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.

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*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.

(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.

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.

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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:

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(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, filled 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

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.

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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.

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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.

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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 on 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 posssession, 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 pre-hearing 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 officials [1] 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 depositions [2] 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

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[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 devulged 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 Counsul 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

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[3] During the trial of this mattter, 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).

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 electromechanical 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.
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> * * * * * * *
>
> 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*

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 decision [4] 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 Trumph-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 oprating 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

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[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 maufactured office manual typewriters (see RXs 684 B, 685 E).[22] Currently, Olivetti typewriters sold in the United States are made at typewriter plants locatd 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 Robotyper 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).

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 insufficent 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).

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[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).

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 signficant 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).

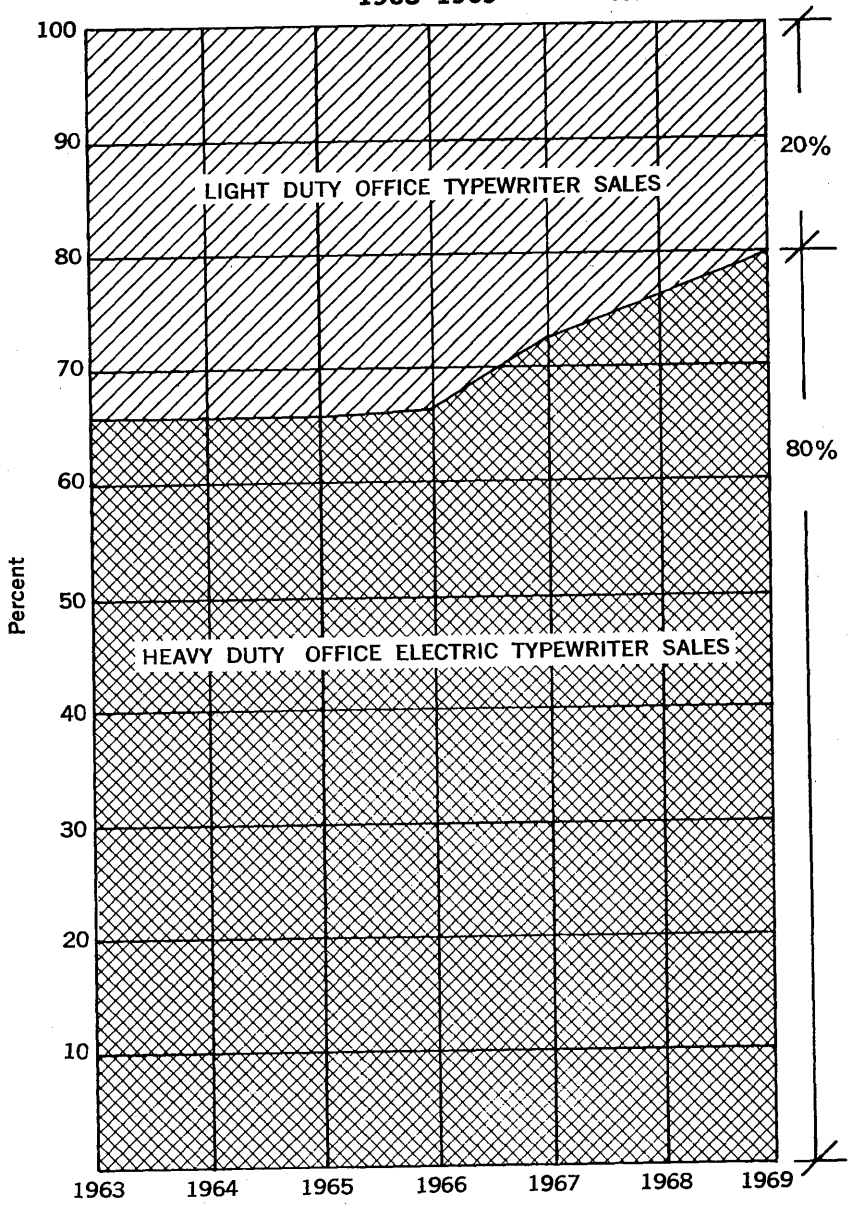
c. Light Duty Office Typewriters

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 lightweight 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).[42] 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.

