tr. 1517, 1581-82, 4747-49; RXs 695, p. 9, 819, 1556 A-D; CX 297, p. 18). All portable typewriters sold in the United States are now manufactured at Olivetti's plant in Barcelona, Spain (Tr. 1517; RXs 819, 1556 A-D).

²² In 1962, Olivetti closed down the Underwood plant in the United Kingdom (RX 690, p. 29).

²³ With the closing of the Hartford plant, Olivetti ceased to manufacture office manuals in the United States (Tr. 1517, 4744-45).

In its home market of Italy where it accounts for 87 percent of typewriter sales, Olivetti sells primarily through branch offices and sales agents. In 1960, it had 35 branches and 233 agents, and its sales through branches during that period accounted for 63.9 percent of its total sales in Italy. In 1969, its sales organization in Italy was strengthened with the opening of 10 new direct sales branches in areas previously served by agents (RX 687, p. 18; CX 297, p. 19; Tr. 7362-63). Olivetti also has subsidiaries in Britain, France, Germany, Argentina, Brazil, Spain, Colombia, Mexico, Japan and South Africa engaged in the sale of typewriters and other office machines primarily through sales agencies (CX 297, p. 19; RX 694, pp. 17-19).

When Olivetti first acquired an interest in Underwood, Underwood had 125 branch offices and more than 1,200 sales agencies for the sale of office typewriters in the United States (RX 687, p. 19). During 1961, the Underwood branch operation was re-organized for greater effectiveness and new branches were opened in five major cities of the United States and additional offices were added in New York, Los Angeles and Chicago. Approximately 1,500 new salesmen were employed in 1961 to staff the re-aligned branch operations (RX 685 B, G). However, by 1969, Olivetti-Underwood's position in the sale of typewriters in the United States had declined and it had reduced the number of its branch offices to 91 and the number of its sales agents to 875 (RXs 820, 1854; CX 298 D).²⁴

In 1969, 100 percent of Olivetti's sales of office typewriters in the United States were made on a direct basis (RX 1870). It had over 6,000 dealers selling portable typewriters (RX 735 B; CX 298 E; Tr. 1516, 1522, 1538, 4739-4740). In 1970, recognizing the trend to mass distribution of portable typewriters, Olivetti created a new marketing group within its home office sales organization to handle the sale of portable typewriters and adding machines to mass merchandisers, premium companies, and mail order houses (Tr. 4740).

²⁴ In addition to its salaried salesmen, Underwood-Olivetti had more than 1,000 exclusive sales agents (RX 685 I). These sales agents received typewriters on consignment with title remaining in Olivetti. The agents solicited orders as salesmen by placing the typewriter on trial and demonstrating the machines. Once an order was obtained, it was forwarded to Olivetti for a credit check and, if the sale was approved, Olivetti would invoice its customer and credit the agent with a sales commission. Olivetti carried the inventory risk, the inventory depreciation, and the credit risk involved (Tr. 1523, 1544-46). Contrary to Commission counsel's argument, sales agents cannot be equated to independent office machine dealers purchasing typewriters as independent dealers for resale to their own customers (CCF 507).

e. Royal Typewriter Company

Royal Typewriter Company, Inc. began its typewriter business in 1904. During World War II, Royal discontinued the production of typewriters and produced armaments. After World War II, it resumed the production and sale of typewriters (see CCF 85-86; CX 15 Z-2; Tr. 1568-69, 1573, 2990-92).

In 1954, Royal merged with the McBee company to expand Royal's product line, obtain economies in joint operation and to improve Royal's management. After the merger, a McBee executive was made president of Royal-McBee (Tr. 6950-6951) and the corporation name was changed to Royal McBee Corporation. McBee was a manufacturer of key sort machines, forms, punch cards, and binders which were distributed through a direct sales force (see CCF 87; CX 15 Z-2; Tr. 7038-7042). In 1956, Royal entered into a joint venture with General Precision Corporation to manufacture electronic computers for the purpose of diversifying Royal's product lines and entering the data processing field. The joint venture proved to be a failure. Royal invested a total of \$12 million and sold its interest to General Precision for \$5 million in 1962, suffering a net loss of \$7 million (see CCFs 88, fn. p. 43, 95, fn. p. 48; Tr. 6951-52, 7061-63). The divestiture of Royal's interest in General Precision was part of a general retrenchment at Royal that started in the summer of 1960. For example, it sold its corporate headquarters at Port Chester, New York, and moved its headquarters to leased space in New York City which freed approximately \$2 million in needed cash and the sale of its interest in General Precision provided \$5 million in cash (Tr. 6952).

In April and May of 1960, Royal scheduled three trade shows in New York, Chicago and Los Angeles. The purpose was to present a host of new products, including the Spacetronic form sensing typewriter which made use of an electric eye, the Royaltyper automatic typewriter, the HE electric typewriter, the Royfax copier, and a number of computer systems, which it intended to introduce into the marketplace that year. The New York and Chicago shows cost Royal in the vicinity of \$100,000 to \$200,000, and were the largest promotions from the standpoint of number of products that Royal ever attempted. In spite of very good press coverage and attendance, the shows were disasters because the products presented were failures and either were withdrawn before they reached the market or had

to be withdrawn from the market within a short time after introduction. Because of the product problems, the Los Angeles show, scheduled for mid-May, was cancelled altogether (Tr. 6913-16, 6921-23, 6931-32, 6941-49; RXs 1793 A-D, 1794 A-C, 1796, 1797 A-B, 1798, 1800 A-C, 1801, 1802 A-B, 1803, 1804 A-B, 1805, 1806 A-B, 1807). Royal's prestige and image suffered drastically. Like Underwood, it was forced to drop its computer business and retreat in many other aspects of its business (Tr. 6944-45, 4750-52; RXs 1623, 1624, 1625, p. 5, 1626, pp. 1, 3).

Royal's problem in the post World War II era stemmed in part from three major deficiencies: (1) it had not, in spite of its public statements to the contrary, developed quality electric office and portable typewriters; (2) its research and development capabilities were not adequate for the development of quality typewriters; and (3) its management during that era was content with Royal's position as a leading producer of office manual typewriters and failed to recognize the need for quality electric typewriters in the marketplace. Detailed findings on Royal's failure to develop quality products are set forth hereinafter.

Until 1960, the only Royal plant producing typewriters in the United States was located at Hartford, Connecticut (RX 407; Tr. 7064-68). Outside the United States, Royal operated typewriter factories at Cuyk and Leiden, Holland, which produced office manual typewriters and the Royalite flat manual portable typewriter (Tr. 7064-68; RX 1595, p. 5).

In 1960, Royal leased a plant in Springfield, Missouri, for the manufacture of portable typewriters. When the plant opened, the domestic production of Royal's manual portable typewriter was transferred from Hartford to Springfield (CX 18, p. 4). From 1960 to 1966, the Springfield plant produced only manual portable typewriters (see CCF 90, 134-139; Tr. 7070-74). In 1966, the Springfield plant began producing the Ultronic electric portable, which proved to be a failure. In the spring of 1969, the Springfield plant was closed at a loss of \$2.3 million. The market price of portable typewriters had been declining, and production costs at Springfield were no longer competitive with Japanese costs (Tr. 975-977, 7070-74, 7696-98, 7769-7770; RX 336).

With the closing of the Springfield plant, the domestic manufacture of portable typewriters was moved to Royal's Hartford facility, and Royal increased its purchases of electric and manual

portable typewriters from Silver Seiko, a Japanese manufacturer from whom it had been purchasing portables since 1967 (Tr. 910). By 1969, the substantial majority of Royal portables being sold in the United States were manufactured by Silver Seiko in Japan (Tr. 910-911; RX 1821). Royal, like Remington, turned to Japan for portable typewriters, even though it had typewriter production facilities in other parts of the world, because the combination of low price and high quality offered by the Japanese was not otherwise available (Tr. 975-977).

Production of Royal's 660 heavy duty office electric typewriter at Hartford ceased in the summer of 1969 and the production of the 440 and 470 office manual typewriters at Hartford was substantially reduced (RXs 403, 405 A-D, 1616; Tr. 7762-63).

In 1954, Royal began manufacturing and selling the Robo-typer automatic typewriter. This machine controlled the typewriter automatically by means of punched paper tape. About 1960, Royal began marketing the Royaltyper, which consisted of the paper tape control mechanism connected with a Royal electric office typewriter as a single integral unit. Royal experienced many problems with the Royaltyper because of the poor performance of its electric typewriter. In 1967, the Royaltyper was discontinued at a substantial loss (Tr. 2467, 6912-15, 6947-48, 7005-7011; RXs 316, 317, 1802 A-B, 1803).

In early 1966, Litton instituted a new automatic typewriter development within Royal. Initially called the Overland project, it was conceived to be the next generation of automatic typewriters beyond IBM's MT/ST (Tr. 4927-29, 5588-89; RX 355). Litton's Data Systems division was engaged to provide Royal with the necessary electronics know-how. In 1969, the project was accelerated and the staff assigned to it substantially enlarged (Tr. 7712-7713, 7716-7732, 7808-12).

Royal traditionally has sold office typewriters directly to end users through its branch offices, since where the necessary volume is present, direct selling is the most effective way to market office typewriters. There is more control over selling activities, and better customer relationships are developed, particularly with national accounts which insist on a direct sales and service organization so they can count on immediate service in any part of the country. Further, with a direct sales force, a company is able to develop a common approach to the customer

since it has common service facilities with common instructions, interchangeable personnel, and a uniform philosophy (Tr. 1104, 7033-34).

From 1964 to 1969, Royal office typewriters were marketed and sold in the United States through approximately 90 direct retail branch offices, 25 independent retail dealers, and approximately 750 distributor agents who sold Royal office typewriters on a consignment basis (see CCF 127; CX 15 Z-3; Tr. 1097). During 1967, over 94 percent of Royal's sales of office typewriters were made on a direct basis to end users. By 1969, the percentage dropped to below 90 percent, reflecting the closing of branch offices due to its declining marketing position (RX 1870, Tr. 7034).

In 1960, Royal portable typewriters were being sold by Royal's Appliance division through 7,000 dealer outlets located throughout the United States (CX 18, p. 6). By 1969, the number of retail outlets that from time to time handled Royal portable typewriters was 12,000, of which about 6,000 did business with Royal on a regular basis (Tr. 8802).²⁵ By 1969, independent office machine dealers accounted for only 8.3 percent of the dollar volume of portable typewriters, while mass merchandisers and others accounted for 91.7 percent of the total dollar volume (RX 1618).

3. *The Rise of IBM*

International Business Machines Corporation, Inc. ("IBM"), was formed in 1914, and it is engaged in the production and sale of computers and office machines, including typewriters. It is by far the largest company engaged in the manufacture and sale of office equipment. It is presently organized into twelve divisions and three wholly-owned subsidiaries which conduct business throughout the world (see CCF 516; Tr. 1385; RX 427, p. 19). Its Office Products division develops, manufactures, markets and services office electric typewriters, dictation equipment, and related supplies (RX 427, p. 19).

IBM has enjoyed the most dramatic success of any company in the United States over the past 20 years, with income and net earnings before taxes jumping from approximately \$267

²⁵ Retail outlets for Royal include furniture stores, home furnishing stores, jewelry stores, household appliance stores, office equipment and furniture stores, and stationery and book stores and mass merchandising outlets such as auto accessory stores, department stores, discount houses, drug stores, and variety stores (CX 258 Z-55).

million and \$77 million, respectively, in 1951, to \$7.5 billion and \$2 billion, respectively, in 1970 (RXs 417, Z11-12, 427, pp. 30-31). According to the *Fortune 500 Directory*, by 1969 IBM was the fifth largest company in the United States in terms of sales, having risen from sixth place in 1968. It was the sixth largest company in terms of assets, and the third largest company in terms of net income in 1969, exceeded only by General Motors Corporation and Standard Oil of New Jersey (see CCF 516; CX 200, p. 4).

IBM entered the typewriter business in 1933 by acquiring the rights to manufacture the Electromatic typewriter from the Northeast Manufacturing Company (see CCF 518; Tr. 1293, 1567-68; RX 488 B). It produced and sold its Model 01 during World War II and in 1948 introduced its Model A (Tr. 1293-94, 1386-88). Its Model B standard and Executive typewriters were introduced in 1954, and its Model C standard and Executive typewriters followed in 1959 (Tr. 1292-93). In 1960, IBM introduced its Executary line of dictating equipment to be sold by its Electric Typewriter division (RX 417 B).²⁶

In 1961, the revolutionary Selectric typewriter was introduced by IBM. IBM described its Selectric as the "first major technological breakthrough in the typewriter industry since IBM introduced proportional spacing in 1940" (RX 418 N). The Selectric typewriter replaced the conventional typewriter's metal type bars and moving paper carriage with a single sphere-shaped element covered with 88 raised characters which types by skimming across paper in the same fashion as the human hand does when writing. It permits the almost instant change of type styles and ribbon, and has a mechanical storage system that prevents characters from running together as occurs on a conventional typewriter when two keys are stuck simultaneously (RX 418 N; Tr. 1293-94). The Selectric printer has been called the single most important development in the typewriter industry (Tr. 314-315), and, since its introduction, has become the dominant machine used in heavy duty office typing, both as a standard electric and as the printer in automatic typewriters (RXs 1500 A-C, 1909-1911; Tr. 1415, 1454, 8592-8595).

In 1964, IBM introduced the Magnetic Tape "Selectric" typewriter (MT/ST), which is capable of storing the typed word

²⁶ The Electric Typewriter division became the Office Products division in 1964 (RX 421, p. 17).

and retyping it automatically at speeds up to 180 words per minute. As a secretary types the material, the machine records it on magnetic tape which is powered to operate the typewriter mechanism on subsequent retyping. Revisions can be made without manually retyping the unchanged text, since the machine automatically re-spaces and re-positions new words and sentences (RX 421, p. 11). Presently there are two MT/ST models available for office typing (Tr. 1412-14).

In 1967, IBM introduced its Model D standard and Executive typewriters, which were improved versions of the Model C. Also in 1967, its MT/ST capabilities were increased by the addition of a remote recording feature, enabling one MT/ST to send information over telephone lines to another located at a distant point (RX 424, p. 23; Tr. 1292-93, 1413). In 1968, IBM announced that the total number of magnetic tape Selectric typewriters "in use at the end of 1968 was nearly double the total at the end of 1967" (RX 425, p. 31), and in 1969 the excellent results achieved by IBM's Office Products division were attributed to the "Increasing acceptance of the importance of 'word processing'—the systems, procedures and equipment that transfer thoughts to written communications" (RX 426, p. 18).

In October 1969, IBM announced its Mag Card "Selectric" Typewriter (MC/ST). With this unit, an initial typing draft is simultaneously recorded on magnetic cards, each of which has a capacity equivalent to more than a full page of copy. Corrections are made simply by typing over errors on the draft, which automatically records the corrections on the card. After the typing is completed, a fresh piece of paper is inserted in the typewriter, a button is pressed, and the Mag Card "Selectric" types out a corrected letter or other document at a rate of 150 words per minute (RX 426, p. 18; Tr. 1501-1503).²⁷

In the United States, IBM has typewriter manufacturing facilities located in Lexington, Kentucky, Austin, Texas, and a Selectric terminal production facility at Raleigh, North Carolina (see CCF 517; RXs 629, 632 A-K). Its Lexington, Kentucky, plant manufactures the Model D line of standard and Executive typewriters, the Selectric typewriter, dictating machines, copiers, and various supplies (see CCF 517; RX 632 A; Tr. 1296-97,

²⁷ It is significant that IBM does not manufacture or sell office manual typewriters or manual and electric portable typewriters (see CCF 516, fn. *; Tr. 1292, 1392-93).

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1501-1502).²⁸ The Lexington plant is also engaged in reconditioning IBM electric typewriters (RX 632 B; Tr. 3117, 4043-44).²⁹

From introduction in 1964 until 1968, MT/ST's were manufactured at IBM's Lexington typewriter plant (Tr. 3118, 3122, 3285-86; RX 632 H). In 1968, however, MT/ST production was shifted to IBM's new Austin, Texas, plant (RX 632 H; Tr. 3118, 3122, 3285). The Austin plant's initial capacity of 308,000 square feet was expanded in 1968 by 150,000 square feet, bringing it to a total size of 462,000 square feet (RXs 424, p. 28, 425, pp. 32, 40). In addition to MT/ST's and composing equipment, the Austin plant also manufactures MC/ST's and dictating equipment (see CCF 517; RX 632 H; Tr. 1501-1502, 3285).

Up until 1969, Selectric typewriter terminals were also made at Lexington, but in 1969 a new facility having a capacity of 242,000 square feet was built at Raleigh, North Carolina, to handle terminal production (RXs 426, p. 42, 632 J; Tr. 3123). In 1970, the Raleigh facility was expanded by 290,000 square feet for manufacturing and development purposes (RX 427, p. 20).³⁰

Outside of the United States, IBM manufactures typewriters at plants located in France, Germany, The Netherlands, United Kingdom, Canada, Brazil, Colombia and Mexico (RX 632 D-G). In 1969, Model "D" standard and Executive typewriters were being manufactured at IBM's factories in Germany, Canada, Mexico and Colombia, while Selectrics were being made in The Netherlands, Canada and Brazil. Since 1964, IBM's plant in the Netherlands has also engaged in the production of Magnetic Tape "Selectric" typewriters (RX 632 F-I; Tr. 3123).³¹

The complete line of IBM's Office Products division, including

²⁸ IBM's Lexington plant capacity has been greatly expanded to meet the needs of its increasing business. In 1963, it completed construction of a 154,000 square foot extension to the Lexington plant (RX 420, p. 21). In 1965, the Lexington plant was further expanded by 196,000 square feet (RX 422, p. 28). In 1966, the Lexington was substantially expanded by the addition of 296,000 square feet (RX 423, p. 28).

²⁹ In 1969, IBM's Lexington plant manufactured 144,230 Model D standards, 51,297 Model D Executives and 273,280 Selectrics, and it reconditioned a total of 11,428 Model C standards, 12,097 Model D standards and 28,278 Selectrics (RX 632 A-B). In contrast, in 1969 Royal's plants manufactured only 20,333 Model 660 typewriters (RX 1611).

³⁰ The Selectric printer is utilized as the printer in competitive automatic electric typewriters, and as an input/output terminal (Tr. 1415, 2475, 2491-93, 2600, 6130, 6190, 6197-98, 6225, 7323-24; RXs 1500, 1517).

³¹ Expansion of IBM's factory in the Netherlands by 304,000 square feet was completed in 1967 (RXs 422, p. 28, 423, p. 28, 424, p. 28). In 1969, IBM's Netherlands factory was expanded by an additional 79,000 square feet of capacity (RX 426, p. 42).

its standard electric office typewriters, automatic typewriters, dictating equipment, copiers and supplies was distributed in the United States on a direct basis as of December 1969, through over 200 IBM Office Products division branch offices, which employed a total of 2,928 salesmen and 6,178 servicemen (RX 630 A-B; Tr. 1359-1360).

To provide support personnel to IBM's branch offices in various parts of the country, IBM has established marketing support centers in major markets. There are marketing support centers in Boston, which has five branch offices; in Detroit, Michigan, which has three branch offices; in Los Angeles, California, which has eleven branch offices; in New York, New York, which has thirteen branch offices; in Philadelphia, Pennsylvania, which has five branch offices. In Washington, D.C., where IBM has nine branch offices, there are two marketing support centers: one for commercial business, and the other for Federal Government business. Also, in major cities, there are so-called GEM offices through which IBM handles all levels of government accounts (RX 630 A-B; Tr. 3112-15).

IBM's total coverage of commercial accounts is demonstrated in New York City. There are, in addition to branch offices located at different geographic points within the city, six branch offices which are geared toward specific kinds of accounts. The banking office handles sales to banks; the brokerage office handles brokerage firm sales; the communications office handles sales to communications accounts; the government office handles government sales; the legal office handles law firm sales; and a printing and publishing office handles sales to printing and publishing firms in New York City (RX 630 A-B; Tr. 3113-14).

In addition to the new products marketed by the Office Products division, the IBM salesmen assigned to branch offices also sell IBM factory-reconditioned typewriters directly to schools (Tr. 2879-2880, 4039, 6250, 6359, 6450-52; RXs 601-603, 605-607, 610-611, 613). These are typewriters which have never previously been sold, but which have been used by IBM salesmen as demonstrator models. Usually, these demonstrator models have not been in use for more than a year (Tr. 6504).³²

Commencing in about 1964, IBM began to experiment with a program whereby IBM typewriters, which had been accepted as

³² IBM does not sell factory-reconditioned typewriters directly to commercial offices, government offices or end users (Tr. 4029-4030, 6504-6505).

trade-ins on the purchase of new typewriters and reconditioned at IBM's Lexington factory, would be made available to independent office machine dealers for resale through regional distributors. Within the past several years, four regional distributors have been appointed to sell IBM factory-reconditioned machines to independent office machine dealers throughout the United States (Tr. 4029, 4030, 4041-42, 5910-13, 6264; CXs 378 A-P, 429 A-P; RX 1787 A-F).

In their respective areas, the four regional distributors obtain office equipment dealers for the distribution of IBM factory-reconditioned typewriters in local areas. The larger of these dealers are appointed "key dealers" (Tr. 5910-13, 6454, 6490-99, 6601-12; RX 1787 A-F). IBM encourages these distributors to seek out dealers in small towns and cities where the volume of available business is insufficient to support a direct IBM branch office salesman; however, they are not limited by IBM in the areas in which they may appoint dealers (Tr. 6609-6610). The IBM dealer organization is rapidly expanding, and as Mr. James Ayres, president of NOMDA,³³ testified, there are more NOMDA dealers selling IBM factory-reconditioned heavy duty office electric typewriters than any other brand of typewriter (Tr. 6550).

4. *Foreign Typewriter Companies*

a. *Ing. C. Olivetti & Co.*

Ing. C. Olivetti & Co. was founded in Italy in 1908, and produced the first Italian office typewriter in 1911 (RX 735 B; CX 298 J). In 1932, it introduced its first portable typewriter (CX 298 J). With 17 plants and 30 affiliated companies, Olivetti has sales offices in 113 countries and manufactures typewriters, adding machines, calculators, accounting machines, microcomputers, data processing systems, office furniture, filing equipment, numerically controlled machine tools and other products and services (see CCF 503; CXs 297, p. 20, 298 J).

Olivetti entered the typewriter business in the United States by forming the Olivetti Corporation of America in 1950, and sold typewriters in the United States through a system of sales agents and dealers in competition with Underwood and other typewriter companies. It acquired Underwood in 1960 (CX 298 J; RX 687, p. 19).³⁴

³³ National Office Machine Dealers' Association.

³⁴ See the discussion of Olivetti-Underwood, *supra*, at pages 40-44 [pp. 832-35 herein].

b. Paillard, Inc.