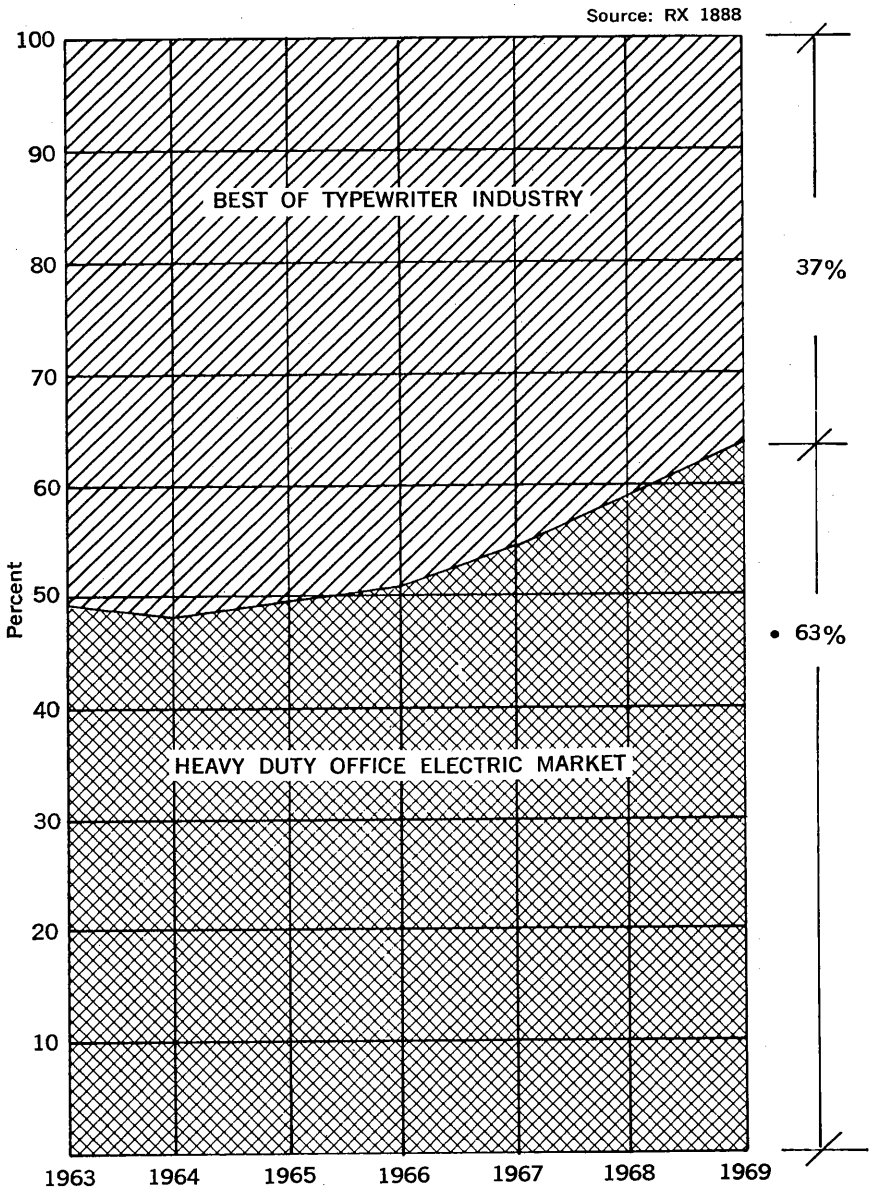
The heavy duty office typewriter market consists of new heavy duty office electric typewriters, factory-reconditioned heavy duty office electric typewriters, and automatic typewriters, which per-

[42] 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.