Paillard S.A., the parent of Paillard, Inc., was organized in 1814 in Switzerland, and presently sells two major product lines: business machines through its Hermes division and photographic equipment through its Bolex division. Business machines manufactured include typewriters, calculators, adding machines and automatic multipliers; photographic equipment includes Bolex cameras and projectors (see CCF 541; RXs 1102-1103, 1915-1916; Tr. 82, 130). The consolidated gross sales of the Paillard group in 1969 were over 400 million Swiss francs (see CCF 541; RXs 1915 B-C, 1916 B-C).³⁵

Paillard first began to manufacture Hermes typewriters in 1925 (RXs 1122 Z-24, 1915 D, 1916 D). The Hermes heavy duty office electric typewriter was first introduced in 1958 and the Ambassador Electric was introduced in 1961 (Tr. 83-84). Paillard regards its office electric typewriters to be of better quality than most "if not all" competing typewriters (see CCF 547; Tr. 124, 219).

Hermes is participating in the word processing evolution. It has developed and patented the "Hermes Writing Process" which prints by means of an electrostatically-controlled jet of ink (RX 1530 A-Q). Advantages of this printer include: absolute silence, no mechanical contact with paper, small lightweight dimensions, high speed writing (70 characters per second), visibility of the writing line by the operator, and general suitability for special applications (RX 1530 N-O). Typewriting is one of the applications for which the "Hermes Writing Process" is designed (RX 1530 C, P-Q).

The major production of Hermes manual and electric office typewriters and portable typewriters is concentrated in the Paillard plant at Yverdon, France. Electric and manual office typewriters are also manufactured at Paillard's factories in Sainte Croix and Orbe, Switzerland. The Hermes Baby portable typewriter is manufactured at Paillard's factories in Sackingen, Germany, and Santo Amaro, Brazil. The Hermes 9 office manual typewriter is manufactured at Beaucourt, France, by the Societe Belfortaine de Mecanographie, the majority stock interest in which was acquired by Paillard in January 1969 (see CCF 543; RX 1915 D-E, J-L; Tr. 146-150).

³⁵ 1969 consolidated sales were 402 million Swiss francs or, based on 1969 conversion rates, over \$93 million (RXs 1915 B-C, 1916 B-C).

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Paillard accounts for approximately 50 percent of typewriter sales in Switzerland and sells and distributes Hermes typewriters in over 130 countries through marketing companies located in France, Germany, the United States, Belgium, Holland and Switzerland (RX 1916 E, P-Q; Tr. 82, 153, 7362-63). In allocating the production and sale of typewriters, Paillard considers the demand in each of the countries in which it sells; as its sales manager testified, it would be unwise to concentrate sales in any particular market such as the United States (Tr. 152-154).

Since the 1930's, Paillard S. A. had sold typewriters in the United States through distributors and dealers (see CCF 541; Tr. 83, 128, 130, 141, 143). In 1949 it organized Paillard, Inc., as a United States subsidiary, and since that date it has sold and distributed typewriters, figuring machines and calculators through its Hermes division in the United States. Approximately 50 percent of the Hermes division's sales are office machines, 33 percent of which are typewriters, with the remainder consisting of calculating and figuring machines (see CCF 542; Tr. 143, 144). Its typewriters are sold in the United States through approximately 1,400 office machine dealers (see CCF 546; RX 1870; Tr. 122, 187-189).

c. Facit AB

Facit AB is a Swedish company based in Atvidaberg, Sweden, which had its origins as a copper mining venture in 1413. It manufactures typewriters, adding machines, calculators, office furniture, agricultural equipment and chemical equipment which it sells in 132 countries. It has annual sales of approximately \$230 million (see CCF 548; Tr. 254-255, 281, 284).

Facit AB manufactures standard manual portable typewriters and electric and manual office typewriters, but it does not manufacture electric portable typewriters or flat manual portable typewriters. Facit does not manufacture flat manual portables because, to be profitable, they must be mass produced, a method of manufacturing inconsistent with Facit's policy (Tr. 257, 295-297, 4303-4304).

Facit manufactures typewriters in Sweden and India, and it exports typewriter sub-assemblies to plants located in Brazil, Colombia, Mexico, Turkey and Poland (Tr. 281; RX 1534 J-L). Swedish typewriter production is limited by the labor policy of the Swedish Government which does not permit overtime. There-

fore, from time to time shipments of the production of typewriters are allocated between various markets. If a sales company in a particular country desires to order typewriters in excess of the number forecast in its budget, it must furnish the factory notice four months in advance (Tr. 282, 295-297).

Facit's distribution is international and it attempts to maintain a worldwide balance in its distribution and sale of typewriters. Therefore, Facit would not attempt to concentrate its sales efforts in the United States to the exclusion of any of its other markets (Tr. 4298-99). Outside the United States, Facit sells typewriters through its direct sales forces and through dealers. In Sweden, for example, where it has approximately 100 branches and approximately 65 percent of the Swedish typewriter market, it distributes typewriters through its direct sales force (Tr. 264, 283, 7362-63).

Facit-Odhner, Inc., a wholly-owned subsidiary of Facit AB, was organized in 1950 for the sale and distribution of Facit products, including typewriters, to independent office machine dealers in the United States. It sells approximately 23 products to dealers, including adding machines, typewriters and calculators; approximately 15 percent of its total sales to these dealers in 1969 were typewriters (see CCF 548, 549; Tr. 254-255, 295, 310-311).

Facit first began to sell office manual typewriters and portable manual typewriters in the United States in 1955. In 1960, it introduced its office electric typewriters (see CCF 548, 549; Tr. 254-255, 295, 310-311).

Facit first began to sell office manual typewriters and portable manual typewriters in the United States in 1955. In 1960, it introduced its office electric typewriters (see CCF 549; RX 1534 D-E; Tr. 257). Recognizing the effectiveness of a direct sales organization, Facit attempted to sell on a direct basis to end users from branch offices in New York, Chicago and San Francisco, but was forced to abandon this program because it did not have sufficient sales volume to justify direct branch office selling. Facit estimated that to adequately cover the United States within the limits of its production capability would require more than 100 branches with an investment of \$10 to \$15 million. This would be prohibitive for a company such as Facit, because it could not generate a sufficient volume

of typewriter sales in the United States to support a branch operation (Tr. 263, 273, 300).

Facit is actively developing improved typewriters for word processing in its 200-man research and development center in Solna, Sweden. Facit believes the office typing market is expanding to include word processing systems and that "this is part of the upgrading of the typewriter, the typing concept" (Tr. 277-278, 284-287).

d. Olympia Werke A.G.

Olympia Werke A.G. ("Olympia"), Wilhelmshaven, Germany, is a wholly-owned subsidiary of A.E.G. Telefunken, Frankfurt, Germany, which sells office equipment, radios, televisions, white goods and small appliances on a worldwide basis. It has annual sales of \$1.6 billion and is the eighth largest company in Germany. Ten percent of its stock is owned by the General Electric Company of the United States (see CCF 532; Tr. DG 614-615; Tr. 696-697, 813-814).

Olympia manufactures and sells typewriters, adding machines, dictating machines, ribbons, and electronic and mechanical calculators. It began the manufacture of typewriters in 1902 in Erfurt, Germany; since World War II, its typewriter production has been in Wilhelmshaven, Germany (see CCF 532; Tr. 697, 702-703). Its office electric and portable typewriters are manufactured in Germany, and office manual typewriters are manufactured in Germany, Mexico, Chile and Canada (see CCF 534; RX 1571 B; Tr. 710).

Olympia sells typewriters in 135 countries throughout the free world, and balances its sales between the many markets in which it sells (Tr. 796-798). In a number of countries, including its home market of Germany, Olympia sells typewriters through its direct sales force (DG 661; Tr. 798). Its primary sales and distribution efforts are concentrated in Germany where it shares the market with IBM and Triumph-Adler. It sells its typewriters at higher prices in its home country than in the United States (RXs 1074 A-I, 1078 A-G, 1815 A-C; DG 618-619).

Olympia began to sell typewriters in the United States in 1952 when it introduced its portable typewriter. In 1956, it introduced an office manual; in 1961, a full sized office electric; and in 1968, a light duty office electric typewriter (see CCF 534; Tr. 697, 701-704, 723, 745-746, 768). All Olympia type-

writers sold in the United States are made in Germany (Tr. 710).

Prior to 1968, Olympia distributed typewriters through its distributor, Intercontinental Trading Company, for sale to independent office machine dealers. In 1968, Olympia formed Olympia U.S.A. and assumed direct responsibility for marketing and distributing typewriters to its dealers in the United States (see CCF 533-534; RX 1571 F; Tr. 602, 698, 705-706, 763). At all times Olympia has followed a policy of selling its typewriters exclusively to independent office machine dealers in the United States (RX 1571 C, 1870; Tr. 762). Although Olympia believes its office electric typewriters to be "the finest electric typewriters manufactured," it has concluded that, if it sold typewriters on a direct basis in the United States, its dealer volume would suffer because its dealers would switch to another typewriter company which confined its sales to independent office machine dealers (see CCF 540; Tr. 759-760, 762, 807-808).

Olympia foresees improved typewriters utilizing new methods of putting characters on paper, such as spray ink, heat transfer or laser beams. It also foresees advanced typewriters as part of word processing systems. Olympia is working to keep abreast of this trend and has several machines in research and development (Tr. 815-817).

e. Triumph-Adler

Triumph Werke, A.G. originally was founded as a bicycle factory in 1896 and later expanded into motorcycles. It began to produce office typewriters in 1909 and portable typewriters in 1928. In 1957, Max Grundig acquired most of the Triumph shares and concentrated on the production of typewriters and bookkeeping machines (see CCF 275-276; DG 31-33; CX 645).

Adlerwerke A.G. was founded in 1880 as a bicycle factory. Subsequently Adler began to make motorcycles and automobiles (DG 29). In 1898, Adler became the first typewriter manufacturer in Germany (CX 75, pp. 2-3). During World War II Adler was required to suspend its production of automobiles, motorcycles, bicycles and typewriters and produce tanks (DG 29). After the war Adler re-tooled with new machinery and resumed the manufacture of motorcycles and typewriters. In 1957, Triumph acquired the majority of the shares of Adler and thereafter concentrated on the typewriter business (see CCF 276; DG 43; CX 64 S).

In 1968, the main Triumph manufacturing factory was located in Nuremburg, Germany. It produced office electric typewriters, portable typewriters, electromechanical bookkeeping and invoicing machines and input-output typewriting devices. There were also small factories at Steinach and Furthmuhle for the assembly of bases for office electric typewriters (see CCF 288-289, 290-293; DG 142-144, 339-341; CX 64 Z14-15).

Adler's main typewriter factory was located at Frankfurt, Germany. It produced office manual typewriters, the Tippa flat portable typewriter and compact manual typewriters (Special, Record, Perfekt). Adler had two other small plants which produced segment adjustments and release knobs for platens (see CCF 288-289, 294-295; CX 214-215; DG 444-449).

In 1969, the production of the Record and Tippa typewriters was moved from the Adler factory in Frankfurt to the Royal factories at Leiden and Cuyk, Holland, thus freeing part of the Adler factory at Frankfurt to manufacture the Royal Model 970 office electric typewriter. Adler formed a subsidiary, Netherlands Adler Factory, Ltd., to operate these plants in Holland (DG 152-156, 165-166, 7319-7321, 7292, 7301, 7311).

Europe in general and the home market of Germany constitute the principal markets for the sale of Triumph-Adler typewriters (DG 580-581). In Germany and France, Triumph-Adler distributes typewriters through company-owned sales agencies, while in England and most of the other European countries it distributes through independent sales agencies (DG 756-761, 784-785). In 1969, Triumph-Adler had 28-30 percent of the German typewriter business in office electric typewriters; 50 percent in manual office typewriters; and 42-44 percent in standard manual portable and flat typewriters (DG 788-789).

Triumph-Adler has approximately 100 overseas markets, which are broken down by Triumph-Adler into three regions or departments: Latin America and South America, United States and Africa, and the Far East and Australia (DG 897). In Latin America, South America, Africa and Asia, Triumph-Adler sells mostly office manual typewriters through independent sales agencies (DG 756-761). In Australia, the company sells typewriters on a direct basis through company-owned sales offices in Sydney and Melbourne (DG 590-594, 756-760, 784-786, 837). In Canada, Triumph-Adler has an independent sales agent with offices in Toronto and Montreal (DG 756-760). In the

United States, Triumph-Adler sells typewriters through a network of independent office machine dealers administered through two company-owned offices—one in New York City and one in Los Angeles (see CCF 346-347; RX 69; DG 756-761).

In order to avoid being too dependent on the fluctuations of any one foreign market and to realize the highest revenue from its products, Triumph-Adler has a policy of not exporting more than 60-65 percent of its typewriter production outside of Germany. The prices are higher in Germany than in the United States. For example, the retail list price of the Adler 21D in Germany as of January 1971 was \$539.50, but in the United States it was only \$460 (DG 601-604; CX 148; RX 1814 A-D; Tr. 7351-53).

Triumph began selling electrified manual and manual office typewriters in the United States in 1955 through an independent sales company, De Jur Amsco, which was also the agency for Grundig's dictating machines, with dealers located in various cities throughout the United States (DG 60-70, 626-629; RX 2 A-D). In 1961, Triumph entered into an agreement with Esgro, Inc., Los Angeles, California, for the distribution of Triumph office and portable typewriters in the United States (RXs 3 A-D, 4 A-C). Most of the typewriters involved in the Esgro arrangement were portable typewriters sold through mass merchandisers. Triumph's arrangement with Esgro was eventually terminated largely because the dealers objected to Esgro's sales of the portable typewriters to discount houses (see CCF 352-353; DG 60-70, 629-634; RX 5).

Adler, prior to its acquisition by Triumph, had been selling office manual typewriters in the United States since 1954 through Addo Corporation, an adding machine company with a dealer organization in the United States (DG 60-70, 79, 631-632). At a later date, Triumph-Adler also began selling portable typewriters under the Adler brand through the Addo dealers. The Adler-Addo arrangement continued until early 1963 (see CCF 351, 354; DG 60-70).

In early 1963, Triumph-Adler formed its own sales company in the United States, Grundig-Triumph-Adler Sales Corporation (G.T.A.), with offices in New York and Los Angeles, to expand distribution exclusively through dealers in the United States. G.T.A. imported and distributed Grundig radios, recording devices, and Triumph-Adler typewriters under the

Adler brand name until early 1968, at which time Grundig Business Machines, Inc., was formed to handle Adler typewriters. This name was changed to Adler Business Machines, Inc., ("ABM") after acquisition by Litton in January 1969 (see CCF 355-358; CX 229; DG 60-70, 1194, 1225).

Commencing in 1963, Triumph-Adler adopted a firm policy of selling its typewriters in the United States, office and portable, only through independent office machine dealers, and it has consistently rejected offers by mass merchandisers and others to distribute Triumph-Adler products in the United States (DG 111-119, 636-639, 642, 647-656, 664-668; CX 113 A-D; RXs 6, 7 A-B, 9, 10 A-B, 12 A-B, 13 A-C, 14 A-B, 15 A-B, 16 A-D, 17 A-D, 18, 21 A-H). Triumph-Adler based its policy on the belief that, if it sold its portable typewriters to mass merchandisers, its dealer organization would become alienated and Triumph-Adler's sales of office and portable typewriters would be adversely affected (DG 111-119, 636-638, 642, 647-648, 649-656, 808-809; CX 120 A-B).

It was estimated that, if Triumph-Adler distributed its portable typewriters to mass merchandisers, it would lose approximately one-third of its dealers with the consequential loss of one-half of its office electric volume and 80 percent of its office manual volume. This was because: "The greatest enemy of office machine dealers in the United States are discount stores and the direct organizations of large manufacturers" (DG 664-668; RX 21 B).

In addition to the risk of dealer alienation, Triumph-Adler could not sell portable typewriters to mass merchandisers at a profit because of its higher costs and the mass merchandisers' incessant demand for lower prices (DG 749-750). Adler's cost of manufacturing its flat manual portable typewriter is \$33, which is also the selling price to ABM in the United States. Flat manual portable typewriters, however, are advertised and sold to the public by mass merchandisers in the United States for as low as \$29.95; consequently, even if Triumph-Adler had desired mass merchandiser business, its higher production cost would make its flat manual portable unattractive price-wise to mass merchandisers (Tr. 7279-83; RX 101).

Triumph-Adler officials have found that direct selling is the most effective way to sell office typewriters in the United States, but for a company such as Triumph-Adler the cost of building

a direct organization in the United States would have been prohibitive (DG 132). Based on the company's experience elsewhere, Adler's president, Gerd Weers, estimated that it would cost in the vicinity of \$25 million to \$40 million to establish the 90 to 100 offices required. This was a cost which was so great in relation to the company's size that the company could not even consider it (DG 590-594). Mr. Weers noted that companies with far greater resources than Triumph-Adler—Olivetti, for example—have sought to establish a direct sales organization in the United States, but without substantial success. Triumph-Adler would have faced the same problems as Olivetti, but would not be as strong financially. While at one time Triumph-Adler did consider establishing a direct sales office in Manhattan, a typewriter market as large as the whole of Canada, it rejected this proposal in favor of establishing an independent office machine dealer as its Manhattan sales outlet (DG 590-594, 786-787; CX 135 B).

f. Brother Industries, Ltd.

Brother Industries, Ltd. was established in 1934 to manufacture sewing machines. It currently manufactures and sells typewriters, sewing machines, adding machines, small appliances, electronic calculators, washing machines, vacuum cleaners, electric fans and other appliances which it markets in over 100 countries, including the United States (see CCF 555; CX 285 R, X; Tr. 343-349). Brother's United States sales are approximately \$35 million (Tr. 368).

Brother entered the typewriter business in 1961 at the suggestion of Western Auto, one of its major United States customers for sewing machines; by 1969, it was manufacturing 500,000 typewriters annually and claimed to rank among the top five typewriter companies in the world (Tr. 344-345; CX 285 E).

All Brother typewriters are manufactured in Japan and shipped to various countries including the United States (Tr. 349; RX 1573 A-B).

In 1965, Brother began to manufacture typewriters for Remington Rand, which are sold under the Remington trade name in the United States and other countries. Brother sells Remington a manual portable typewriter, two models of the compact electric typewriter, which are sold by Remington as Models 711 and 713, and two electric portable typewriters, which Remington

sells as its Models 611 and 612 (see CCF 557; Tr. 356, 4351-4352, 4369; RXs 1057, 1573 A-B).³⁶

Brother typewriters are sold and distributed in about 50 countries throughout the world. In the United States sales are made by Brother International Corporation, a subsidiary of Brother Industries, Ltd. Brother International is owned 50 percent by Brother Industries and 50 percent by three individuals (see CCF 555; Tr. 341-343, 349). Brother International was organized in 1950, and has sold and distributed typewriters in the United States through four regional offices since 1961 (Tr. 344-348, 368; CX 284 D).

The first Brother typewriter model sold in the United States was the JP-1 series flat manual portable which it sold to Western Auto and other mass merchandisers (Tr. 345-346, 369, 387, 388-389, 4347). In 1965, Brother introduced the JP-2 or 1400 series, a light duty compact electric typewriter (Tr. 346, 371, 391; RX 1046 B). Subsequently, Brother introduced the JP-3 line, which is its top of the line portable (Tr. 389-390). In 1969, the JP-4 line, which is a full featured electric portable, was introduced (Tr. 401; RX 1047 B).

Only about 10 percent of Brother's sales are made to independent office machine dealers; the remaining 90 percent are made to mass merchandisers and discount houses (Tr. 4370-71; RX 1574 A-B). Brother does not sell to end users, and its sales organization does not solicit commercial accounts (Tr. 386, 401, 4369). Brother distributes the bulk of its portable typewriters in the United States through private label accounts, such as Montgomery Ward, Western Auto, Korvette, Grant, Gamble-Skogmo, Goldblatt and the Singer Company (Tr. 347-348, 371-374, 385, 4342-46; RX 1573 A-B).

For the past six years, Brother has been the sole supplier of portable typewriters to Montgomery Ward (Tr. 2556-57). It sells portable typewriters to Montgomery Ward under Ward's Signature brand at prices substantially below Triumph-Adler's prices to its dealers for comparable models. In 1970, for example, Brother sold flat manual portables to Ward for \$21.50 and Ward retailed them for \$37.88; Triumph-Adler's cost of production of its flat portable (Tippa) was \$33 and it was sold to independent office dealers at \$36.50. Similarly, Brother's price to Ward on its standard manual portable was \$37.75; Adler dealers paid

³⁶ Brother does not sell heavy duty office electric typewriters.

\$65.00 for a comparable standard manual portable (Tr. 7292; RXs 138 B, 1055 A-D, 1669 A-C).³⁷

g. Nippo Machine Co., Ltd.

Nippo Machine Co., Ltd. is a Japanese company located in Yokohama, Japan, which has been selling Nippo time recorders and checkwriters for over 20 years (Tr. 224; RX 1190 B). In 1965, it began to manufacture flat manual portable typewriters in Japan for sale in the United States, and in mid-1970 it introduced an electric portable typewriter in the United States (Tr. 225, 231, 245; RXs 153, 1190 B-C).

Nippo sells its products in four or five countries, but as of 1969 almost 80 percent of its sales volume was in the United States (see CCF 558; Tr. 225, 247-248). Spiegel, a mail order house based in Chicago, Illinois, is Nippo's largest customer in the United States, purchasing typewriters under private label directly from Nippo's Japanese factory (Tr. 226, 234, 251). Nippo's typewriters are also delivered to an importer-distributor in New York City, who distributes them through some dealers (see CCF 559; Tr. 226, 244).

h. Messa

Messa makes standard manual portable typewriters in Portugal under contract for Sears, Roebuck & Co. The typewriters are made to Sears' specifications and sold under Sears' private label. Sears first began selling the typewriters in 1967. In that year, its purchases amounted to only \$13,000, but in 1969 they had grown to almost three-quarters of a million dollars (RX 1719; Tr. 2816, 2849, 2854).

i. Other Companies

In addition to the foregoing typewriter companies that have manufactured and sold, presently manufacture and sell, or are developing, automatic typewriters, there are a number of other companies that have developed and are manufacturing and marketing automatic typewriters. Their products consist of the same components as the IBM MT/ST and MC/ST: a heavy duty office electric typewriter and a storage, or memory, unit; and they operate in the same basic manner: the secretary or typist types the material on the typewriter; the text is automatically stored in

³⁷ Brother also sells private label portable typewriters to Remington Rand (RX 1057 A-F) and Western Auto (RX 1056 A-B) at similarly low prices compared to Adler (RX 138 B).

the memory unit; corrections, deletions and additions are typed in on the typewriter; the final text is typed out automatically under the control of the memory unit.

There are, of course, some variations among the various typewriters. Some use a magnetic tape storage medium; others use paper tape. Some contain the typewriter and memory together in a single free-standing unit; others have the two components in separate units. In some cases the typewriter and memory fit on the typist's desk; in others the typewriter rests on the typist's desk, or next to it, and the memory unit may be located under the typist's desk or in other locations remote from the typist. In all cases, the typewriter is wired to the memory unit and, whether the memory is contained integrally with the typewriter or is located elsewhere, the typewriter is the same as a standard heavy duty office electric typewriter with the addition of a few keys to operate the memory and automatic typing functions. In most cases, the typewriter component is the IBM Selectric.

A typical automatic typewriter, the Edityper, which consists of a separate typewriter and memory unit, was demonstrated by a witness (Mr. Kight) in the hearing room and the machine's appearance and operation were observed by the hearing examiner and counsel (Tr. 2932-42).

Companies which have introduced automatic typewriters include the Singer Company, with 1970 sales of \$2 billion, which markets the Flexowriter through 120 company branches throughout the United States; Itel Corporation, with 1970 sales of \$67 million, which markets the Dura Word Processor through 17 company branches and 32 sales agencies throughout the United States; Epsco Corporation, with 1970 sales of approximately \$5.5 million, which markets the Edityper through company branches in Boston, New York City and Washington, D.C.; American Automatic Typewriter Company, which markets the Autotypist through company branches in New York City, Chicago, Illinois, and Hartford, Connecticut, and 65 independent distributors throughout the country and through other distributors in approximately 20 foreign countries; Proprietary Computer Systems, Inc., a computer service company in Van Nuys, California, with affiliated bureaus in Tulsa, Oklahoma, Chicago, Illinois, Richmond, Virginia, and New York City, which has been marketing time-shared automatic typewriter service since 1969; and VIP Systems Corporation, which has been marketing a simi-

lar service in Washington, D.C., Philadelphia, New York City, Boston, Chicago, and Cleveland since 1966 (Tr. 2454, 2501, 2644-45, 2959-2960, 6027, 6069, 6128-6130, 6174-75, 6214-16; CX 361; RX 1774).

Witnesses from all of the companies just named, which the hearing examiner finds represent a comprehensive cross-section of automatic typewriter suppliers, appeared and testified concerning the features, operation, use, advantages, growth and potential of automatic typewriters.

In addition to these companies, the evidence in the record establishes that there are a number of other companies that have recently entered, or are planning to enter, the manufacture and sale of automatic typewriters. Because of the rapid increase in sales of automatic typewriters and the number of companies in the field, the record does not show the identity of all companies in the field. Some of the others that were identified in the record, however are Quindar Electronics, Redactron, Novar Corporation, Bechtel Engineering Corporation, Boeing-Vertol and Varian Corporation (Tr. 1495-96, 2453-54, 2463, 2500-2501, 2506, 2507, 2598, 2601, 2647-49, 2959, 2962, 2970-73, 2975-76, 6069, 6100, 6109, 6111-12, 6129, 6204-6206, 6214, 6222-23, 6228; CX 357; RX 1913).

B. Line of Commerce

1. Introduction

Several lines of commerce have been proposed by Commission counsel and respondent. For example, Commission counsel contend the typewriter industry as a whole is a relevant market. Respondent agrees there is a typewriter industry, but argues that there is no economic or legal significance in measuring the industry as a whole as a determination of the actual or probable effects of the acquisition. The parties also disagree as to the products and companies properly included in the typewriter industry.

Similarly, Commission counsel contend there is an office typewriter market which includes office manuals, standard office electric and compact office electric typewriters. Respondent admits that "office typewriters" is a generic term that loosely covers all typewriters generally used in an office, but argues that it is not proper to lump such typewriters together as a market for Section 7 purposes because to do so would result in a hodgepodge of dissimilar products that would have little significance in analyzing the economic and commercial effects of the acquisition.

Respondent claims that heavy duty office electric typewriters constitute the most important market for any Section 7 analysis, and that performance characteristics and sales trends of office manual and compact office electric typewriters are such that neither of these products is determinative of the issues in this case.

Commission counsel also contend that office electric typewriters are an important relevant market which includes both heavy duty standard office electrics and light duty compact electrics. Respondent agrees that heavy duty office electric typewriters are an important relevant market—in fact, the most important relevant market in the case—but would include heavy duty standard office electric and automatic office electric typewriters and exclude the compact office electrics.

Commission counsel contend that office manual typewriters are a significant relevant market, but respondent denies this on the ground that office manuals are fast declining in use and no longer have a significant impact on competition in general or on any particular company.

Both parties agree that there is a portable typewriter market, and respondent contends, in addition, that the portable electric segment of that market is a significant submarket for measuring the effects of the acquisition on portable typewriters.

A basic difference underlying Commission counsel's and respondent's proposed relevant markets is that Commission counsel's proposed markets are based on historical distinctions. For example, Commission counsel contend that office manual typewriters are a relevant market which has been recognized since before the turn of the century. Respondent argues, to the contrary, that relevant markets, to be economically and legally significant for measuring the competitive effects of the acquisition, must reflect the competitive reality of the marketplace, which means—in this case—the trends and changes taking place in the industry, such as the introduction of the automatic typewriter as a substantial factor during the past decade; the change from manual to electric typewriters; and the increasing significance of heavy duty office typewriters and portable electric typewriters to the industry.

Respondent contends that these trends and changes are caused by the changing patterns of usage and needs of the customers and that it is the customer needs as they exist today and will exist in the foreseeable future that, in the final analysis, de-

termines the relevant product markets in this Section 7 case. For example, Mr. Doyle, manager of Market Research and Forecasting for IBM, called as a witness by Commission counsel, testified on cross-examination:

Q. Is it your understanding that any meaningful definition of a typewriter market must be considered over a period of time?

A. Yes.

I think of the typewriter market as the number of users or possible users, shifting them with each year, to which the number of manufacturers, including my employer and the one you represent, sell products (Tr. 1423).

Q. As I understand it, Mr. Doyle, the true definition of the market is the demand of buyers for machines to serve a function or to serve different functions.

A. Yes, a market is made up of either users or potential users of a product. That constitutes a demand. Obviously, you don't have a market if you don't have suppliers to satisfy that demand (Tr. 1428).

Q. This market then will always remain the same, but the equipment will change as time moves on.

A. Well, except that the number of users and the manner in which they use the equipment will change (Tr. 1428-29).

Q. What will change is the equipment which will be necessary to satisfy this market?

A. That is correct (Tr. 1429).

Q. In defining a typewriter market, in your opinion is it the location of demand which is the most important factor?

A. Not the location.

Q. What is the most important factor? When I say location I am thinking about whether it is commercial, school or government and also within each of those three categories the type of commercial account, the type of government account.

A. To any of that, I don't think that is the principal characteristic. To my mind the principal characteristic is the function performed that characterizes the demand.

Q. What do you mean by the function performed?

A. The customers have a need to do a certain kind of work. As it happens in offices or similar environments the kind of work that is done on typewriters could be characterized as a function. We discussed it yesterday. That to me is the crucial characteristic to determine the market.

Q. It is your [IBM's] purpose to satisfy that need in the particular function that is being performed in that office.

A. Yes (Tr. 1439-1440).

For reasons which will be discussed hereinafter, the hearing examiner finds that the typewriter industry marks the outer boundaries of the relevant market but that an analysis of the industry as a whole has little significance in determining the effects of the acquisition in question. There are certain clearly defined and economically significant markets within the industry that are relevant product markets for determining the actual and probable effects of the merger for purposes of Section 7. The hearing examiner finds there is an office typewriter market which includes heavy duty standard office electric and automatic typewriters, light duty compact office electric typewriters, and office manual typewriters. The examiner also finds that there is a heavy duty office typewriter market which includes standard office electric typewriters, both new and factory-reconditioned, and automatic typewriters. Portable typewriters also constitute a relevant product market and the portable electric typewriter submarket is the segment which is most important in determining the effects of the acquisition regarding portable typewriters.

2. Consideration of Relevant Markets

a. Typewriter Industry

The grouping of all typewriters together, as proposed by Commission counsel is not economically meaningful in the determination of probable competitive effects. Such a grouping lumps together many different kinds of typewriters with completely different physical characteristics and uses with no reasonable interchangeability of use. For example, portable typewriters, designed for home and student use, are not functionally interchangeable with heavy duty office electric machines, which are designed to withstand heavy duty typing tasks in commercial, government and school offices (DG 607-612). Moreover, such a grouping brings together typewriters with vastly different prices. For example, the IBM Model D standard office electric typewriter retails for \$510, while portable typewriters sell for as low as \$29.95 (RXs 101, 461). In addition, the overwhelming volume of portable and office typewriters is distributed through different channels of distribution, and typewriter companies traditionally have maintained separate sales forces for the distribution of these diverse kinds of typewriters. For example, Remington and Royal maintain consumer products sales forces which sell portable typewriters to dealers and mass merchandisers, and separate office

products sales forces which sell office typewriters directly to end users and to dealers (Tr. 446-448, 7138).

Finally, the inclusion of all typewriters, office and portable, heavy duty and light duty, in the same market creates the appearance of competition where none exists since all typewriter companies do not sell in the same markets. IBM manufactures only heavy duty office electric typewriters; R. C. Allen manufactured only office manual typewriters; Nippo and Brother sell basically portable typewriters although Brother does sell what it calls a compact office electric typewriter; and SCM does not manufacture heavy duty office electric typewriters or manual office typewriters. Therefore, any analysis of concentration in the typewriter industry as a whole would be meaningless.

b. Office Typewriters

Commission Exhibits 301 and 306, which set forth Commission counsel's data relating to sales of all office electric typewriters and all office manual typewriters, are defective in that they combine sales of heavy duty standard office electric typewriters with sales of light duty electric typewriters and office manual typewriters—which together account for a declining share of all office typewriter sales (RX 1890)—but fail to include sales of automatic typewriters and factory-reconditioned typewriters, which are the most rapidly growing segment of the sale of office typewriters (Tr. 8629-8630, 8632).

As the trend shows in Chart 1, following, the total office typewriter market is secondary to the over-riding economic importance of the heavy duty office typewriter market which constituted 80 percent of the total office typewriter market in 1969.

Heavy duty office typewriter sales were increasing at a rate in 1969 which would reach 90 percent by mid-1970. The light duty office segment is already so small that, regardless of what strength, in terms of market share, a company may have in it, that strength, standing alone, would not be enough to make that firm a viable competitor in the combined heavy duty and light duty office typewriter market. Therefore, the competitive trends in heavy duty office sales will determine what happens in the combined heavy duty and light duty office sales (Tr. 8633-35).

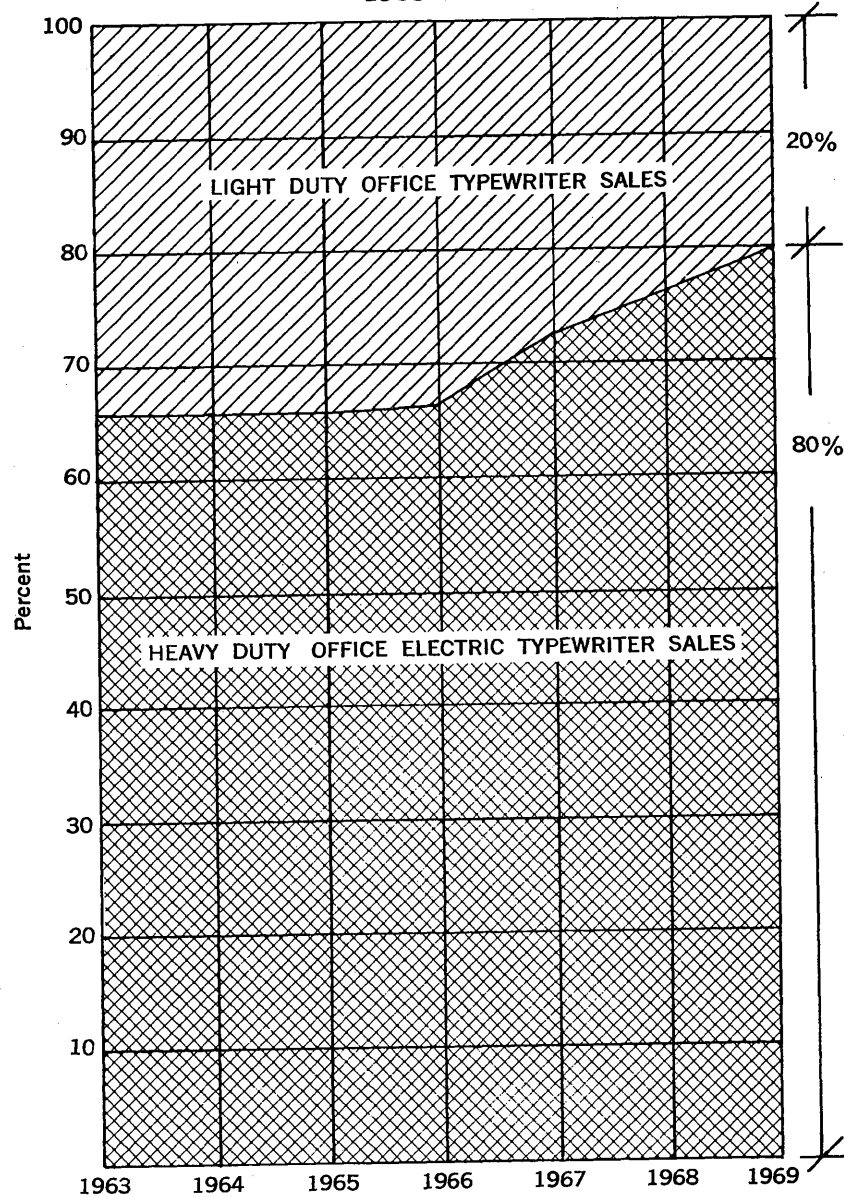
c. Light Duty Office Typewriters

Commission counsel do not contend that light duty office typewriters, which include both office manuals and light duty office

CHART 1

Heavy Duty Office Electric Typewriter Market as a Percentage
of Total Office Typewriter Sales, United States
1963-1969

Source: RX 1890



electrics, constitute a relevant market. When considered separately, they do not contend that light duty office electrics constitute a market, but they do contend that office manual typewriters constitute a relevant market (CCF 601-608).

(1) Office Manual Typewriters

Commission counsel's own data demonstrate the substantial decline in the sale of office manual typewriters. Commission Exhibit 303, for example, shows that in 1966 almost 466,000 office manual typewriters were sold in the United States, and that two years later, in 1968, these sales had declined to 354,000 units, a decline of more than one-fifth. Further, according to the Bureau of the Census *Current Industrial Reports*, the value of factory shipments of office manual typewriters dropped from \$64 million in 1966 to \$27.5 million in 1969, an erosion of over 50 percent in a three-year period (RX 1912 A-D; Tr. 8393). Moreover, office manuals represented only about 5 percent of total typewriter sales in 1969, and the great bulk of office manual sales are made to the low or negative profit school and government accounts (RXs 1560 B-D, 1563, 1571 N, 1590, 1605, 1744, 1745 A-B, 1813, 1854; Tr. 756, 4896-4899, 6350-6355, 6397-98, 6416-17, 6427-28, 6598, 6599-6601, 7283-7285, 7289-7290, 7310-7311). The contribution that office manuals make, therefore, to the competitive potential of the manufacturers is far less than the absolute figures indicate.

The basic reason for the decline in office manual typewriters is that their usefulness is declining drastically—they are obsolescent. Large typewriter purchasers, including commercial offices, universities, banks, and insurance companies and schools that teach typing are discontinuing the use of office manual typewriters for regular office typing and for teaching typing and are replacing them with heavy duty office electric typewriters in order to increase the productivity of their employees. The primary use to which office manuals are put is to perform light duty typing tasks in areas where typing is not the principal work assignment. *Universities and Schools*: (Georgetown) Tr. 2877-79, 2891-92; (Columbia) Tr. 5434-36; (U. of California) Tr. 6242-45, 6257-58; (Chandler School) Tr. 5433; (MTI) Tr. 6142-43; (Gibbs) Tr. 5402, 5406; *Commercial Offices*: (Dupont) Tr. 5009-5010, 5031-32; (Union Carbide) Tr. 5035-38; (General Foods) Tr. 5100, 5104; (TWA) Tr. 5209-5210, 5213; (Xerox) Tr. 5254-55; (Shell) Tr. 5296-97; (Morton Salt) Tr. 5327, 5332-

33; (Ford) Tr. 5366;³⁸ (Standard Oil of Calif.) Tr. 5827; *Banks*: (Chase Manhattan) Tr. 5067, 5072; (United Calif. Bank) Tr. 5709-5711, 5730-31; (Crocker-Citizens) Tr. 5785-86, 5788; and *Insurance Companies*: (Metropolitan Life) Tr. 5132-33; (Firemans Fund) Tr. 5738, 5775; see RPF 452-455).

Of even greater significance is the fact that the domestic manufacturers have withdrawn from the production of office manual typewriters. Olivetti discontinued domestic production in 1968; R. C. Allen discontinued all production in 1970; SCM discontinued all production in 1970; Remington discontinued domestic production in 1971; and Royal is shifting its remaining production of office manuals to England (Tr. 512, 654, 1517, 4744-45; RXs 403, 405, 1193, p. 6, 1558 C, 1592 A-B, 1605, 1917 B). No other single fact so vividly illustrates the dying nature of manual typewriter demand in the United States and the unprofitability of manual typewriters than the wholesale withdrawal of all of the domestic manufacturers from manual production. In a product line which is shrinking so fast and where prices are constantly trending downward, there is no economic significance in examining market shares. "[A] firm that relied on that market would not long exist as a company" (Tr. 8640).

(2) Light Duty Office Electric Typewriters

Light duty office electric typewriters, or "compacts" as they are frequently referred to in this record, do not perform heavy duty typing tasks and will not stand up mechanically under heavy duty use, nor do they contain features required to perform heavy duty office typing applications. As this record shows, they are used at typing stations where typing loads are light (Tr. 5011-5012, 5036, 5072-73, 5259-5261, 5282-83, 5298, 5346-47, 5447, 5759-5760, 6258). Light duty electric typewriters include the Royal 550 and 560 series (RX 267-268; Tr. 826, 1981-87, 6446, 6984-86; Olivetti Praxis (Tr. 489, 779, 1516; Brother JP2, Models 1401 and 1411 (Tr. 391, 396, 4360-61; RX 1046 B); SCM 250, 315, 500 series (Tr. 489, 777, 4459-4462; Remington 711 and 713 (Tr. 480-81, 779, 4393, 4510-11, 4514); Olympia 35 (Tr. 314, 488-489, 768); and Hermes 10 (Tr. 779, 489; see RPF 463-472).

³⁸ Ford's manuals "are used by individuals that are not experienced typists, that use the hunt and peck system" (Tr. 5366).

In arguing that the Royal 550 is a heavy duty office typewriter, Commission counsel rely on an ad that ran for a short time soon after the typewriter was introduced in 1967, which referred to the Royal Model 550 as a "heavy duty" typewriter (CCF 179-180, 590, fn.*, p. 313). But contemporaneous Royal internal documents establish that the Royal 550 was in fact designed to be sold to schools rather than to commercial offices for the performance of heavy duty typing tasks (RXs 267-268, 1981-87, 6446). Royal's midwestern sales manager, in a memorandum written in the regular course of business to his district managers, concurred in by the vice president and general manager of Royal's Office Typewriter division, stated in 1967:

The 550 is a typewriter really designed for schools and Government. * * *

* * * If we are to penetrate this market [the big market for electrics], it *MUST* be done with the 660. The 550 is not designed to do this job and, for that matter, will not do it. The GA [predecessor to the 550] did not successfully penetrate this market, and it would not be logical to expect the 550 to do it. * * (RX 267 A).

The record confirms this contemporaneous statement. In actual fact, the Royal 550 was sold to schools versus commercial in the ratio of about four-to-one (RX 271).³⁹

Royal always recognized the distinction between its high-priced office electric typewriter (660), and low-priced office electric typewriters such as its 550, the SCM 250, and Olivetti's Praxis. In fact, in the pie chart at page 140 of Commission counsel's proposed findings, the 550 is grouped with the SCM 250 and Olivetti Praxis as low-priced electrics (CX 39 T; see CX 64 H-I quoted by Commission counsel at pp. 139-140).

Impartial typewriter users likewise considered the Royal 550 a light duty typewriter, and to the extent it was purchased by commercial offices it was used for light duty typing purposes: Xerox Corporation classifies the Royal 560-565 (more recent version of the 550) as a medium duty typewriter for light typing uses (Tr. 5261-5262); General Telephone Company uses the Royal 560, with special large type, as a light duty typewriter to type employee identification badges (Tr. 6293-94); Metropolitan Life Insurance tested the Royal 550 and determined it was too light-weight for heavy duty typing application (Tr. 5140); TWA tested

³⁹ Olivetti notified its sales force that its Praxis compact model was priced to compete with Royal's 550 for school business (RX 861). Olympia, for example, did not consider Royal's 550 as a competitor to its Model 50 heavy duty office electric typewriter (Tr. 826).

the Royal 550 and found that it had no application in a commercial high-production office (Tr. 5234); Illinois Bell Telephone Co. concluded that the Royal 550 would not hold up under heavy duty typing (Tr. 5273-74); and Morton Salt and Ford purchased a small quantity of the Royal Electress, the predecessor of the 550, for "strictly" light duty use (Tr. 5323-27, 5366-67).

SCM's Model 250, the first compact office electric, was designed as "truly the ideal manual typewriter replacement" (RX 1199 C; Tr. 583, 626-627).⁴⁰ Mechanically, the SCM 250, a "king-size" portable with a high commonality of parts with other SCM portables, is suited only for light duty use (Tr. 6586-87, 6595-97, 6646-47). For example, the "Medalist Power 12" which SCM sells to Sears as a portable typewriter is almost identical to the SCM 250 (Tr. 3060-61, 5575-82; see RPF 467-470).

The preponderance of the evidence shows that compact electrics have characteristics and uses which distinguish them from the standard office electric typewriters.⁴¹ For example:

(1) Olivetti describes its Praxis as designed to function as "a compact machine that combines the benefits of electric operation and portability" (RXs 735, 774; Tr. 1516; see RPF 463);

(2) Brother presently classifies its JP-2 model typewriters which include the Models 1401 and 1411, as compact electric typewriters which are designed for light typing stations and small offices where heavy duty typing is not required (Tr. 391, 4348-49, 4360-61);

(3) The Remington Models 711 and 713 typewriters purchased from Brother are classified by Remington as compact light duty office electric typewriters, a step above the portable range, but not in the same class with Remington Models 25 and 26 heavy duty office electric typewriters (Tr. 480-481, 779, 4393, 4414-15);

(4) The Olympia 35 is classified by Olympia as a compact designed for light duty typing use in secondary typing stations (Tr. 723, 768-769, 777-779); and

(5) Paillard's Hermes 10 has been called nothing more than "a husky portable" (Tr. 6539-6540).

The record is devoid of evidence showing the volume of compact electrics sold for office use, but it does show that many com-

⁴⁰ SCM chose the term "compact" rather than "intermediate" for the 250 so as not to suggest that the 250 was something less than an ordinary typewriter, but also to indicate that it was a unique item (Tr. 626-627).