CHART 2

Heavy Duty Office Electric Typewriter Market as a Percentage of the Total Typewriter Industry, United States

1963–1969



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

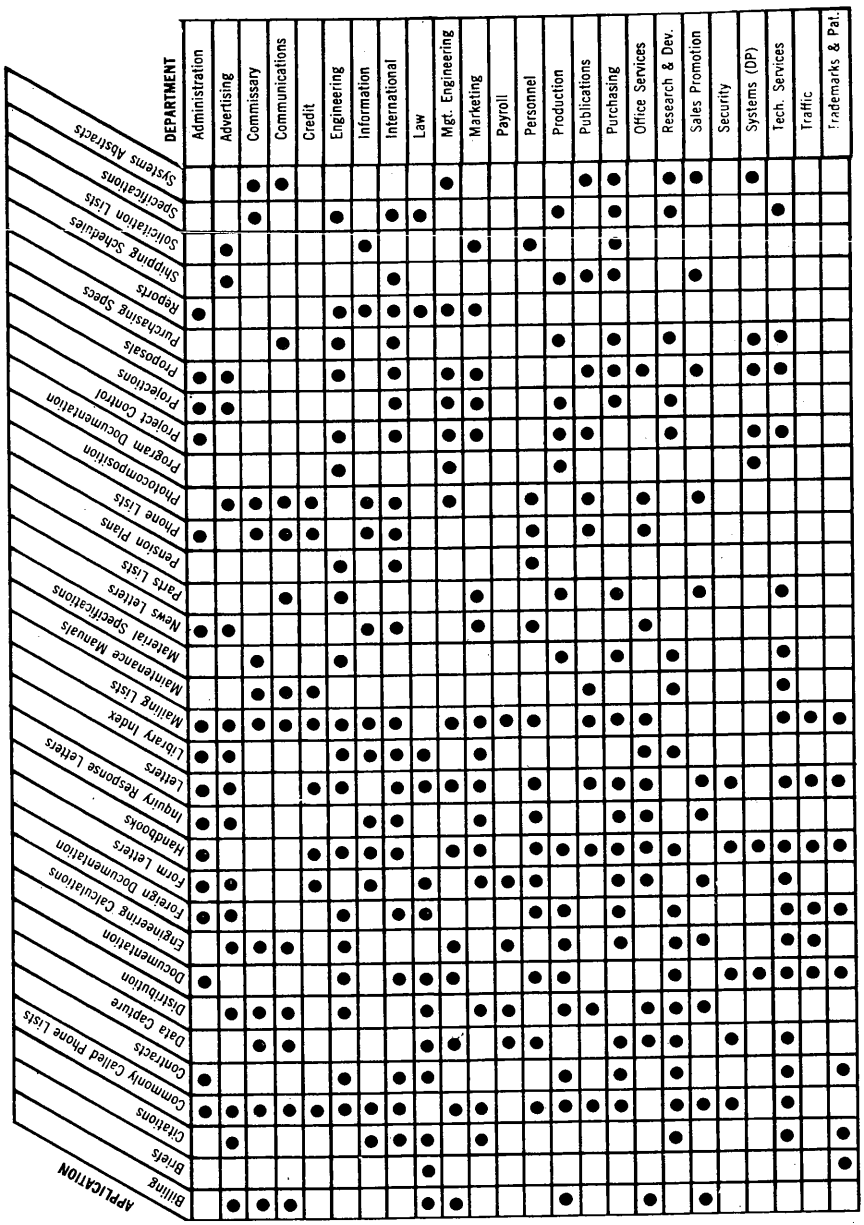
[43] Commission counsel's contention that RX 1848 is not reliable because it "totally ignores" all reconditioned typewriters other than IBM factory-reconditioned machines (CCR 50, 246–247), is incorrect in that the table includes Royal reconditioned typewriters (Tr. 8328) and, as Commission counsel, 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).