⁴¹ Some commercial accounts considered purchasing compact electrics and rejected them (Tr. 5036, 5072-73, 5146-49, 5234-35, 5278, 5282-83, 5346-47, 5759-5760); others purchased some compact electrics and declined to buy more (Tr. 5278, 5298, 6305-6307).

pact electrics are sold as "high end" electric portables for home and student use (Tr. 5900-5901, 6304-6307, 6444-45, 6586-87, 6595-97, 6646-47).

For these and other reasons expressed in the initial decision, the hearing examiner finds that light duty office typewriters do not have a significant effect on competition in the office typewriter market and are not an "economically significant submarket [in which] to determine if there is a reasonable probability that the merger will substantially lessen competition." *Brown Shoe Co. v. United States*, 370 U.S. 294, at 325 (1962).

d. Heavy Duty Office Typewriter Market

As previously indicated, the typewriter industry is comprised of several distinct markets, submarkets and segments of markets which are demarcated in terms of performance, technology, size, growth rates and other economic factors, including profitability, distribution methods, and, very importantly, relating to all of these, the ability of the firm to be a viable firm if it depends on that market for its existence (Tr. 8340-41, 8723-25 A; RXs 1844-1847, 1848-1886, 1887-1890, 1891, 1892-1904, 1903-1908).

From the standpoint of concentration trends and business and economic significance, the heavy duty office typewriter market is the most important market in the typewriter industry for measuring effects within the meaning of Section 7 (Tr. 8303-8306, 8996; RX 1844). Sales of heavy duty office typewriters have increased from \$138 million in 1963 to \$352 million in 1969, an increase of 225 percent in a six-year period (RX 1848).¹² During this period, the sales of heavy duty office typewriters increased from 50 percent of the total sales of all typewriters to 63 percent of total typewriter sales. Thus, by 1969, almost two-thirds of the total typewriter sales in the United States were of heavy duty office electrics (Tr. 8403-8404; RXs 1854, 1888).

Chart 2, following, shows the relationship of the sales of heavy duty office electric typewriters to sales of all typewriters and graphically demonstrates the over-riding importance of heavy duty office electric typewriter sales as a relevant market for Section 7 purposes.

The heavy duty office typewriter market consists of new heavy duty office electric typewriters, factory-reconditioned heavy duty office electric typewriters, and automatic typewriters, which per-

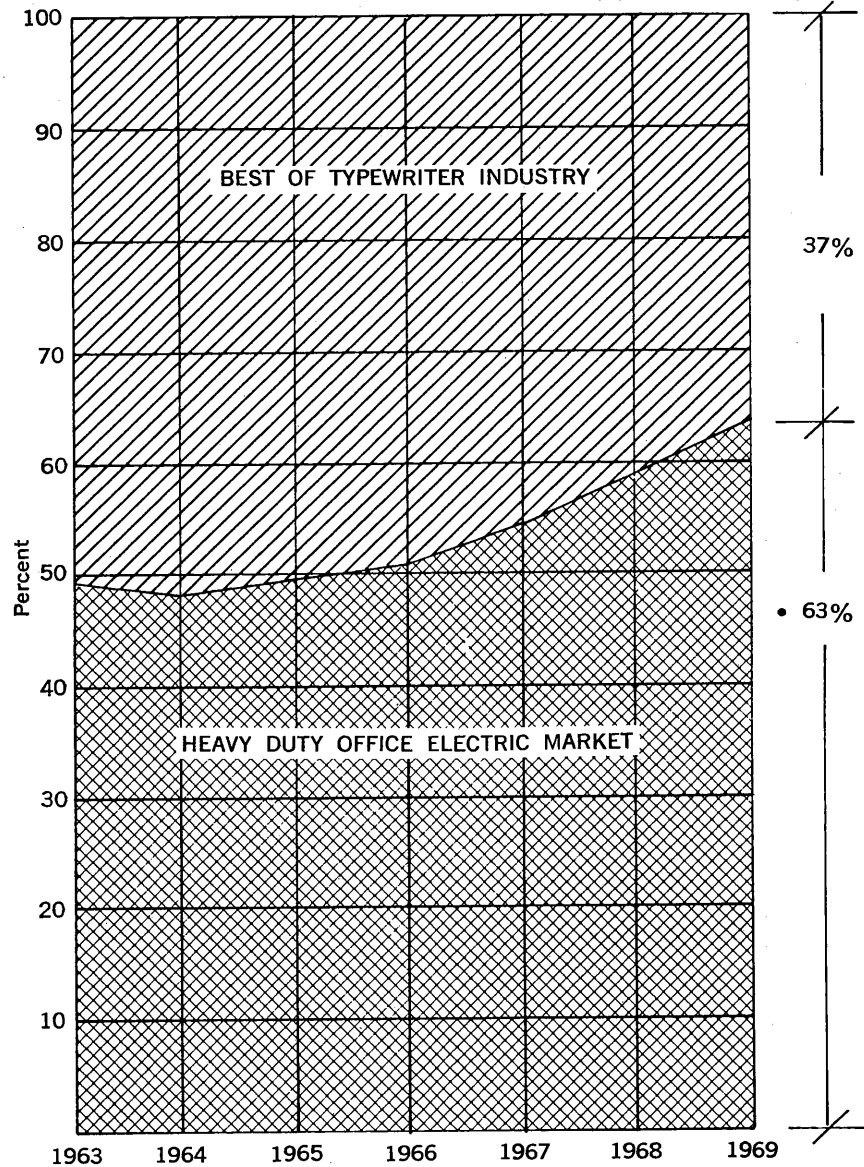
¹² 1969 has been used as the cut-off date for market statistics because this was the last full year prior to commencement of the taking of testimony in this case.

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CHART 2**Heavy Duty Office Electric Typewriter Market as a Percentage
of the Total Typewriter Industry, United States****1963-1969**

Source: RX 1888



form heavy duty typing functions in commercial and government offices and schools throughout the country. All of these typewriters perform similar functions in offices, and are sold by similar methods to the same types of customers. The evidence of record shows high cross-elasticity of demand among these typewriters.

Commission counsel agree that standard office electric typewriters are part of the office typewriter market, but they dispute respondent's claim that factory-reconditioned and automatic electric typewriters are part of this market for the purpose of determining the effects of the acquisition of Triumph-Adler. As the following findings demonstrate, factory-reconditioned and automatic electric typewriters are, in fact, part of the heavy duty office electric typewriter market.

Factory-reconditioned typewriters have the same characteristics and uses as new heavy duty standard office electrics; they are similar, physically and in performance. They compete with heavy duty office typewriters in the performance of heavy duty typing functions in schools and commercial offices (Tr. 2880, 2884, 2889-2890, 5907-5908, 6153, 6250-52, 6356-59, 6450-52, 6454, 6457-58, 6498-99, 6505, 6612-13, 6717-18, 6724-25, 7278). Advertising states that "Next To A New IBM Typewriter Your Best Buy Is One Reconditioned By IBM" (RX 1788 B). IBM's factory-reconditioned typewriters have made substantial inroads in the marketplace and now rank second in total sales to independent office machine dealers (RXs 620, 622, 647 B, 1782-1785 A-D, 1786, 1787 A-F, 1872, 1914; Tr. 4029-4030, 4042, 5910-15, 6450-52, 6503-6505, 6717-18).⁴³ Indeed, there are more dealers in NOMDA selling IBM reconditioned typewriters than for any other typewriter manufacturer (Tr. 6550; see RPF 499-502).

Contrary to Commission counsel's contention (CCF 590, fn. *, p. 312), automatic typewriters are properly included in the heavy duty office typewriter market because they perform the same functions and uses in offices as standard heavy duty office typewriters: they are sold to the same customers; the cost savings achieved by use of automatic typewriters makes them cheaper in the long run; and they compete with standard office electric

⁴³ Commission counsel's contention that RX 1848 is not reliable because it "totally ignores" all reconditioned typewriters other than IBM factory-reconditioned machines (CCR 50, 246-247), is incorrect in that the table includes Royal reconditioned typewriters (Tr. 8328) and, as Commission counsel, themselves, recognize (CCR 247), none of the other typewriter companies doing business in the United States sold factory-reconditioned office electric typewriters except on very rare occasions (Tr. 197-198, 297, 678, 4516, 4722-23; RX 1571 C).

typewriters in that they are impacting sales of standard office electrics made by IBM and other typewriter companies (RX 1848; Tr. 8321-25).

Currently, the major manufacturers of automatic typewriters are IBM, the Dura Division of Itel Corporation, the Friden Division of Singer Corporation and Edityper, a wholly-owned subsidiary of Epsco, Inc. Although not manufacturers, other companies are presently fabricating and marketing automatic typing equipment including Proprietary Computer Systems, Inc. and VIP Systems, Inc. (Tr. 2452-54, 2472, 2598-99, 2611-12, 2627, 2632-33, 2913-19, 6025-26, 6038, 6042, 6045-47, 6051-54, 6101-6104, 6108-6109, 6173, 6188-6192).

As numerous witnesses, including manufacturers and commercial accounts, have testified in this proceeding, both large and small offices use automatic typewriters to perform ordinary office typing functions including letter writing and other correspondence (Tr. 2454-2464, 2477, 2599, 2602-2603, 2628, 2646-47, 2920, 6025-26, 6047-47, 6049-6052, 6058-6062, 6101-6104, 6109, 6112-6115, 6121-22, 6124-28, 6173-75, 6193, 6200-6201, 6239, 6969; RXs 635 N, 1675 B, 1764 D, 1765, 1766-67). The uncontradicted testimony of commercial users demonstrates the definite trend towards replacement of standard office electric typewriters with automatic typewriters for ordinary office typing functions (Tr. 2488-89, 2627, 2895, 2962, 5012-14, 5029, 5079-5085, 5114-5128, 5153-54, 5161-62, 5214-17, 5219-5225, 5232, 5262-64, 5309-5312, 5333-5341, 5345, 5377, 5724-25, 5728, 5731-32, 5747-5757, 5779-5780, 5793-99, 5830-37, 5841-46, 5851-52, 5855, 5874-76, 5922, 6340, 6453-54, 6485-86, 6612, 6766-68, 7821, 8347-49).

Moreover, as the testimony of the president of NOMDA shows, the independent office machine dealers are in direct competition with the automatic typewriters in their effort to sell standard office electric typewriters (Tr. 6612):

Q. Are you familiar with the IBM MT/ST? And the IBM mag card?

A. Yes. I am.

Q. Do they compete against your standard office electric typewriters?

A. Yes, they do; very effectively.

Q. Is IBM successful in replacing standard office typewriters in your area with the MT/ST and the mag card?

A. Yes, they are.

The record also shows that automatic typewriters are substantially more efficient than standard office electric typewriters. Two automatic typewriters replace a minimum of three standard electric office typewriters. This produces a savings of not only the cost of one standard office electric typewriter, but also the cost of one secretary's salary and fringe benefits and the cost of floor space and furnishings for a typing station (Tr. 5079-5084, 5219-5224, 5309-5312, 5747-5751, 5833-35, 5841-44, 5874-76, 8321-25). For example, Standard Oil of California analyzed the cost per page of correspondence upon replacing standard electric office typewriters with automatic typewriters and found that, whereas the national average cost is approximately \$3.50 per page, with automatic typewriters the cost per page was reduced to \$2.50 (Tr. 5833-34). In fact, Standard Oil saved \$65,000 per year by installing 11 MT/ST's to replace a larger number of standard office typewriters (Tr. 5841-44). Similarly, TWA installed IBM's automatic typewriters in New York in place of standard office electric typewriters and eliminated 51 typing stations and effected a net reduction of 31 typists for an annual savings of \$300,000 (Tr. 5215, 5219-5224, 5231).

IBM contends that its MT/ST permits a typist to "handle correspondence, itineraries, proposals and itemized statements more than 50 percent faster (with less proof-reading, too)" (RX 517). Further, in one IBM proposal, it confirmed that "With the IBM Magnetic Card 'Selectric' Typewriter (MC/ST) as output to [its word processing] system, three secretaries will be able to do 75 percent of the typing now being done in Personnel—in effect, doing the typing of nine secretaries" (RX 657 B).

When IBM introduced the Mag Card automatic typewriter (MC/ST) in 1969, it recognized that it would be used for ordinary typing functions and replace standard office electric typewriters:

2. The base MC/ST will be readily accepted and justifiable in typing stations due to the following factors:

- a) Simplicity of operation, reduced size and lower acoustical level.
- b) Lower selling/rental price vis-a-vis the MT/ST.
- c) Acceptance will not be contingent on the need for difficult or dedicated applications.
- d) Reduced operator training time and greater overall reliability.

*These factors will lead to a deeper penetration of the ET Market by power typewriters and increase the revenue yield and profitability rate per sales man hour. (RX 635 E; emphasis supplied.)*⁴⁴

IBM forecast that its MC/ST would replace standard office electric typewriters in the following proportion:

- j) One MCST will displace .65 Electric typewriters (of those displaced, .70 will be IBM ET's) (RX 635 F).

As Dr. Weston testified (Tr. 8322):

* * * this is one of the rare instances in cases of this sort where you have concrete measures of cross-elasticity. It is very high, which indicates that the automatic electric typewriter and the standard office electric typewriter are in the same market.

After surveying the users of office typewriters in the United States (RX 641), IBM concluded that:

MC/ST's will be sold exclusively to *Typing Stations*. A *Typing Station* is the job held by a single typist, stenographer, secretary or receptionist using one or more typewriters primarily to transcribe material prepared by others, regardless of the amount or kind of typing done (RX 641 Z6).

IBM acknowledged the direct and immediate competition between the automatic typewriter and the standard electric typewriter, in predicting that the impact of the MC/ST on electric typewriter sales would range from a low of 45,000 to a high of 80,000 lost electric typewriter sales (RX 641 Z71). It concluded that out of every hundred sales of the Mag Card Selectric typewriter, eighty of the automatic typewriters would be installed to replace 60 IBM standard electrics and 20 competitors standard electrics; twenty of the automatic typewriters installed would be at new or expanded stations (RX 641 Z72-76).

As IBM proclaims, the automatic typewriter is "The typewriter that allows the businessman to change his mind * * * and a secretary to make mistakes" (RX 528 B); "a typewriter that works the way people work * * * not the way machines work"

⁴⁴ IBM perceived that the market for the "power typewriters" arose out of the businessman's need to achieve lower cost typing (RX 635 F, 661 G).

(RX 529 D); “ * * * a typewriter that can keep them from wasting the hours they’ve been wasting and costing the fortunes they’ve been costing” (RXs 530 A, 531-32).

Evidence of the trend toward automatic typewriters and recognition of the growing importance of automatic typewriters in offices is the fact that many of the traditional typewriter companies are developing automatic typewriters. Royal, for example, in early 1966 began development on an automatic typewriter. The project evolved initially into an effort to develop a display typewriter wherein the operation of a keyboard would display characters on a cathode ray tube screen (Tr. 4927-29). Later Litton employed a modular concept wherein the printer, keyboard, display, and the magnetic tape could be combined in various packages depending upon the customer’s needs (Tr. 5596-97). This more flexible approach was determined after Royal’s newly formed Product Planning Force had conducted over 100 customer interviews to determine customer needs and the market, had examined automatic typewriters in use, and had observed the flow of paper work in various business establishments. Project Paper Flow “ * * * was tailoring the equipment to specific business applications for maximum flexibility * * * ” (Tr. 7717-18; RX 357 H-I).⁴⁵

In April 1970, Royal’s staff studying the impact of automatic typewriters on the sales of standard heavy duty office electric typewriters submitted a report which concluded in part:

The labor force performing typing and the cost of this labor force is exceedingly large and will grow.

* * * * *

The cost of typing equipment is small relative to labor costs. However, automatic typewriters, which increase per-typist productivity and alleviate increasing labor costs, will continue to grow at a substantially greater rate than non-automatic typewriters.

* * * * *

An opportunity exists to enter the automatic typewriter business. If Royal elects not to participate, its share of the total office typewriter business will decline relative to the total market and IBM (RX 362 L).

The evidence cited above together with other evidence of record clearly demonstrates that it is necessary to include automatic typewriters in any universe of office typewriters.

⁴⁵ Through the end of fiscal 1969, Royal had expended \$1,351,000 on the development of an automatic typewriter (RX 355 E). It had an investment of \$3 million planned for fiscal 1970 (RX 355 V).

e. Portable Typewriters

(1) *Total Portable Typewriter Market*

Both Commission counsel and respondent agree that portable typewriters constitute a relevant market for the purposes of this case. The hearing examiner agrees and finds that the uncontradicted evidence of record demonstrates that the portable typewriter market is a relevant market in this case which has substantial economic and commercial significance.

(2) *Electric Portable Typewriters*

Sales of electric portable typewriters constitute a relevant product submarket for Section 7 purposes and is the most meaningful economic segment of the portable typewriter market (Tr. 8369-8370, 8941-42).

Trends in the total sales of portable typewriters show that electric portable typewriters have increased from 15 percent of total portable typewriter sales in 1963 to 47 percent 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 relatively flat trend during this period. As Respondent's Exhibit 1892 shows, the rate of relative growth of electric portables is increasing and is the most dynamic portion of the market. It is questionable whether any typewriter company can be successful in the portable typewriter business in the future without a line of quality electric portables (Tr. 8370).

3. *Quantitative Measurement of the Relevant Markets*

Commission counsel (CCF 560-565) have formulated market share analyses on the basis of suggested retail dollar sales (CXs 305-309) and units (CXs 300-304). They seek to justify their use of units and suggested retail dollar sales on the grounds that typewriter manufacturers report such figures to the Bureau of the Census (CCF 560), typewriter companies sell typewriters at more than one level of distribution (CCF 560), and some companies employ unit and retail sales data in making market studies and other analyses (see CCF 561-562, 564-565). Respondent denies that either suggested retail dollar sales or units are meaningful measurements of market shares in this industry and asserts that the most economically meaningful measurement is the actual dollar revenues realized by companies in the sale of typewriters (RPF 347-443).

Commission counsel argue that suggested list price is the proper measure of market share because it is reported to the Bureau of the Census (CCR 188-189, 196). In fact, however, dollar value representing suggested retail list prices is not the only measure of typewriter sales that is published by the Bureau of the Census. Indeed, there are at least three separate Census publications containing eight reports showing information on typewriters, including the *Census of Manufacturers*, the *Census of Business*, and the *Current Industrial Reports*. Only two of these eight reports use dollar value based on suggested retail price for any purpose.

In both its five-year *Census of Manufacturers* and the *Annual Survey of Manufacturers*, the Census Bureau collects and publishes the *value of shipments* of typewriters and the number of units shipped by manufacturers. Value of shipments is net dollar value, f.o.b. plant, after discounts and allowances, freight charges and taxes. The dollar value of shipments in both of these Census reports was prepared in the same way as, and are comparable to, respondent's actual dollar revenues. In these two major reports, the Bureau of the Census does not use suggested retail list prices at all.

The two kinds of data which use dollar value representing suggested retail list prices are both in the *Current Industrial Report* series. In the *Current Industrial Report* for office computing and accounting machines, one of two tables presents such data, but it is presented in direct conjunction with data on value of shipments shown in the second table. In the report for typewriters, only domestic sales (and not factory shipments) are presented on a suggested retail list price basis. This simplifies the reporting problems in connection with foreign manufacturers' typewriters. But there is no reason to use this secondary data here, because the record contains the actual realized sales of all of the foreign manufacturers.

The use of suggested retail prices is not a valid measure of market shares in this case. They are fictitious where sales are made to dealers, mass merchandisers, schools or governments. They are correct only for those sales made directly by a manufacturer at commercial list prices to accounts to which no discounts are given. Suggested retail prices accurately reflect transfer prices only for commercial sales by IBM and, in a few instances, for commercial sales by Olivetti, Royal and Remington to customers who do not receive national account discounts or

quantity discounts. Most manufacturers sell office typewriters to dealers at 40 percent off suggested retail prices (Tr. 810, 4279, 6721; RXs 68 A, 1113). In addition, national account and quantity discounts are available up to 10 percent and manufacturers often conduct special promotions to their customers, such as 3 machines for the price of 2, and urge dealers to pass the discounts on to their customers (*e.g.*, Tr. 4440-42; RXs 970-971, 973-976, 978-985, 988, 1113). These promotions result in additional discounts from 20 percent up to 33 percent on both the wholesale and, subsequently, the retail level. Thus the magnitude of the distortion that occurs from using suggested retail dollar sales is very substantial when suggested retail list prices are compared to actual sales (RXs 1900-1902; Tr. 8363-64, 8454-57; see RPF 401, Tables 3-5).

Manufacturers of portable typewriters also sell to dealers or to mass merchandisers at substantial discounts from suggested retail list prices (Tr. 3035-36, 3042, 2271-73; RXs 1281, 1284, 1465). Brother, for example, sells standard manual portables to Montgomery Ward at a price of \$37.75 which Montgomery Ward retails for \$87.95 (RXs 1055 A-D, 1689 A-C). The dealers and mass merchandisers uniformly resell at prices substantially below the suggested retail list prices (Tr. 2277, 2395-96, 2675-76, 2702-2703, 2770, 2774, 3029, 3031, 3076, 3087-88, 5182-83 RXs 1317-1320, 1656-1665, 1669 A-C, 1677-1683, 1685, 1696-99, 1732-34). In addition, a substantial portion of portable typewriters is sold by mass merchandisers as "traffic builders" and "loss leaders" (Tr. 2770, 8645).⁴⁶

When required to report sales data in terms of suggested retail prices by Commission counsel in this case, a number of the companies had to create the data because they did not keep it in the regular course of their business and the data furnished did not comport with sales figures kept in the regular course of business (*Paillard*—Tr. 112-113; CX 204 A-B; *SCM*—Tr. 545, 548; CX 203 C-F; *Olympia*—CX 205 A-B; Tr. 750-752, 755; *Facit*—CX 206; Tr. 297-300; *Brother*—CX 207 A-B; RX 1535 A-B; Tr. 358-361, 365-367, 376-381, 405, 4371-72; *Nippo*—RX 1531; Tr. 232-236; *R. C. Allen*—Tr. 512-513; CX 209 A-B; and *Triumph-Adler*—CX 97; DG 258, 384-386).⁴⁷

⁴⁶ Commission counsel, at the trial (Tr. 3053), and in their findings (CCF 560, fn. *, p. 288) admit that typewriters are often sold below list price.

⁴⁷ *Paillard* reported to the Commission (CX 204 A) that "the retail dollar sales were computed from suggested retail price lists," and that "It was necessary to compute the

The following testimony of the Olympia witness called by Commission counsel is illustrative of the invalidity of using suggested retail sales dollars as a measure of probable competitive effects:

Q. Then to the extent that it [CX 205] reflects your books and records, and you stated it did, you were in error in stating that the retail value came from your books and records, were you not?

A. The retail value came from our multiplication of units times retail price.

Q. This is not the record you keep in the regular course of business.

A. No, sir.

Q. You only came up with the retail value after you received the request from the Federal Trade Commission.

A. Exactly, yes, sir.

Q. You calculated the retail value solely for their benefit.

A. Yes, sir.

Q. You don't use it for anything else, do you.

A. No, we don't calculate anything at retail.

Q. So if you really wanted to know what your sales were in dollars from your books and records, you would show the wholesale value would you not?

A. Yes, sir, we would.

Q. That would be the actual dollar sales to your dealer organization.

A. That would be our volume, yes sir. (Tr. 751-752.)

* * * * *

Q. In your opinion are the retail values shown on [CX] 205B meaningless when you consider the competitive reality of the sale of your typewriters?

A. * * * [T]hey don't mean anything to us as far as a useful forecast or anything (Tr. 755).

dollar sales in this manner as our actual sales records reflect only sales to dealers at whole-sale prices."

SCM uses actual dollar revenues to show its forecast of competitive changes and trends. Its five-year marketing plan (RX 1652) uses actual net revenues (Tr. 2302, 2305). The similarity between market shares set forth in respondent's tables and those in SCM's five-year marketing plan is striking (RXs 1652 H-I, 1852, 1849).

Brother initially submitted data to the Federal Trade Commission in terms of average wholesale price (RX 1535 A-B) but, after the importunings of Commission counsel, it submitted data based on estimated average retail selling prices (CX 207 A-B) even though Brother does not fair trade and was fully aware of the fact that many of its customers sold Brother typewriters at less than suggested retail price (Tr. 4371-72).

Upon examination, it was determined that all Nippo typewriters were sold under private label, and that the witness had determined the estimated list prices by looking at competitive list prices advertised in dealers' show windows and newspaper advertising (Tr. 232-235).

Commission Exhibit 97, which is used as the basis of Triumph-Adler's sales data in Commission counsel's market share tables (CXs 300-312; Tr. 1694-95, 1704-1705), as explained by Mr. Weers, was not made by Triumph-Adler in the regular course of business, but was prepared pursuant to a special request by Commission counsel (DG 258). Triumph-Adler does not keep its records on the basis of suggested list prices in the regular course of business (Tr. 384-386).

Mr. Berry, the former president of Royal, testified that he did not rely on suggested retail price information in making business decisions (Tr. 1064-65).

Commission counsel's unit tables (CXs 301-304 treat all typewriters alike, regardless of their size, functions or selling price. Commission Exhibit 301, for example, treats office electric typewriters that sell for as much as \$705 (RX 617; CX 314, p. 10-4) as the equivalent of office manual typewriters and light duty compact office typewriters that sell for under \$200 (CX 314, pp. 10-7, 10-9; Tr. 5575). Even within one model price variations of over \$100 based on carriage size are frequent (CX 314, pp. 10-1 to 10-7, 10-9; see RPF 406). Commission Exhibit 304, dealing with portable typewriters, creates the same distortions of market position by treating flat manual portable typewriters which sell for under \$30 as equivalent to electric portable typewriters which sell for over \$200 (CX 314, pp. 10-1, 10-9; Tr. 2689).

In view of the large number of price lines, therefore, and the wide price spreads among them in the typewriter industry, the use of units is a fictitious measure for purposes of gauging probable competitive effects (Tr. 8629-8633, 8636-38, 8641, 8876-8880). One way to eliminate the distortion that occurs from giving each typewriter a weight of one, regardless of its actual sale price, is to weigh the typewriters in accordance with their relative market value. Thus, for example, a \$200 model would be given twice the weight of a \$100 model. The results obtained by this procedure would have been close to the results using actual realized dollars (Tr. 8312-18; RPF 409-410).⁴⁸

The fallacy of Commission counsel's position in using units and suggested retail prices is shown by a comparison of their tables. For example, their tabulation of "All Office and Portable Typewriters," expressed in units (CX 300) gives IBM a share of 11.4 percent in 1968, and the corresponding table expressed in suggested retail dollars (CX 305) gives IBM a market share of 31 percent in 1968—a difference of 19.6 percentage points. This difference alone is greater than the market share of any company other than IBM in the suggested retail dollar tabulation (CX 305). Not only do the two measures produce such widely varying market shares, they produce widely varying market rankings. Comparing the same two tables, IBM ranks first on the basis of suggested retail dollars (CX 305) but third on the basis of units (CX 300). SCM ranks first on the basis of units, but third on the basis of suggested retail dollars.

⁴⁸ The use of weighted units is recognized in the industry as an appropriate method for determining sales breakdowns (Tr. 4443-45, 4881-4896).

A review of the Section 7 merger cases brought by the Federal Trade Commission, from 1951 to date, in which the Commission has handed down orders after litigation,⁴⁹ shows that in no case involving differentiated products has suggested retail price been used to measure market shares.⁵⁰ In all Commission cases where the product line included substantially differentiated products of a combination of differentiated and homogeneous products, the standard used to measure the market is closely equivalent to the actual realized dollar value figures used by respondent. In these cases, either actual dollar sales or f.o.b. value of shipments was the measure.

Similarly, a review of the Department of Justice cases under amended Clayton 7 in which a district court has handed down an opinion after litigation shows: In no case has suggested retail price been used to measure the market.⁵¹ The Department is consistent with the Commission in that actual dollar sales or f.o.b. value of shipments figures have been used for all differentiated products.

Further, a review of the Federal Trade Commission and Department of Justice cases shows that neither the Commission nor the courts have ever used individual physical units as a market measure for highly differentiated products.⁵² In those cases in

⁴⁹ Excluded are cases dismissed, cases ending in consent orders, cases with stipulated facts, and cases that are pending as of October 1, 1971. Examples of cases included are: *Golden Grain Macaroni Co.*, 3 CCH Trade Reg. Rep. ¶19,521 (FTC 1971 [78 F.T.C. 63]); *The Bendir Corp.*, 3 CCH Trade Reg. Rep. ¶19,288 (FTC 1970 [77 F.T.C. 731]); *Seeburg Corp.* [1967-1970 Transfer Binder], Trade Reg. Rep. ¶18,464 (FTC 1968 [77 F.T.C.]); *American Brake Shoe Co.* [1967-1970 Transfer Binder], Trade Reg. Rep. ¶18,339 (FTC 1968 [73 F.T.C. 610]); *Dean Foods Co.* [1965-1967 Transfer Binder], Trade Reg. Rep. ¶17,765 (FTC 1966 [70 F.T.C. 1146]); *Beatrice Foods Co.* [1965-1967 Transfer Binder], Trade Reg. Rep. ¶17,244 (FTC 1965); *Brillo Manufacturing Co.*, 64 FTC 249 (1963); and *Foremost Dairies, Inc.*, 60 FTC 1049 (1962).

⁵⁰ Commission counsel admit that "[t]ypewriters * * * are disparate in their physical characteristics" (CCR 41).

⁵¹ Excludes cases concerning banks, cases settled by consent, or decided on the basis of stipulated facts. Examples of cases included are: *United States v. Reed Roller Bit Co.*, 274 F. Supp. 573 (W.D. Okl. 1967); *United States v. Kimberly-Clark Corp.*, 264 F. Supp. 439 (N.D. Cal. 1967); *United States v. Lever Bros. Co.*, 216 F. Supp. 887 (S.D. N.Y. 1963); *United States v. FMC Corp.*, 218 F. Supp. 817 (N.D. Cal. 1963), appeal dismissed, 321 F.2d 534 (9th Cir. 1963); *United States v. Koppers Co.*, 202 F. Supp. 437 (W.D. Pa.), appeal dismissed, 371 U.S. 856 (1962); *United States v. Ling-Temco Electronics, Inc.*, ¶70,160 Trade Cas. (N.D. Tex. 1961); *United States v. Jerrold Electronics Corp.*, 187 F. Supp. 545 (E.D. Pa. 1960), aff'd per curiam, 365 U.S. 567 (1961); *United States v. Columbia Pictures Corp.*, 189 F. Supp. 153 (S.D. N.Y. 1960); *United States v. E. I. du Pont de Nemours*, 353 U.S. 586 (1957).

⁵² In only three Department of Justice cases have individual physical units been used to measure market shares. These are *United States v. Chrysler Corp.*, 232 F. Supp. 651 (D. N.J. 1964) (trucks in varying weight classes); *United States v. Tidewater Marine Service, Inc.*, 284 F. Supp. 325 (E.D. La. 1968) (vessels); and *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962) (pairs of men's, women's, or children's shoes). In these cases, the items measured have relatively high homogeneity.

which the Commission has used physical units such as tons, barrels, hundredweight or cubic yards, the products concerned were relatively homogeneous or, if differentiated, were grouped into relatively homogeneous sub-groups. Thus, the cases which Commission counsel cite (CCR 203-204) in support of their unit measurements are inapposite.⁵³ As stated by Dr. Bock in *Mergers and Markets*, p. 143 (1964), "It is, in fact, frequently unclear whether a unit of measurement has been selected for its relevance or for its relative availability."

The hearing examiner rejects Commission counsel's Exhibits 300 through 309 as setting forth inaccurate and unreliable measurements of the market shares and trends of the relevant markets. The hearing examiner finds from all of the evidence of record that actual sales revenue, based on actual realized prices, is the most accurate and reliable measure of the relevant markets in this case for the purpose of determining whether the acquisition violates Section 7 of the Clayton Act. Among the reasons for this finding are:

(1) Actual sales revenue or actual realized prices measures the revenues actually received by the typewriter manufacturers; it is not fictitious.

(2) Actual sales revenue automatically adjusts for the differences in value among the different kinds of typewriters, which is the inherent defect of using unadjusted units. Actual revenue is similar to using weighted units and, hence, provides measures of equivalent and comparable units.

(3) There is no distortion whatsoever in the use of actual sales revenue by the criterion of measurement of actual competitive effects and relations. Actual sales revenue measures actual competitive position in the marketplace.

(4) Not only are actual realized prices a measure of actual competition, they are also the most reliable indicator of capacity for future competition. Actual realized prices are determinative of actual realized profits. Actual realized profits measure competitive results and, importantly, the capacity for future competitive potential. In this connection the use of the fiction of suggested

⁵³ The *Balian Ice Cream* and *Case-Swayne* cases cited by Commission counsel, of course, did not involve Section 7 of the Clayton Act. Further, contrary to Commission counsel's "commodity" characterization, the products involved in a number of these cases were more homogeneous than indicated. For example, in *Bethlehem Steel*, the products for which market shares were measured were steel ingots—not steel in general; in *Brown Shoe*, the products were men's, women's and children's shoes; in *Reynolds Metals*, it was florist foil; in *Alcoa (Rome)*, they were aluminum conductors and insulated aluminum conductors; and in *Pennzoil*, it was Pennsylvania grade crude oil.

retail price produces a serious distortion as an indicator of current competitive effects and future competitive possibilities.

(5) The use of actual realized prices is the only measure which accurately reflects important competitive market shifts and trends that have in fact been taking place in the typewriter industry, such as:

(a) the shift by the manufacturers other than IBM from direct sales to dealer sales in the office market, and from dealers to mass merchandisers in the portable market. These shifts have reduced greatly the sales revenues of the manufacturers other than IBM as they are forced to sell at wholesale with increasingly larger discounts;

(b) a major shift from manual portables to electric portables. As a consequence, the prices realized on manuals have increasingly involved wider discounts from the normal 40 percent;

(c) a major shift from standard manual typewriters to office electric and compact electric typewriters with greater discounts and reduced revenues from standard manual typewriters; and

(d) an increased loss of commercial sales and a shift to dependence on school and government business for the manufacturers feeling the increased pressure of competition. Sales to schools and governments are substantially below even the wholesale price to dealers.

Of the foregoing reasons, two are of over-riding importance for using actual sales revenue: it is the most accurate of all the measures proposed and it is the one that measures the actual competitive viability of firms in the market. It is the most accurate because it contains the least distortion due to varying methods of distribution and varying discounts; it measures actual competitive viability because it measures actual revenue to the firms which, in turn, determines profits or losses, and the firm's ability to stay in the business, grow and conduct research and development.

Commission counsel contend that actual sales revenue contains the defect of including selling costs in the case of direct sales and excluding such costs in the case of sales at wholesale through dealers (CCR 190-191). The record shows that in the portable markets all sales are to dealers, so this complaint has no validity whatsoever in the consideration of portable typewriters. In measuring that market, actual sales revenue is completely accurate and reliable.

The only inaccuracy in the use of actual sales revenue is to the extent of the cost of sales included in the revenue from typewriters sold directly to customers in the office markets, but this inaccuracy is substantially less than the inaccuracy of using suggested retail prices. Dr. Weston demonstrated by reference to trade association data and personal experience with other firms selling electrical and electronic products that the cost of selling for direct sales organizations in these fields is 10 percent or less. Applying this figure to IBM and the small volume of direct sales of the other office typewriters indicates that the use of actual revenues results in not more than a 10 percent distortion of IBM's sales and smaller distortions in the other domestic companies' sales. Considering that foreign companies make no direct sales of typewriters in the United States, the total effect would be a distortion of substantially less than 10 percent for office typewriters and no distortion for portable typewriters.

Commission Exhibit 117, which discusses the markup which Adler's United States sales organization required in selling the Adler office electric, supports Dr. Weston's estimate of 10 percent. It states:

If it is possible to decrease our FOB price by DM 40.—(or \$10.—), our landed cost price will amount to \$203.50; and with a suggested retail price of \$399.—, *our gross margin would then be approx. 16 percent*, which, in our opinion, is the minimum margin if we are to show an acceptable net profit for this model (emphasis added).

After deducting for net profit, this exhibit, which relates specifically to the typewriter industry, indicates that the selling costs of Adler's United States sales organization are in the area of 10 percent and confirm Dr. Weston's estimate.⁵⁴

The possible distortion from use of actual revenue is small compared to the distortions from using suggested retail price. As noted, use of suggested retail price results in overstatements of a minimum of 40 percent to more than 50 percent on sales to dealers for all companies except IBM in both the office and portable markets.

⁵⁴ The record shows that IBM probably has a lower ratio of selling costs than Adler, which would indicate that IBM's selling costs are probably less than 10 percent of sales revenue. With sales of \$287,972,000 in 1969 and 2,928 salesmen, IBM's average sales per salesman was \$98,351. Adler Business Machines, on the other hand, with sales of \$7,942,800 in 1969 and 16 salesmen had average sales per salesman of only \$49,642 (Tr. 1163; RXs 63 A-F, 630 A-B, 643 A-B, 644), approximately one-half as much as IBM's. This confirms the testimony of a former IBM district sales manager that IBM has salesmen who, individually, sell more typewriters in a year than the entire 75 Adler dealers in the Pacific Northwest (Tr. 6526-27).

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Dr. Weston summarized the reasons which led him to conclude that actual realized prices are the only appropriate and correct measure of the relevant markets in this case:

* * * I considered a number of bases on which to prepare tables for analyzing trends in market shares among individual companies.

A number of alternatives presented themselves: Units, suggested retail price were among the alternatives. Business practices for specific purposes used different measurement units to differing places in the conduct of business of operations, production schedules, for example, are typically based on units. * * *

* * * * *

But business firms, as I say, use data of different types in different ways. As Mr. Doyle of IBM testified, they put a wide range of different types of data on a tape and they look at it in a large number of different possible ways depending upon the kind of business decision that is required. (Tr. 8312-13).

* * * * *

Now retail price or suggested retail price posed a number of problems in connection with meaningful economic analysis for this industry.

In the first place, testimony has indicated that typewriters are typically sold to dealers at 40 percent off of suggested retail price. To put it another way, the amount realized by the manufacturer is 40 percent below suggested retail price. * * * And then compounded on to that the consideration that within a given model there are variations, for example, in carriage length, 13-inch carriages versus a 17-inch carriage, that will produce variations as much as \$100 within a given model.

Furthermore, testimony has indicated that there is considerable discounting at the retail level and also at the level of sales by the manufacturer to the dealer. Testimony shows that there are special promotions of one typewriter free given by the manufacturer to the dealer for purchases of three, or one free for the purchase of four, or one free for purchases of five, or one free for a various combinations of purchases.

* * * [I]t seems to me that to use suggested retail price for analysis of competitive impac[t] or economic effect would be to implying a set of fictitious numbers that would have no real meaning for economic analysis. Not only would the number suggest that retail price be wrong from a purely statistical and numerical standpoint, but the economic effects would produce distortions.

For example, in the use of suggested retail price it would overstate the total market. It would distort trends where shifts are taking place between direct sales and dealer sales as is the case, to some degree, in this industry. It would understate the position of a company that sells entirely by direct sales in relationship to companies that use dealers.

Now, for these reasons it was clear that suggested retail price could not be used. And what I tried to do was to use some form of equivalent units. Because physical units are concrete there are something that one can visualize, and I experimented with methods such as those mentioned in testimony where one witness indicated that in making some calculations

where some of the data weren't broken down, that a compact was given a weight of .4, standard office electric was given a weight to .6, essentially that a compact was two-thirds of the standard office electric; that a flat portable was given a weight of one and a standard manual portable was given a weight of two, which is to say that a flat portable is one-half of a standard manual portable.

I experimented with this method of equivalent units and when I did I ended up with numbers that were so close to using actual realized dollars that it seemed desirable to use actual realized dollars to avoid a large number of subjective judgments that would have to be made along the way and that would be subject to argumentation. And since the method of equivalent units ended up so close to the use of actual dollars, it seemed to me that from a statistical standpoint actual dollars should be utilized and statistical reasons for using actual dollars are further underscored by economic considerations. (Tr. 8314-16).

* * * [A]ctual prices reflect what takes place in the market where firms compete with one another. Actual prices determine what actual profits will be and actual profits have a major impact on the firm's ability to develop an effective sales organization, service organization, perform research and development for the future. So in terms of its business and economic significance, actual prices and actual profits are what are relevant for judging business results and economic effects.

This is to say that what Section 7 is all about is what the competitive economic impacts will be. And this can only be measured meaningfully by using actual prices. (Tr. 8317-18.)

* * * And I perfectly well realize there is a range in average realized prices that reflects in part [the] method of distribution employed, but again this goes to the heart of a Section 7 case, which deals with competition in the marketplace where the competition does in fact take place.

The range in these actual realized prices reflects not only that the prices, and therefore profits, profit margins realized, are different, and the subsequent tables will bear this out, but it also demonstrates that the competition that takes place at these different segments in the market produce different prices, produce prices different from the prices that these companies were aiming for, and testimony indicates that they were trying to sell their products at. It reflects different degrees of control over channels of distribution. It reflects different profit margins, and therefore differences in ability to further strengthen distribution channels, engage in R&D, and therefore these actual prices realized * * * reflect more accurately than any other alternative the business and economic facts of life as they take place in actual market places. (Tr. 8456-57.)

4. *Market Share and Trends in the Relevant Markets*

a. Introduction

Dr. J. Fred Weston, who testified in this proceeding on behalf

of respondent, was qualified as an expert on industrial organization and economics, and as a statistical analyst (Tr. 8252-58; RX 1834 A-N). He personally read all of the testimony and prepared extensive tabulations of sales data gathered from typewriter companies engaged in the manufacture or sale of office and portable typewriters (Tr. 8258). Dr. Weston then analyzed these data and their application to the evidence in this record. Thereafter, he prepared market share and other tabulations to determine what, if any, competitive effects were likely to result from the acquisition in Triumph-Adler by Litton. Those tabulations were taken into account by both Dr. Weston and Dr. Betty Bock in their analyses of the evidence of record. Their expert testimony is uncontradicted.

Dr. Bock is director of Antitrust Research at the Conference Board (formerly the National Industrial Conference Board), with a Ph.D. from Bryn Mawr College and additional graduate work at the Universities of Chicago and Buffalo. Since receiving her Ph.D. in economics in 1942, Dr. Bock's professional life has been spent in the study of economics as it relates to business organization and growth (Tr. 8156). Prior to joining the Conference Board in 1956, Dr. Bock was a staff economist at the Federal Trade Commission for a number of years, during which time she participated in the preparation of the Attorney General's Report (Tr. 8154).

Since joining the Conference Board, a non-profit research organization dealing with problems in business and economics, Dr. Bock's full time has been spent in analyzing and dealing with antitrust problems and related empirical data. Mergers and acquisitions have occupied approximately 80 percent of her time (Tr. 8156). She publishes an ongoing series called "Mergers and Markets" in which she analyzes the economic issues in merger cases dating back to the amendment of Section 7 in 1950. She has also made studies using current statistical data on concentration and productivity as related to antitrust (Tr. 8153). She has written numerous publications and her expertise in the field of mergers and economics has been recognized for many years (RX 1828). In fact, in 1962 her work was cited with approval by the Supreme Court in *Brown Shoe Co. v. United States*, 370 U.S. 294, at 325 n. 43, 343 n. 71.

Dr. Weston has been active in teaching economics and statistical courses since the early 1940's when he first joined the faculty of the University of Chicago. He holds B.A., M.A. and

Ph.D. degrees, receiving his Ph.D. degree at the University of Chicago in 1948 (Tr. 8254). He is highly qualified as an expert for the purpose of testifying to the probable economic and commercial effects of this acquisition. He has been Professor of Business Economics and Finance at the University of California at Los Angeles since 1955, and during most of that time chairman of the Economics or Finance Committees. He is in the Graduate School of Business Administration where his teaching assignments have been in the areas of micro-economics, industrial organization and economics, and business finance theory. Over the years he has been consultant for a number of business organizations and has been chairman of many doctoral committees (Tr. 8252-53).

Dr. Weston has written over 100 books and other publications (RX 1834 A-N). At least 18 of his publications have been reprinted in books and articles on industrial organization and economics and finance (Tr. 8254-57). In the past several years he has published articles on lines of commerce, diversification and merger trends, the nature and significance of conglomerate firms and changing environments and new concepts of firms and markets (Tr. 8255).

In the course of his research in and teaching of micro-economics and industrial organization and industrial economics, Dr. Weston has studied a range of industries where he has tested theories which are applicable to the industrial organization of the typewriter industry (Tr. 8527-58).

Instead of attempting to rebut Dr. Weston's testimony, Commission counsel chose to attack his credibility by frequent reference to him as a "paid expert" or as a "paid economic expert" (CCR 13, 43, 124). The hearing examiner, having observed Dr. Weston during several days of testimony, was impressed by his candor and objectivity and concurs with United States District Court Judge Zirpoli's observations in *United States v. Crocker-Anglo National Bank*, 277 F. Supp. 133, 170-171 (N.D. Cal. 1967):

* * * Professor Weston, whom this court finds eminently qualified to make such survey and which this court deems to have been a fair, representative, and adequate economic survey, demonstrates that there were no customers in such hypothetical statewide market (and the Government never offered any proof to the contrary) * * *.⁵⁵

⁵⁵ As to Dr. Weston's opinions on competitive effects, the Court said:

"Plaintiff produced no direct evidence on the 'weighing' issue. Plaintiff sought only to

Judge Zirpoli also referred to Dr. Weston as "one of the leading financial experts in the country" and placed extensive reliance on his testimony throughout the decision. *United States v. Crocker-Anglo National Bank, supra*, at 172.⁵⁶

The hearing examiner also finds that Dr. Weston is eminently qualified as an expert economist and statistician. The opinions expressed in this record by both Dr. Weston and Dr. Bock as to the statistical data presented by the parties and the conclusions as to the probable effect of the acquisition of Triumph-Adler must be accredited great weight in this proceeding.

b. The Office Typewriter Market

The office typewriter market in the United States is a combination of heavy duty office electric typewriters and light duty office typewriters. The only reliable market share data in the record for measuring the effects of the acquisition as it relates to the office typewriter market are Respondent's Exhibits 1852 and 1860. Respondent's Exhibit 1852 follows as Table 1 of these findings.