The following chart (RX 1675 B) illustrates the extensive overlap in use between standard heavy duty office electric typewriters and automatic office electric typewriters for performing office typing functions. See also, *e.g.*, RXs 636 P–X, 641 Z61.



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"

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[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]

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[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 dol[l]ars 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).

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dollar sales in this manner as our actual sales records reflect only sales to dealers at wholesale 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 Bendix 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 drecrease 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.

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[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).

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]

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[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 probably 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

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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)

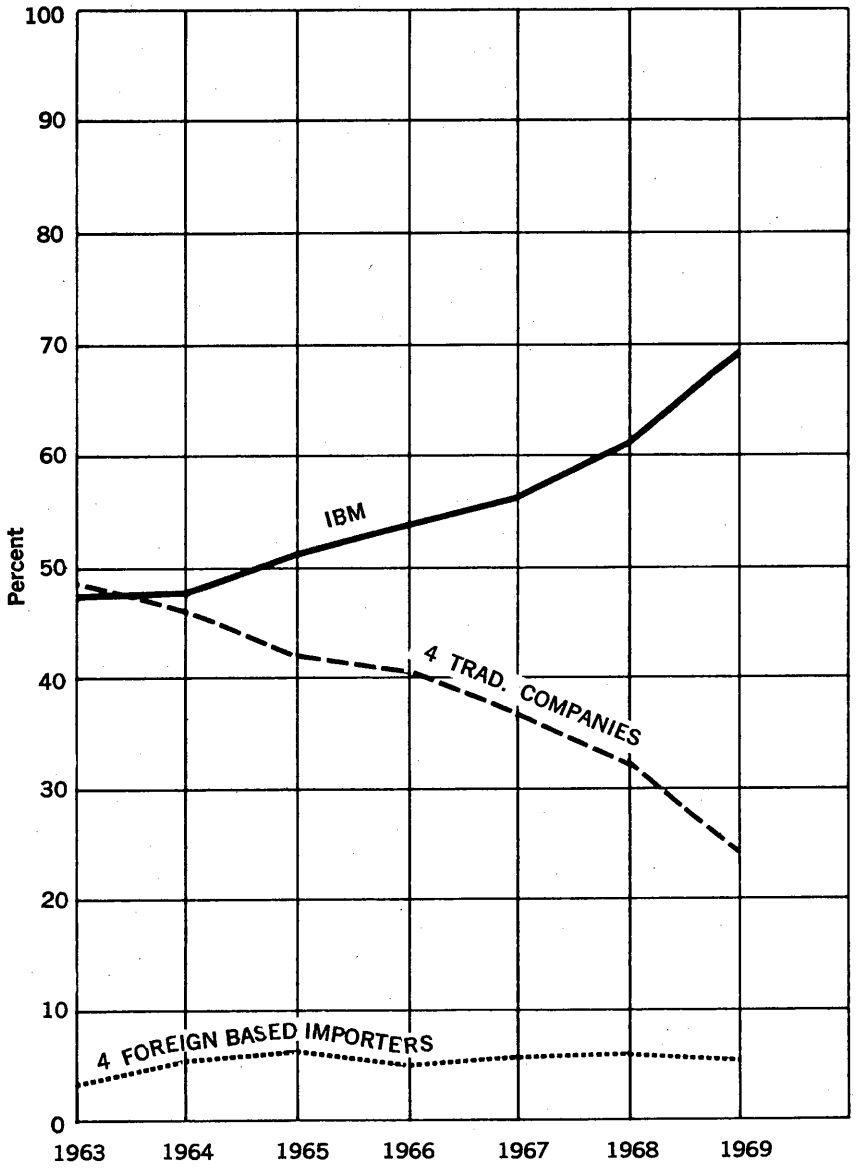
	1963		1964		1965		1966		1967		1968		1969	
	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.	SALES	SHR.
IBM	99031.	0.472	110351.	0.479	133757.	0.511	180121.	0.538	197748.	0.564	235851.	0.608	301517.	0.689
Royal	43304.	0.206	47256.	0.205	50316.	0.192	60936.	0.182	59189.	0.169	53500.	0.138	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	22934.	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

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:

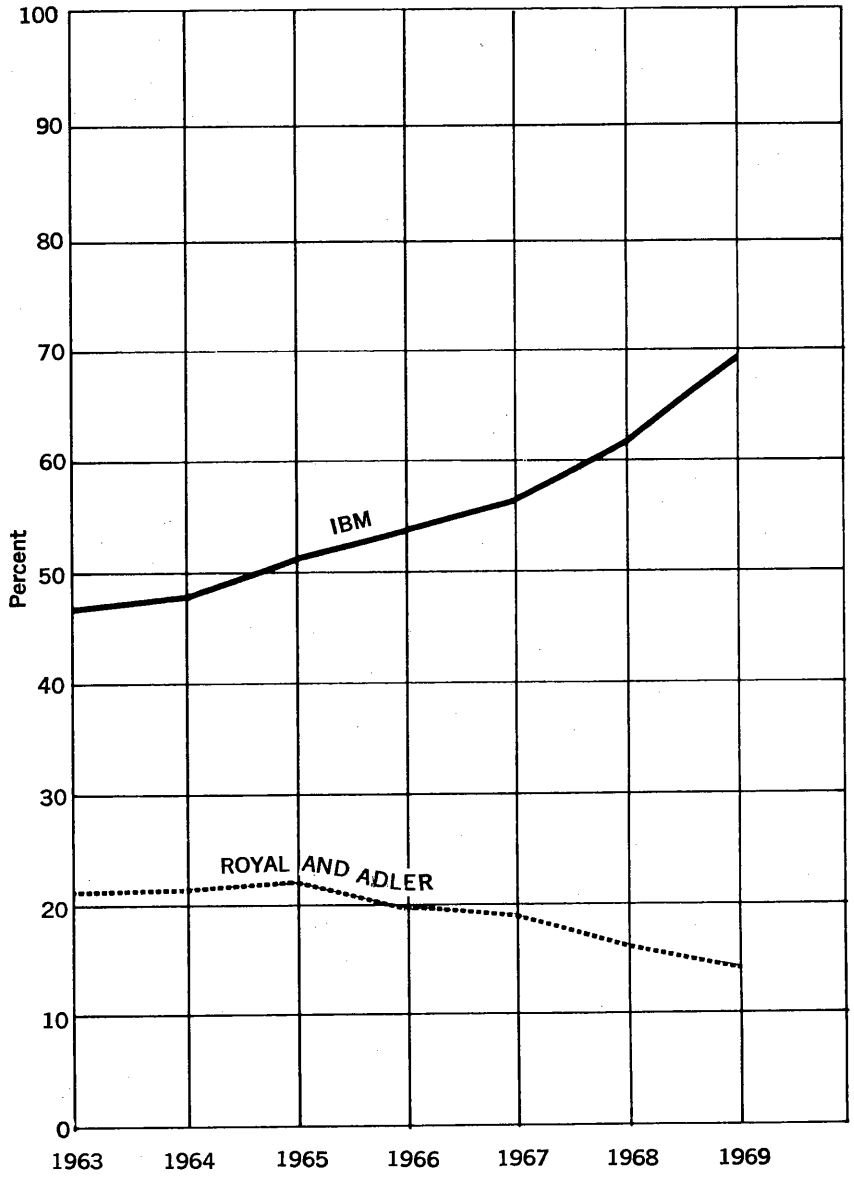
> In view of the high and really increasing gap between the shares of Royal and the leading companies, and the increased gap between the leading company and all of the other companies combined, in my opinion, the combination of Royal and Adler both of which have been declining in

[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).

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 Royaltyper/Robotyper, 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 date 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 Robotyper 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	13905.	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	137,971.	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).