IBM increased its share of the total United States office typewriter market from 47 percent in 1963 to over 68 percent by 1969. Its market share increased by over 21 percentage points during the period and this increase alone was twice the combined shares of all of the other companies in the market in 1969. The share of each of the other companies either declined or remained stable during this period. The market shares held by the four traditional United States typewriter companies which, combined, accounted for almost 50 percent of the total sales of office typewriters in 1963, dropped to less than 25 percent in 1969 (RX 1852). The attached Chart 3 highlights these trends.

Among the foreign companies, Olympia, which has been selling office typewriters in the United States since the early 1950's, was only able to increase its share of total office typewriter

minimize the beneficial effects of the merger. On the other hand, both Professors Goodman and Weston rendered opinions as to whether the admitted benefits clearly outweighed the alleged anticompetitive effects. Consistent with his original hypothesis that there were no anticompetitive effects and that the effects of the merger had to be weighed in the total financial market, Professor Weston opined that the merger was desirable from a competitive standpoint and that it had neither immediate nor potential anticompetitive effects * * * Because he viewed the effects of the merger in the context of a line of commerce which included all competing financial institutions, he readily admitted that the benefits accruing from the merger would be small in relationship to the total line of commerce, but by the same token, he testified that any assumed anticompetitive effects could not be large. In his opinion the overall effects of the merger were procompetitive, in the right direction and beneficial * * * (at 195-196).

⁵⁶ In the *Crocker* case, *supra*, the merger was upheld by a three-judge district court and the Department of Justice did not appeal the case (Tr. 8257).

Table 1
U. S. OFFICE TYPEWRITER MARKET
(Sales in Thousands of Dollars)

	1963	1964	1965	1966	1967	1968	1969
	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.
IBM	99031. 0.472	110351. 0.479	133757. 0.511	180121. 0.538	197748. 0.564	235851. 0.608	301517. 0.689
Royal	43304. 0.206	47256. 0.205	50316. 0.192	60936. 0.182	59189. 0.169	53500. 0.138	50936. 0.116
SCM	15252. 0.073	14428. 0.063	13533. 0.052	13980. 0.042	14620. 0.042	12380. 0.032	10732. 0.025
Sperry Rand	14041. 0.067	16004. 0.069	17870. 0.068	22617. 0.068	22984. 0.065	24888. 0.064	18952. 0.043
Olivetti	29249. 0.139	28242. 0.123	29273. 0.112	36496. 0.109	32826. 0.094	33719. 0.087	25807. 0.059
R. C. Allen	1225. 0.006	1419. 0.006	1285. 0.005	1685. 0.005	1372. 0.004	1596. 0.004	1269. 0.003
Olympia	5600. 0.027	8000. 0.035	10000. 0.038	10868. 0.032	11679. 0.033	12340. 0.032	13474. 0.031
Adler	1062. 0.005	3143. 0.014	4023. 0.015	5117. 0.015	5939. 0.017	7483. 0.019	8288. 0.019
Facit	591. 0.003	882. 0.004	1053. 0.004	1344. 0.004	1372. 0.004	1431. 0.004	1115. 0.003
Paillard	618. 0.003	728. 0.003	681. 0.003	794. 0.002	945. 0.003	1038. 0.003	1443. 0.003
Brother	0. 0.000	0. 0.000	22. 0.000	965. 0.003	2132. 0.006	3429. 0.009	4393. 0.010
Total	209,973. 1.000	230,453. 1.000	261,813. 1.000	334,923. 1.000	350,756. 1.000	387,655. 1.000	437,926. 1.000

Source: RX 1852

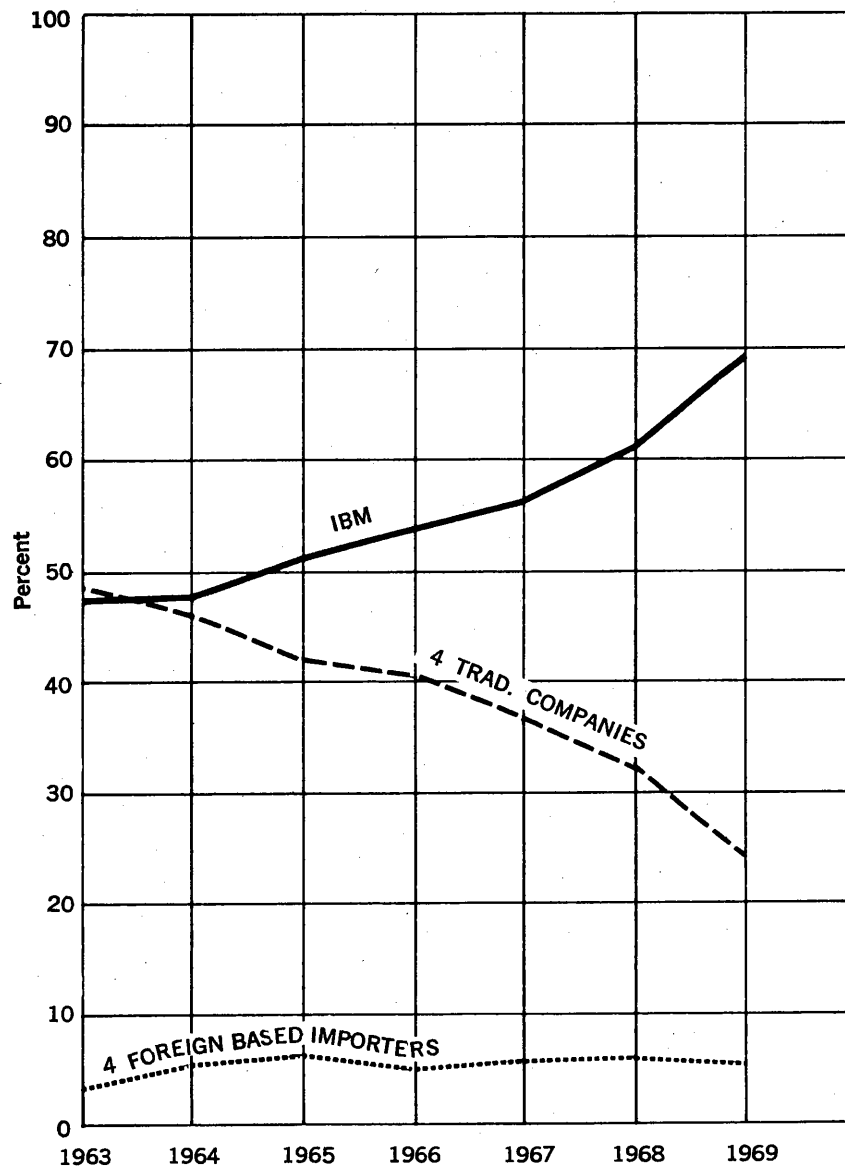
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CHART 3**U.S. Office Typewriter Market**

(Sales in Percent of Market Share)

Source: RX 1852



sales from 2.7 percent in 1963, to 3.1 percent in 1969. Olivetti, which had also been in the United States market since 1950, and which had acquired Underwood, dropped in share by .50 percent, from 13.9 percent in 1963 to 5.9 percent in 1969. Facit's and Paillard's share never exceeded 4/10 of 1 percent and 3/10 of 1 percent, respectively, throughout the period (RX 1852; Tr. 9002-9003).

Royal's share, which was 20.6 percent in 1963, fell by 9 percentage points to 11.6 percent in 1969. Royal's share was 27 percentage points below that of IBM in 1963 and 57 percentage points below IBM's share in 1969. Adler's share increased only 1/2 of 1 percent from 1964 to 1969. It had no increase in the last two years (RX 1852; Tr. 9002-9003).⁵⁷

As Chart 4 shows, the combined shares of Royal's and Adler's total sales of office typewriters in the United States declined substantially during the period 1963 through 1969. In 1963, their combined share was 21.1 percent of total office typewriter sales; by 1969, it had declined to 13.5 percent. In the four-year period from 1965 through 1969, their combined share declined by over 7 percentage points, while in the space of one year—between 1968 and 1969—IBM's share of total office typewriter sales increased by over 8 percentage points (RX 1852; Tr. 8397-98, 9002-9003).

Dr. Weston testified that these trends in market position of Royal-Adler in the total office typewriter market "hardly represents a threat to the competitive position of any of the remaining firms in this industry" (Tr. 8398). The testimony continued:

Q. Based upon your analysis of Respondent's Exhibit 1852, is it predictable that the acquisition of Triumph-Adler by Litton Industries, insofar as heavy-duty and light-duty office typewriter sales are concerned, will have any adverse effect on competition in the foreseeable future?

A. My answer is no, it would not have adverse effects, and as some of my subsequent tables provide a basis for, the effects are more likely to be pro-competitive (Tr. 8398-99).

Dr. Bock concluded:

In view of the high and really increasing gap between the shares of Royal and the leading companies, and the increased gap between the leading company and all of the other companies combined, in my opinion, the combination of Royal and Adler both of which have been declining in

⁵⁷ Adler's sales did not increase in 1970; assuming the total office typewriter market maintained its upward trend, Adler's market share declined (RX 1813; Tr. 6795-96).

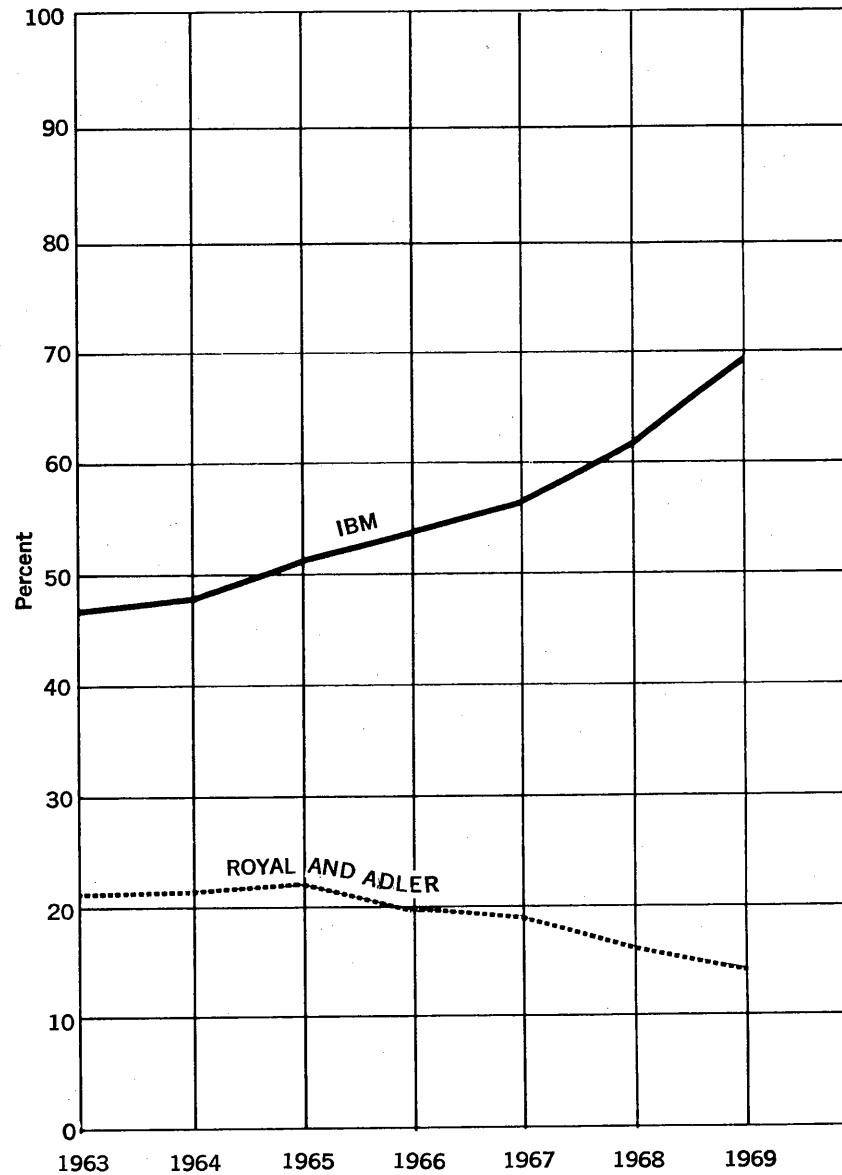
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CHART 4**U.S. Office Typewriter Market**

(Sales in Percent of Market Share)

Source: RX 1852



shares * * * . I do not think that * * * there can be an adverse effect on competition in this segment of the industry (Tr. 9002-9003).

The critical point for Section 7 purposes is that the sales of heavy duty office typewriters account for over 80 percent of sales of all office typewriters and, based on the trend of the last three years, will account for over 90 percent within less than three years (RX 1844, 1890). Therefore, a close analysis of the heavy duty office market is more meaningful because it most clearly reveals the underlying competitive forces and is determinative of what takes place in the total of the heavy duty plus light duty segments of the office typewriter market (Tr. 8633-36; RX 1890).

As Dr. Bock testified, a comparison of Respondent's Exhibits 1852 and 1848 shows:

* * * that within the total sales of office typewriters, heavy-duty electric typewriters, are the largest and fastest growing, while the remainder represents the declining and increasingly less significant part of overall office typewriter sales. This means in turn that any company that intends to remain in the industry in the office typewriter segment of it over the next few years must be able to achieve a significant position and a profitable share of the heavy-duty office electrical sales (Tr. 9000-9001).

c. The Heavy Duty Office Typewriter Market

Respondent's Exhibit 1848, which follows as Table 2, shows the sales and market shares of heavy duty office typewriters in the United States for IBM, Royal, SCM, Remington Rand, Olivetti, Olympia, Adler, Facit and Paillard in each of the years 1963 through 1969.⁵⁸

As Table 2 shows, IBM's share of the heavy duty office typewriter market in the United States in each of the years 1963

⁵⁸ With the exception of the IBM MT/ST and the Royaltypewriter/Robotypewriter, sales of other automatic typewriters were excluded (RX 1848). IBM MC/ST sales were excluded, although three months of 1969 might properly have been included, because the data were available for only one quarter of a year, and would, in any event, have increased IBM's share, particularly when its significance for the future was taken into account (Tr. 8358-8361; RX 651).

The Friden Flexowriter was omitted from the heavy duty office market because the Flexowriter witness indicated that out of some 30 models it was impossible to separate the sales of those designed to perform office typewriter functions (Tr. 8341-42). The IBM composing equipment was also excluded because of the difficulty of separating the pure typing activity from the other activities involved (Tr. 8358-8361).

Because of the number of the other companies and the small size of many of them, obtaining the data would have delayed the progress of the case substantially. Moreover, the record indicates that exclusion of the MC/ST probably more than offsets the exclusion of certain small automatic typewriter companies whose data are not included (Tr. 8341-8349, 8358-8361).

Royal's position is not overstated. Royal's Robotypewriter is included for all years in which sales were made; therefore, including all of Royal in this automatic typewriter segment of the heavy duty office market and not including other automatic typewriter companies overstates Royal's position in the market (Tr. 8341-49).

Table 2
U. S. HEAVY-DUTY OFFICE TYPEWRITER MARKET
(Sales in Thousands of Dollars)

	1963	1964	1965	1966	1967	1968	1969
	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.	SALES SHR.
IBM	99031. 0.718	110351. 0.726	133757. 0.777	180121. 0.797	197748. 0.779	235851. 0.800	301517. 0.857
Royal	7891. 0.057	5505. 0.036	4158. 0.024	6705. 0.030	16182. 0.064	13176. 0.045	10764. 0.031
SCM	10818. 0.078	9252. 0.061	3720. 0.022	3470. 0.015	3092. 0.012	2401. 0.008	2266. 0.006
Sperry Rand	7704. 0.056	8540. 0.056	9689. 0.056	12614. 0.056	12447. 0.049	3290. 0.045	8566. 0.024
Olivetti	10584. 0.077	12969. 0.085	13380. 0.078	13906. 0.062	13752. 0.054	17534. 0.059	15195. 0.043
Olympia	800. 0.006	2500. 0.016	3700. 0.022	4555. 0.020	5078. 0.020	5707. 0.019	5822. 0.017
Adler	755. 0.005	2368. 0.016	3076. 0.018	3783. 0.017	4496. 0.018	5684. 0.019	6434. 0.018
Facit	216. 0.002	296. 0.002	370. 0.002	490. 0.002	550. 0.002	785. 0.003	748. 0.002
Paillard	172. 0.001	207. 0.001	212. 0.001	238. 0.001	375. 0.001	340. 0.001	376. 0.001
Total	137,371. 1.000	151,988. 1.000	172,062. 1.000	225,881. 1.000	253,720. 1.000	294,768. 1.000	351,688. 1.000

Source: RX 1848

through 1969 was many times that of the combined shares of all of the other companies. IBM's total sales of heavy duty office typewriters in 1963 amounted to almost \$100 million, or almost 72 percent of the total sales of heavy duty office typewriters. By 1969 its sales exceeded \$300 million, an increase to almost 86 percent of the total market, and a 14 percentage point increase in its share of sales in a six-year period. From 1968 to 1969, IBM's dollar sales of heavy duty office typewriters increased from more than \$235 million to over \$301 million, an increase of over \$65 million in one year, which exceeded the total dollar sales for all other companies selling heavy duty office typewriters in the United States during 1968 (RX 1848; Tr. 8365-68, 9001-9002).

Table 2 also shows that the shares of the total sales of heavy duty office typewriters held by the four traditional United States typewriter companies—Royal, Remington, SCM and Olivetti—have declined throughout the period 1963 through 1969. These companies accounted for almost 27 percent of total heavy duty office typewriter sales in the United States in 1963, but by 1969 their *combined shares* amounted to only 10 percent of the total heavy duty office typewriter market. SCM's market share declined from 7.8 percent in 1963 to less than 1 percent by 1969; Remington's market share declined from 5.3 percent in 1966 to 2.3 percent in 1969; and Olivetti's market share declined from 7.8 percent in 1965 to 4.3 percent in 1969. Royal's sales volume of heavy duty office typewriters declined from \$16 million in 1967 to \$10.7 million in 1969, a drop of over \$5 million in a three-year period at a time when the total market had increased by almost \$100 million; this represented a 50 percent decline in market share, from 6.4 percent in 1967 to 3.1 percent in 1969. Similarly, Royal's sales of heavy duty office typewriters to commercial offices declined 50 percent, from 5.2 percent of total commercial office sales in 1967 to 2.6 percent in 1969 (RX 1868). In this two-year period, Royal lost half of its sales position in the two most important market segments of the typewriter industry.

By the same token, the foreign typewriter companies—Olympia, Adler, Facit and Paillard—which have been selling heavy duty office typewriters in the United States for over a decade, have experienced a decline in their combined shares of the heavy duty office typewriter market since 1965. Facit's share of this market has been approximately 2/10 of 1 percent during

the period 1963-1969, and Paillard's market share never exceeded 1/10 of 1 percent. Olympia's sales, which had increased from 1963 to 1965, began to decline in 1966 and, by 1969, its market share had decreased to 1 percent. Adler's sales in the heavy duty office typewriter market were relatively stable during the period 1966 through 1969 at about 1.8 percent. Thus, these four companies, which have been in the United States market since the 1950's, had a combined market share of 3.8 percent in 1969, a decline from 4.3 percent in 1965. This is an indication of the lack of potential impact that foreign typewriter companies have on the market where they are dependent upon distribution through dealers (Tr. 8367-68).

As shown in Chart 5, whereas IBM's market trend is increasing substantially, the market trends of both the four traditional companies and the four foreign-based importers are declining.

Royal-Adler's combined share of the heavy duty office typewriter market in 1969 was less than 5 percent. Moreover, as Chart 6 on the following page shows, the market share trends of IBM and Royal-Adler were in opposite directions. IBM's share of the market was increasing at a substantial rate and Royal-Adler's share was declining (RX 1848; Tr. 8368-69, 9001-9002).⁵⁹

After discussing the economic significance of the trends relating to the heavy duty office typewriter market, Dr. Bock concluded:

* * * With this history, in my opinion, there is no likelihood of a lessening of competition by the combined operations of Royal and Adler in the heavy-duty office electrical segment of the industry" (Tr. 9002).

d. The Portable Typewriter Market

As indicated above, Commission counsel (CCF 609-614) and respondent (Tr. 8942) agree that the total sales of portable typewriters in the United States constitute a relevant market within the meaning of Section 7 of the amended Clayton Act.

Table 3 on the following page shows the total sales of portable typewriters in the United States during the period 1963-1969 (RX 1853).

⁵⁹ Royal's sales of heavy duty office typewriters have not recovered since 1969. Although it projected it could sell 50,000 Royal 970 typewriters in 1970 (Tr. 947-948; CX 2 A), it only sold 23,000 (RX 1812). In fiscal 1971, it estimated that it would sell 45,000 Royal 970's; however, in October or November, 1970 this estimate was reduced to 35,000 and later to less than 25,000. After seven months in fiscal 1971, Royal had sold only slightly over 15,000 Royal 970's (RXs 1539, 1812).

Adler's sales of heavy duty office typewriters in the United States in 1970 did not increase over 1969, and its 1971 sales are likely to remain at the 1970 level (RX 1813; Tr. 6795-96).

CHART 5

U.S. Heavy Duty Office Typewriter Market

(Sales in Percent of Market Share)

Source: RX 1848

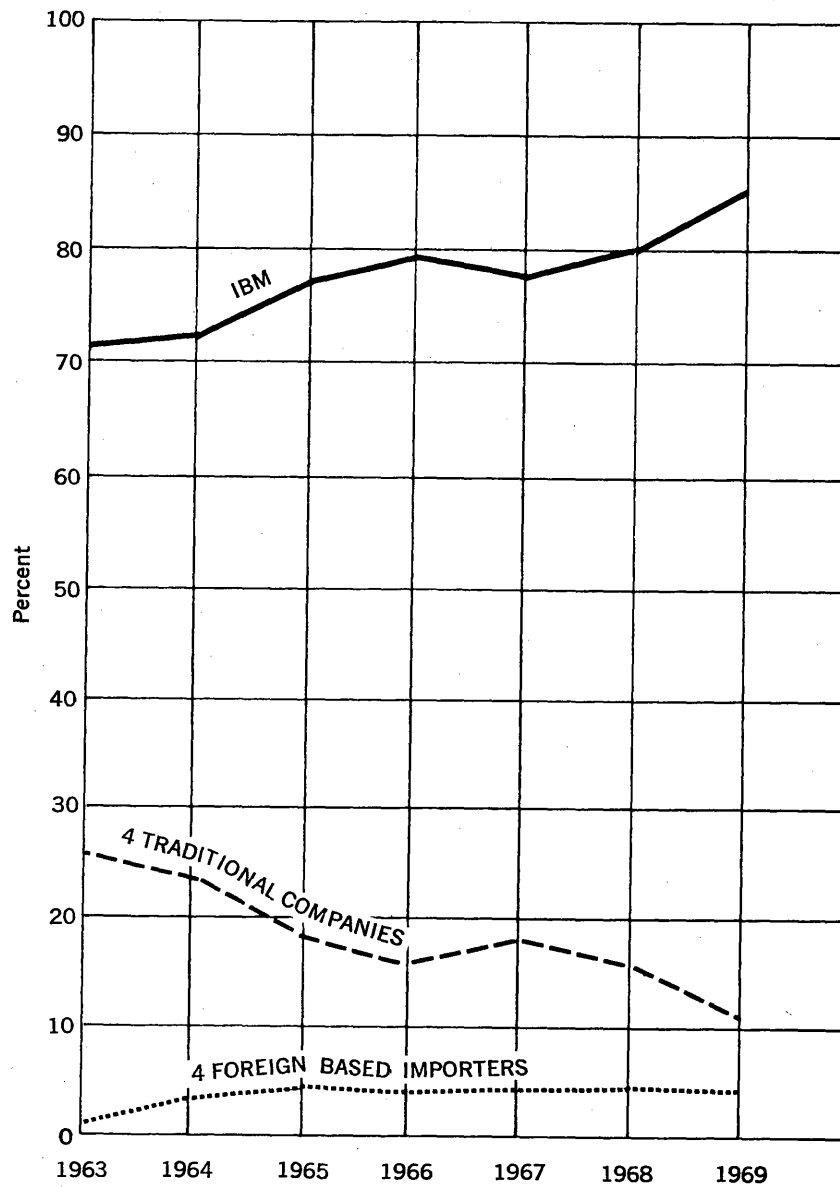


CHART 6**U.S. Heavy Duty Office Typewriter Market**

(Sales in Percent of Market Share)

Source: RX 1848

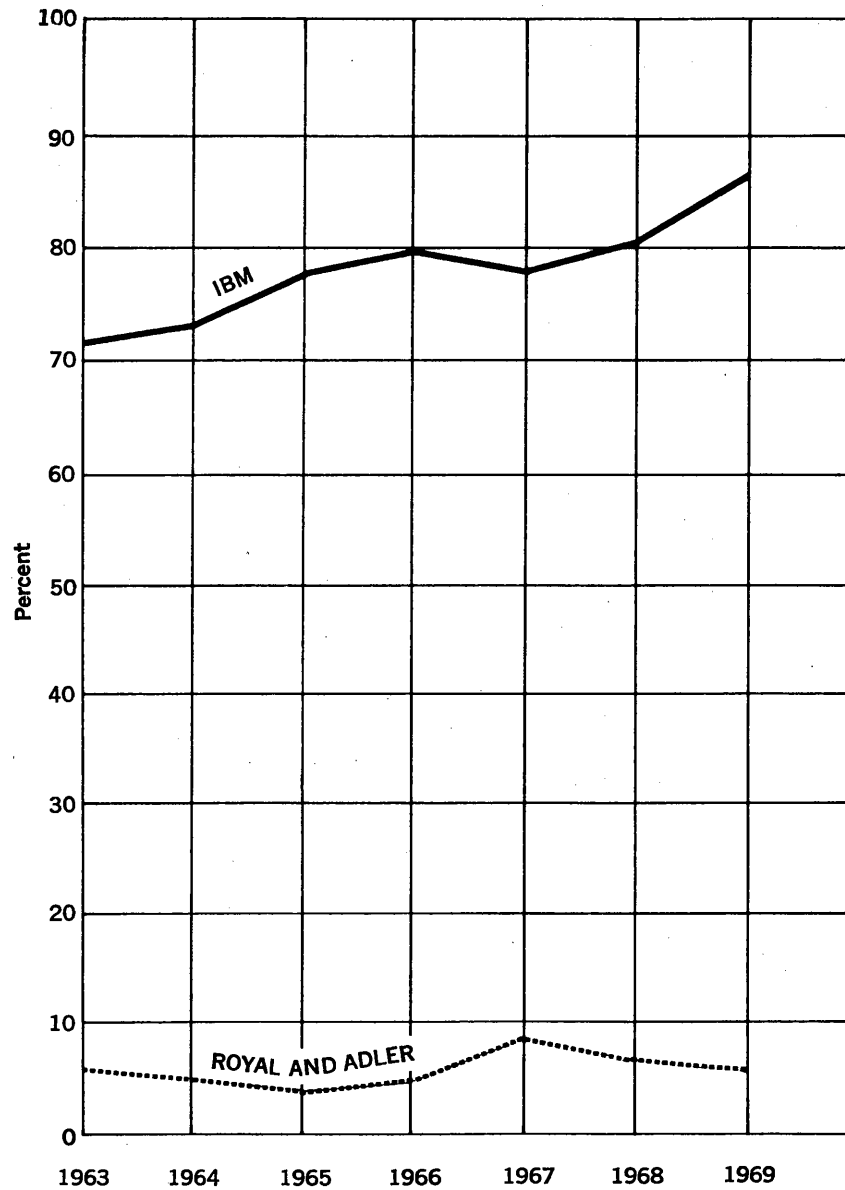


Table 3
U. S. PORTABLE TYPEWRITER MARKET
(Sales in Thousands of Dollars)

	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	5942. 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
Paillard	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).

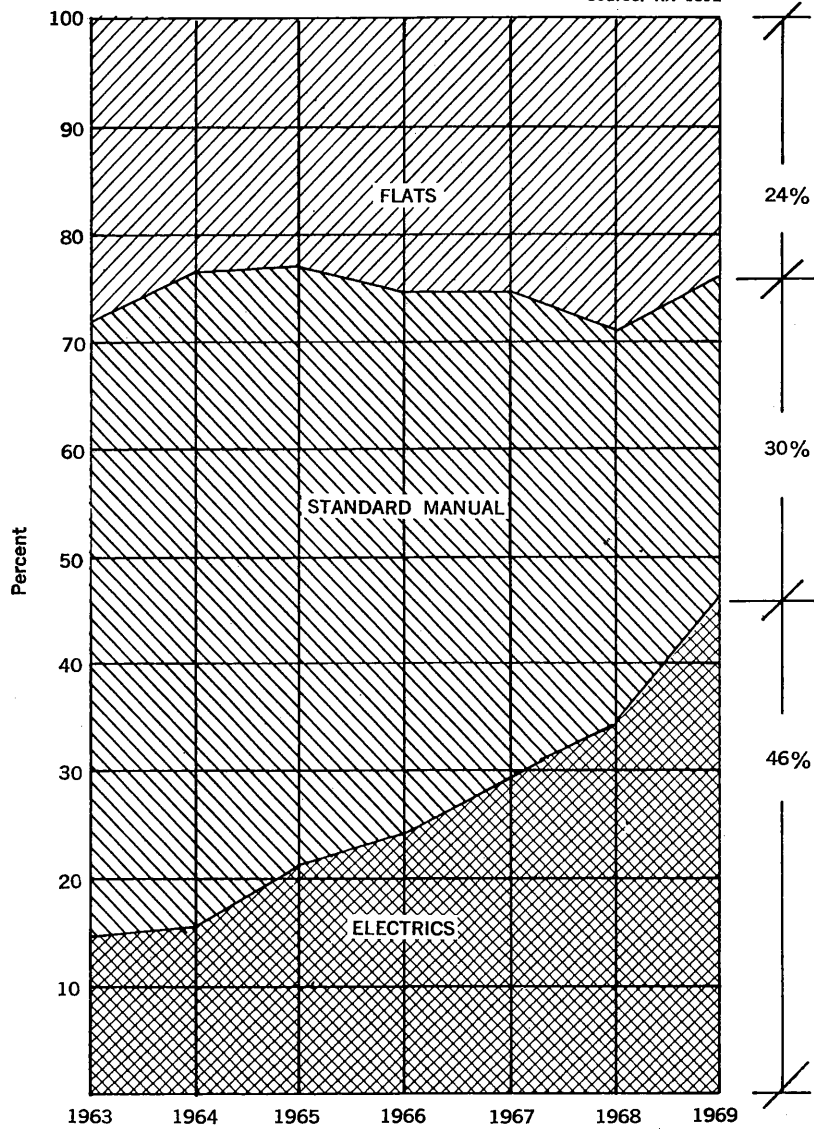
Royal's share of total portable typewriter sales in the United States decreased 8 percentage points from 24.5 percent in 1963 to 16.3 percent in 1969, most of the decline occurring between 1966 and 1969. The combined Royal-Adler shares declined by more than 6 percentage points during the period 1966 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.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.
Royal	0.	0.000	0.	0.000	0.	0.000	2669.	0.105	4817.	0.160	6140.	0.159	8911.	0.779
SCM Rand	0.	0.000	0.	0.000	0.	0.000	22789.	0.395	23310.	0.340	32509.	0.341	42451.	0.015
Sperry Rand	10180.	1.000	12186.	1.000	17633.	1.000	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.	0.034
Brother	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	0.	0.000	1333.	1.000
Total	10180.	1.000	12186.	1.000	17633.	1.000	25433.	1.000	30127.	1.000	38649.	1.000	54504.	1.000

Source: RX 1849

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.

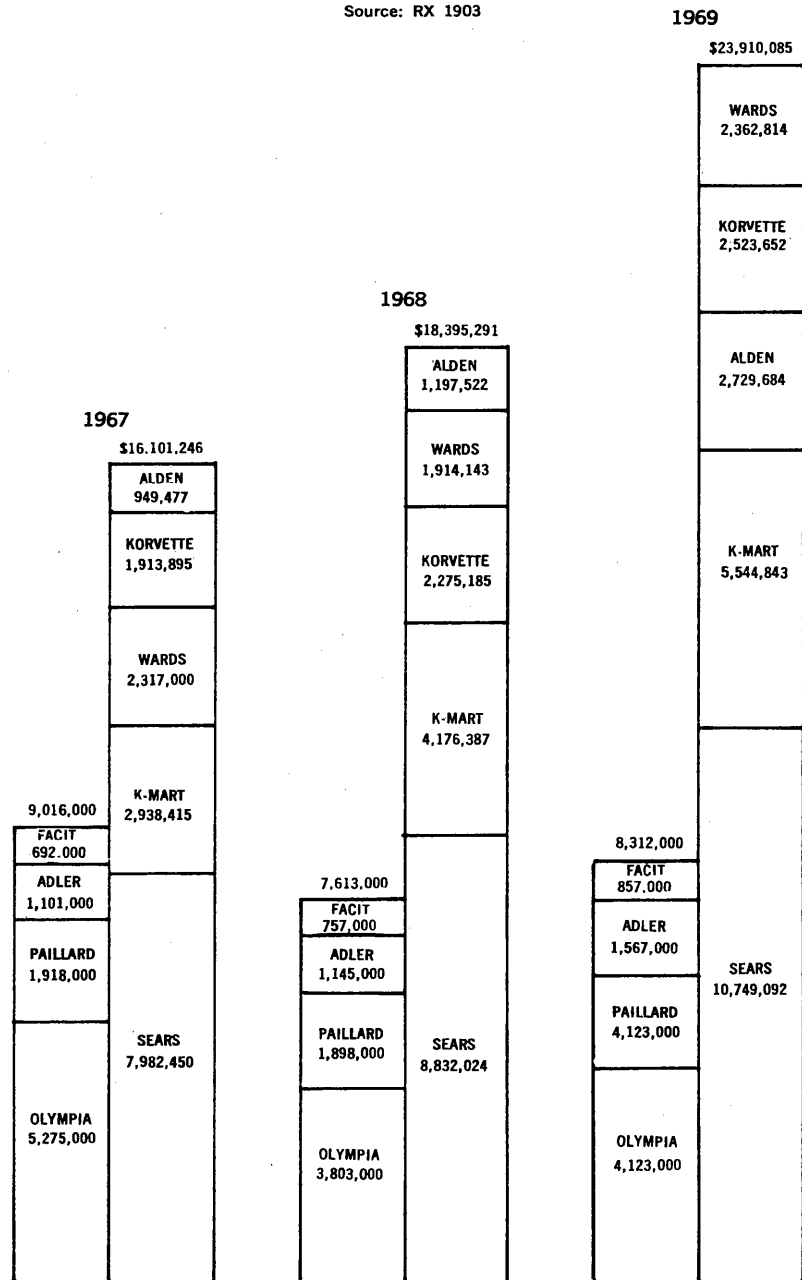
IBM's market position increased 18.6 percentage points in a six-year period to 54.3 percent in 1969. During this same period, third-ranked Royal's position declined 9 percentage points to 12.6 percent in 1969. IBM's increase in position in 1969 was 4.2 percentage points greater than Royal's and Adler's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

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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

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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

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(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

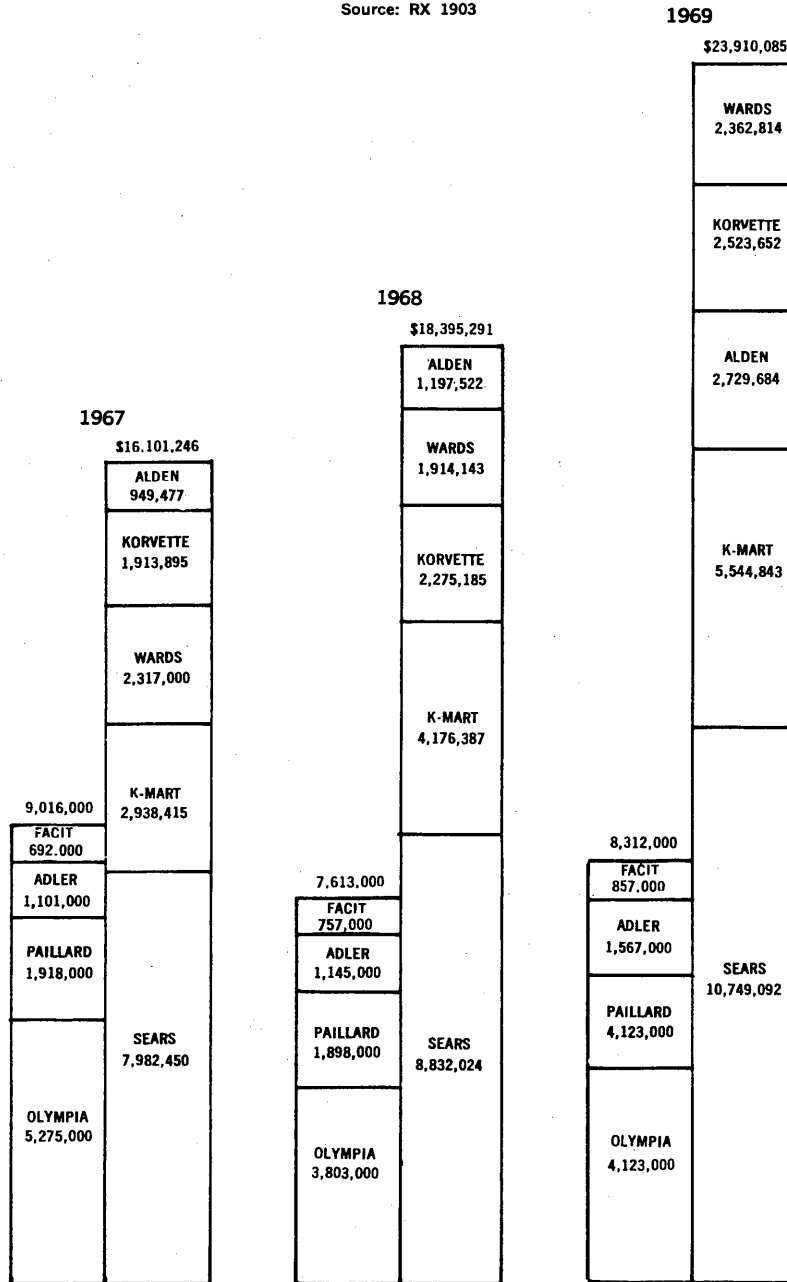
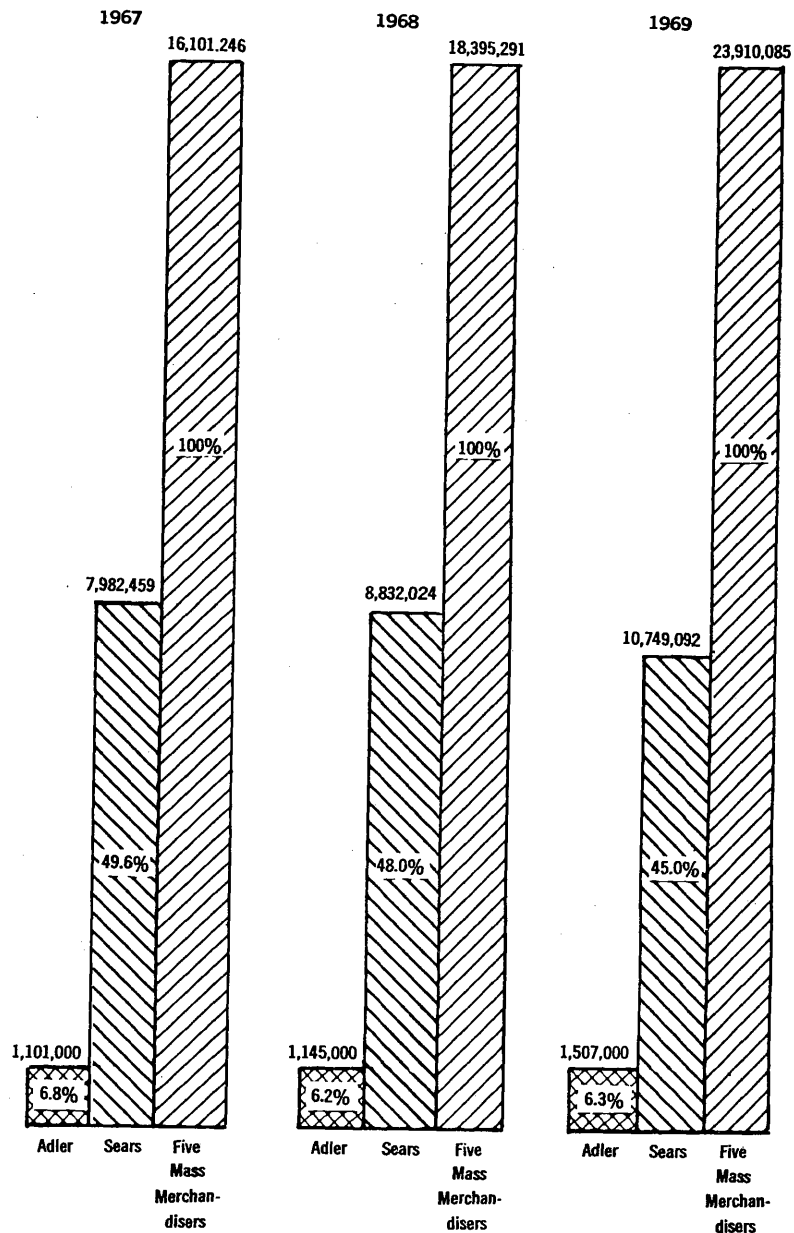


CHART 9

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.

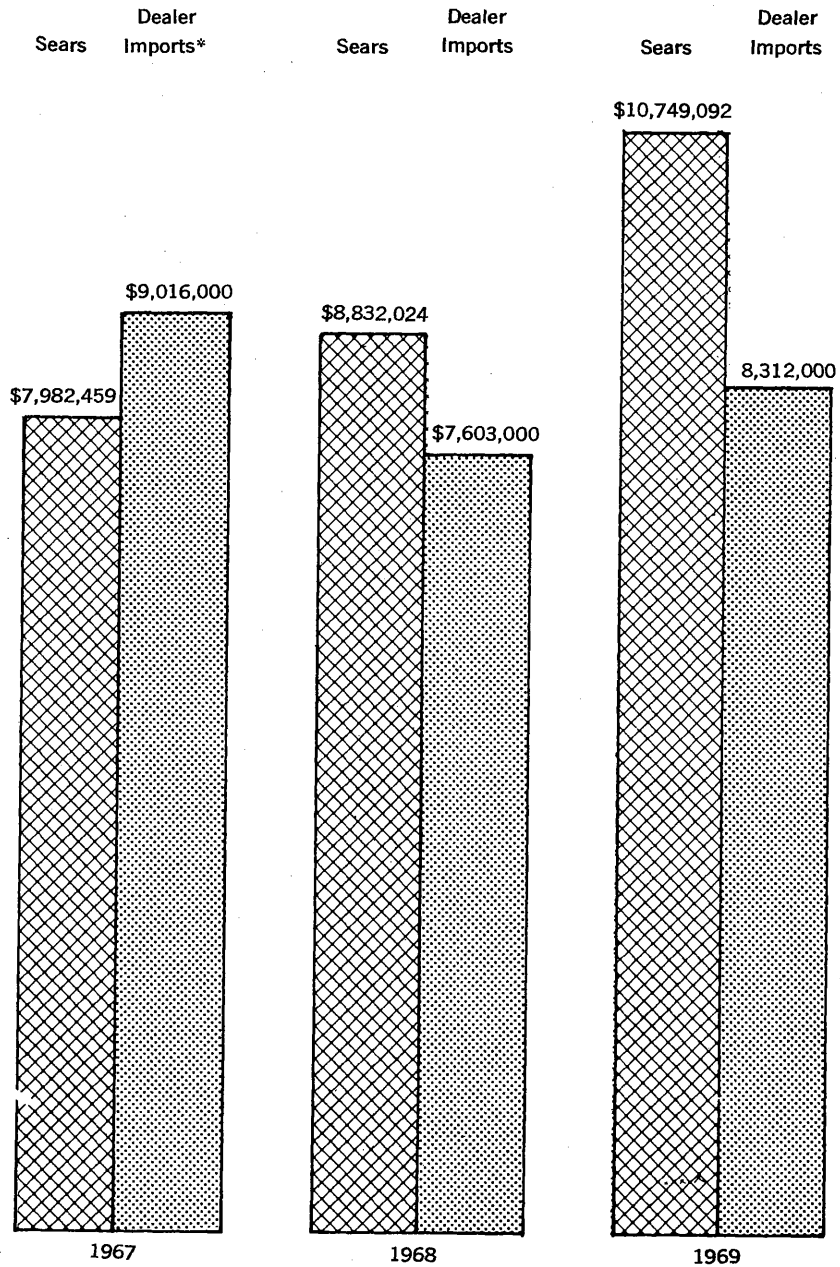
Source: RX 1904

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

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*

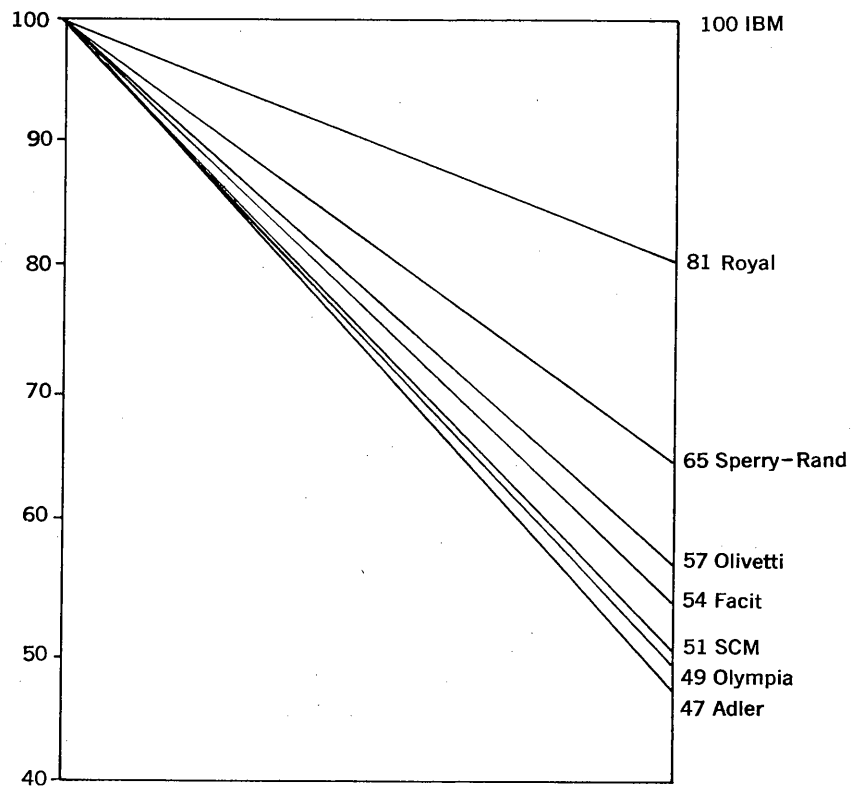
The degree of monopoly power that IBM exercises over pricing in the typewriter industry is indicated by evidence in the record showing how IBM set the rental price of its MC/ST prior to introduction. In December 1967, IBM forecast sales on the basis of monthly rentals of \$75, \$90, \$115, \$125, \$140 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).

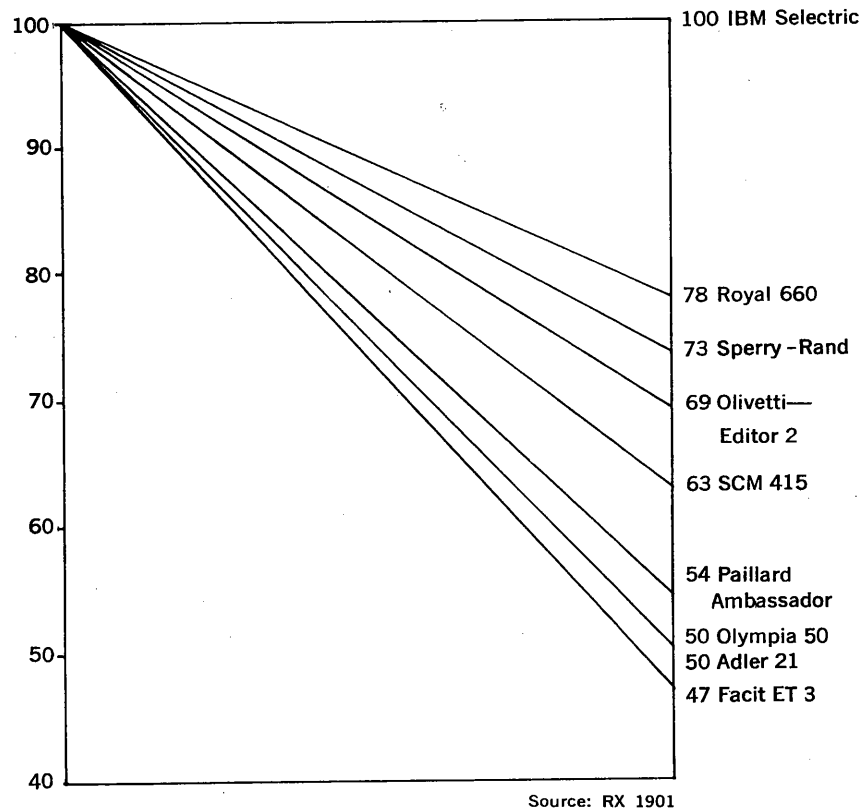
As the treasurer of NOMDA put it, an independent office machine dealer cannot compete with an IBM typewriter represented as equivalent to a new machine and sold at "low ball prices." "In other words, if they want to wipe out a small dealer, they can just move right in there and X him out. And I submit 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).

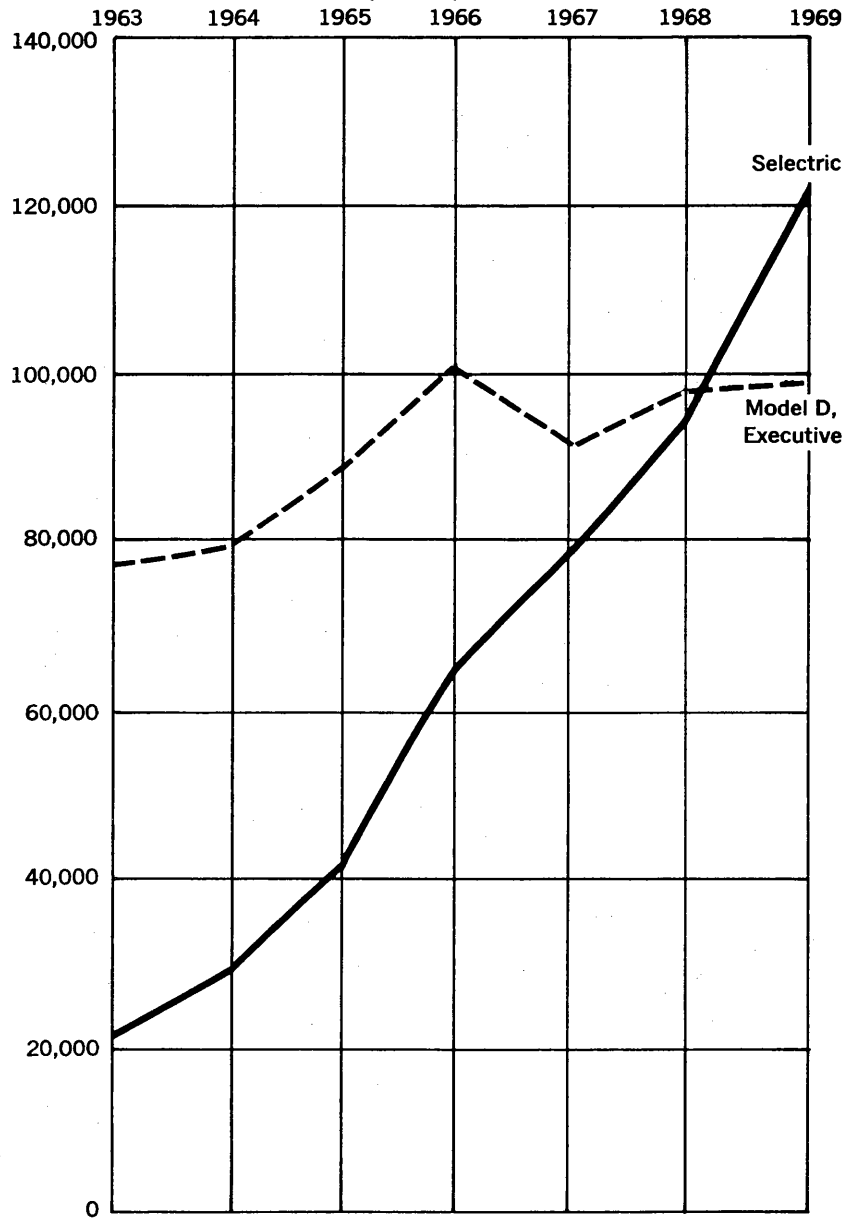
Chart 13 shows the sharp upward sales trend of the Selectric. It passed sales of IBM's Model D in 1968, and is continuing to climb at the rate of more than \$22 million per year (RX 1909). Chart 14, following Chart 13, shows that sales of IBM's Selectric and automatic typewriters was 55 percent of the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



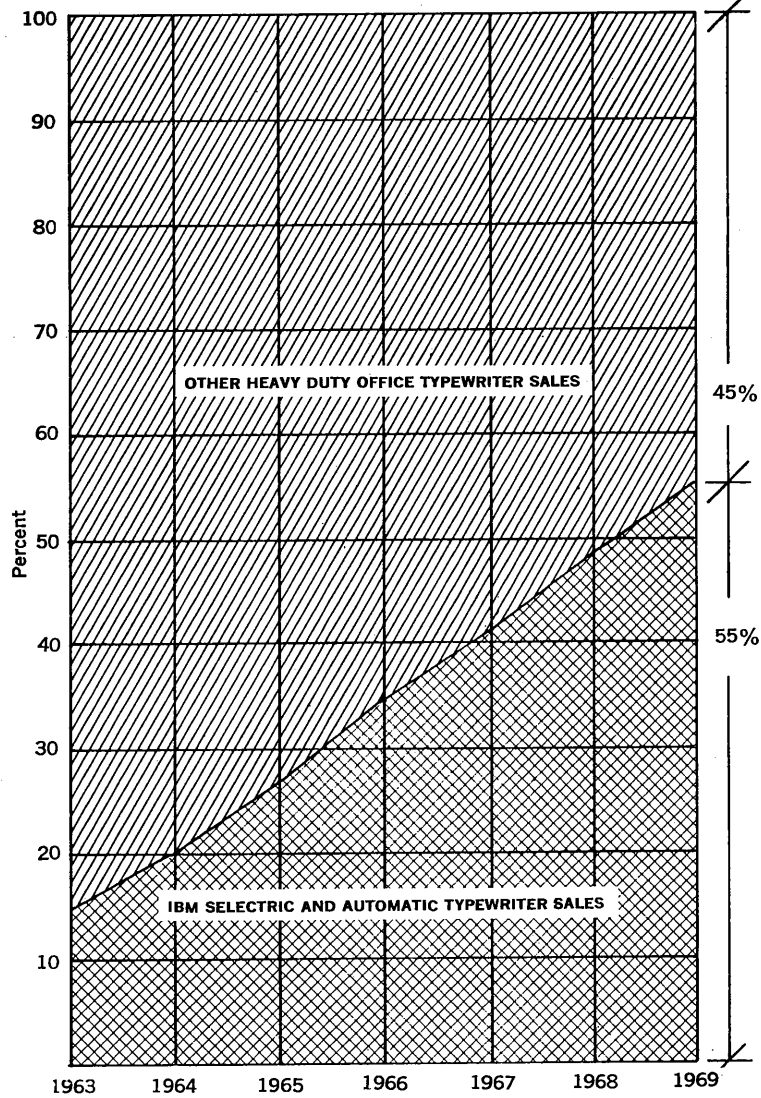
Initial Decision

82 F.T.C.

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 Termi-Printer which it manufactured under license from the General Electric Company. The OEM 7074 Termi-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).⁸⁸

(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

⁸⁸ 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)⁸⁹</u>

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)

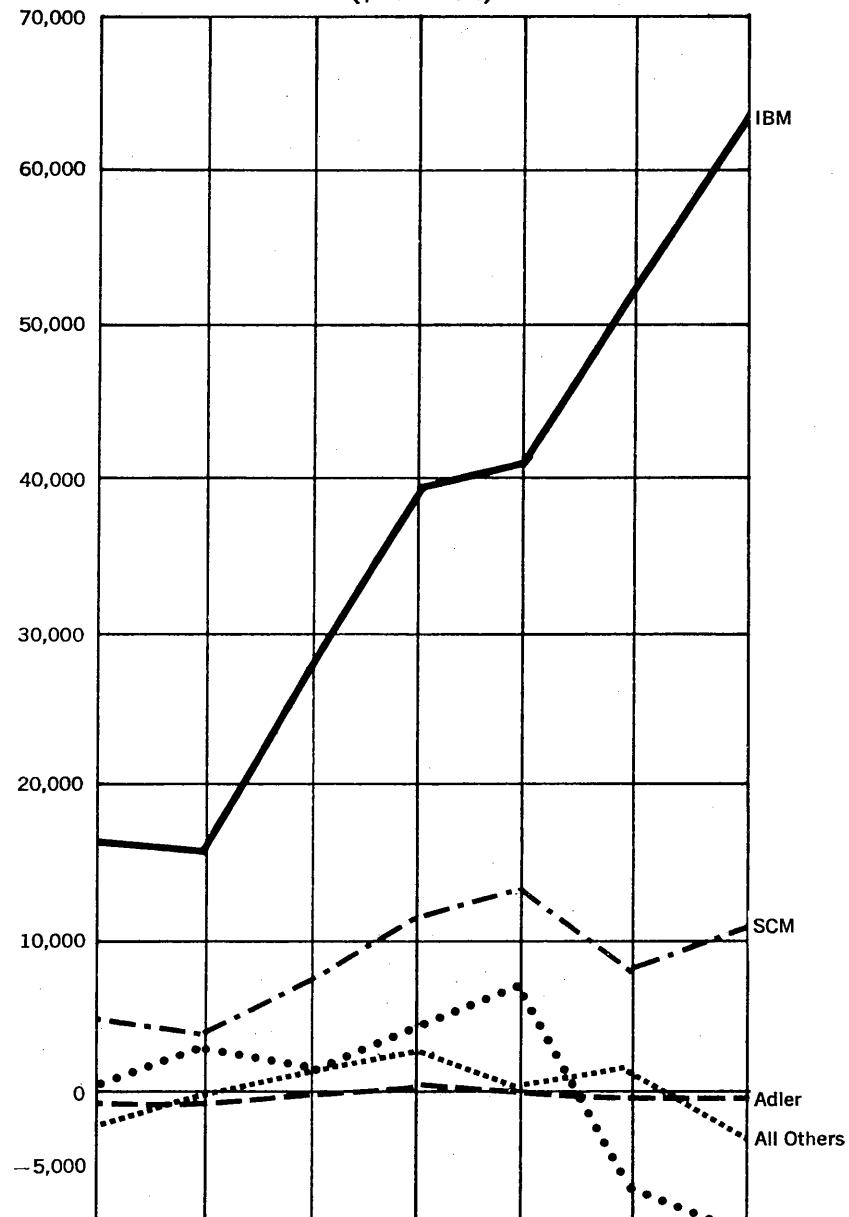
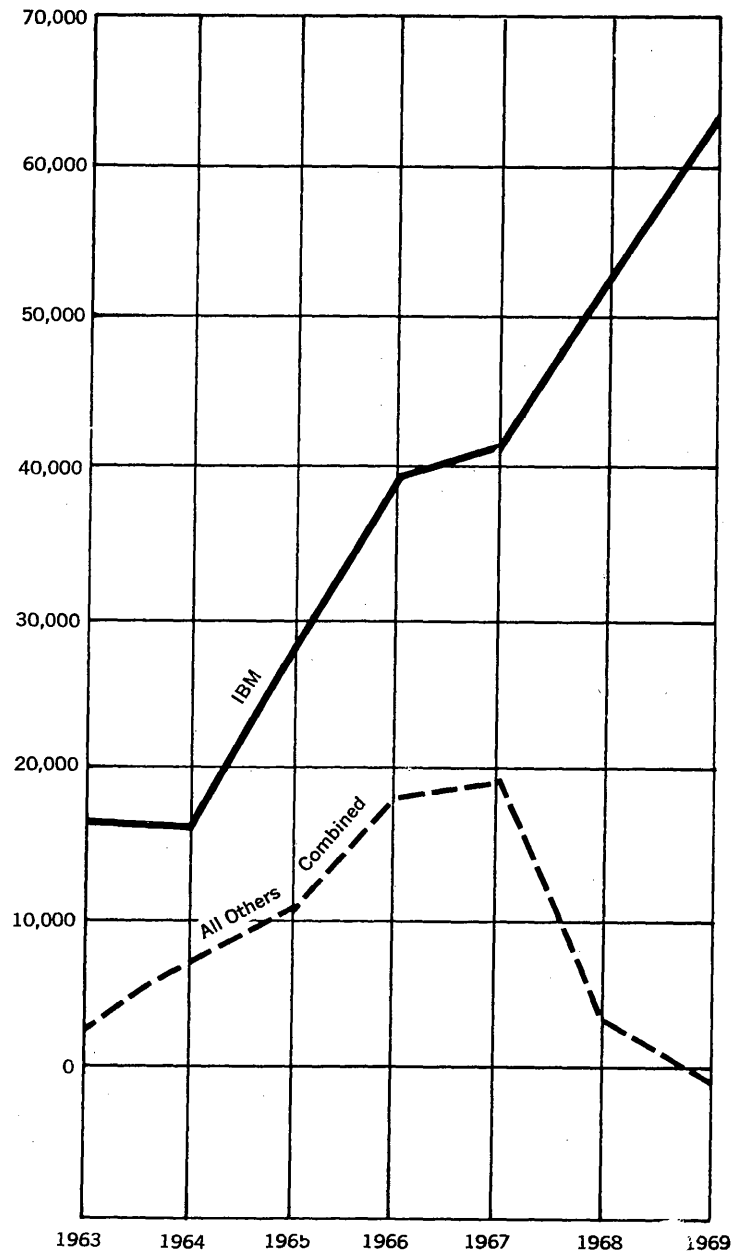


CHART 16
Reported Profit (Loss) of IBM
Compared with all other Companies*
United States, 1963-1969
(\$ in 000's)

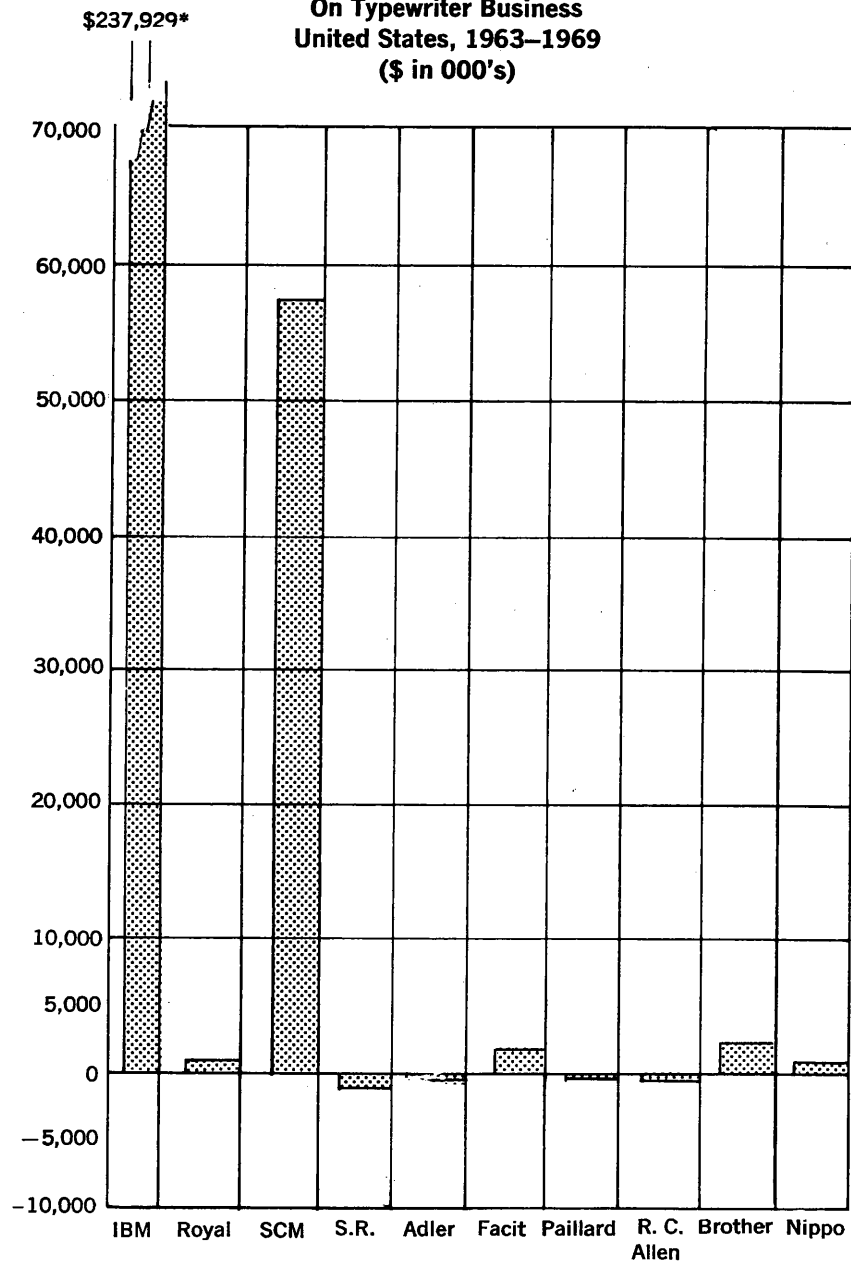


*Olivetti and Olympia did not provide data.

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).

³ I 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

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

⁴ The 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 Burotechnik 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.

established *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 herein-after, 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 (Nippon) 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 million ³² 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. Proctor & 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 Alder 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).

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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.

Complaint

IN THE MATTER OF

J. D. GRAMM, INC., ET AL.

CONSENT ORDER, ETC., IN REGARD TO THE ALLEGED VIOLATION
OF THE FEDERAL TRADE COMMISSION ACT

Docket C-2363. Complaint, March 14, 1973—Decision, March 14, 1973.

Consent order requiring a Hialeah, Florida, personal income tax preparation service, among other things to cease representing that each customer's tax return carries an unconditional or unlimited guarantee of accuracy; misrepresenting the training and ability of respondent's employees; representing that respondent offers an auditing service; and representing that respondent's representatives are engaged in the income tax business on a full time, year round basis.

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, and by virtue of the authority vested in it by said Act, the Federal Trade Commission, having reason to believe that J.D. Gramm, Inc., a corporation, and David Goldberg and Virginia M. Goldberg, individually and as officers of said corporation, hereinafter referred to as respondents, have violated the provisions of said Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, hereby issues its complaint stating its charges in that respect as follows:

PARAGRAPH 1. Respondent J.D. Gramm, Inc., is a corporation organized, existing and doing business under and by virtue of the laws of the State of Florida, with its principal office and place of business located at 461 Hialeah Drive, Hialeah, Florida.

Respondents David Goldberg and Virginia M. Goldberg are individuals and officers of the corporate respondent. They formulate, direct and control the acts and practices of the corporate respondent, including the acts and practices hereinafter set forth. Their address is the same as that of the corporate respondent.

PAR. 2. Respondents are now, and for some time last past have been, engaged in the advertising, offering for sale and sale of personal income tax preparation services to the general public.

Respondents sell their aforesaid tax preparation services directly and through various affiliates and franchisees, hereinafter referred to for convenience as respondents' representatives.