

UNITED STATES OF AMERICA,  
  
Plaintiff,  
  
v.  
  
INTERNATIONAL BUSINESS MACHINES  
CORPORATION and  
STORAGE TECHNOLOGY CORPORATION,  
  
Defendants.

Civil Action:  
  
Filed December 18, 1997

The United States, pursuant to Section 2(b) of the Antitrust Procedures and Penalties Act ("APPA"), 15 U.S.C. § 16(b)-(h), files this Competitive Impact Statement relating to the proposed Final Judgment submitted for entry in this civil antitrust proceeding.

On December 18, 1997, The United States filed a civil antitrust complaint alleging that an "OEM agreement" dated June 7, 1996, between International Business Machines Corporation ("IBM") and Storage Technology Corporation ("STK") unreasonably restrained competition in the United States and worldwide in the sale of disk storage subsystems ("DASD") for mainframe computers, in violation of Section 1 of the Sherman Act (15 U.S.C. § 1). Before entering into the OEM agreement, IBM and STK competed with each other, and with only two other major competitors, in the development, production, and marketing of mainframe DASD in the United States and worldwide. With the OEM agreement, however, IBM became STK's exclusive outlet for STK's mainframe DASD

products, thereby eliminating competition between them for sales of mainframe DASD to end-users.

At the same time as it filed the Complaint, the United States also filed a Stipulation and a proposed Final Judgment in settlement of the suit. As described in greater detail below, the proposed Final Judgment would end the provisions of the OEM agreement that made the OEM agreement an exclusive arrangement between IBM and STK, and will provide positive incentives for STK to resume its position as an independent competitor in the market.

The United States, IBM, and STK have stipulated that the proposed Final Judgment may be entered after compliance with the APPA. Entry of the proposed Final Judgment would terminate this action, except that the Court would retain jurisdiction to construe, modify, or enforce the provisions of the proposed Final Judgment and to punish violations thereof.

## **II. DESCRIPTION OF EVENTS GIVING RISE TO THE ALLEGED VIOLATION**

### **A. The Defendants and Mainframe DASD**

IBM is incorporated in the state of New York and is headquartered in Armonk, New York. IBM is by far the world's largest supplier of mainframe computers and related products. For the year 1996, IBM posted worldwide revenues of about \$75 billion. In 1995, the last full year in which IBM and STK were separate competitors in the mainframe DASD market, IBM had mainframe DASD sales of over \$2 billion, representing shipments of about 588 "terabytes" of data storage capacity. The terabyte -- equivalent to the amount of data that can be stored in

hundreds of millions of pages of paper -- is a standard industry measure of sales volume. In 1995, IBM sold 275 terabytes of mainframe DASD, for over \$1.2 billion, in the United States.

STK is a Delaware corporation headquartered in Louisville, Colorado. STK reported total worldwide revenues of about \$2 billion in 1996. STK's core businesses are computer data storage and retrieval systems, especially those for mainframe computer systems. Other than mainframe DASD, STK's major products are automated tape library storage systems for mainframe computers, and it is the world's dominant supplier of these tape systems. STK's 1995 worldwide sales of mainframe DASD were over \$300 million, representing shipments of about 155 terabytes. Its U.S. sales of mainframe DASD were about \$190 million, representing shipments of 100 terabytes.

DASD are computer data storage systems that utilize rotating magnetic disks. As defined in the Complaint and proposed Final Judgment, "mainframe DASD," are DASD specifically designed to attach to and operate with IBM's System 390 computers, predecessor and successor models, and other manufacturers' IBM-plug-compatible computers.<sup>1</sup> As described in the Complaint, mainframe DASD perform high-speed and high-capacity data storage and retrieval functions that are essential to the operation of mainframe computers, which in turn are commonly and widely used

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<sup>1</sup> These mainframe computers are distinguishable from other computers in that they all operate with IBM mainframe computer operating systems, principal examples of which are IBM's OS-390, MVS, VSE, and VM operating systems. Some "mainframe DASD" attaches to and operates with other types of computers as well.

for mission-critical data processing by business, educational, governmental, and other organizations throughout the world.<sup>2</sup>

**B. The OEM Agreement**

On June 7, 1996, IBM and STK entered into an OEM agreement pursuant to which STK agreed to supply IBM, and IBM committed to purchase for resale purposes, mainframe DASD products developed and manufactured by STK.<sup>3</sup> The parties agreed to extend the arrangement through the end of 1999, subject to terms for renewal. Before the OEM agreement, STK sold its mainframe DASD products in direct competition with IBM's internally developed and manufactured mainframe DASD products. Under the OEM agreement, however, IBM became STK's exclusive outlet for its mainframe DASD, and this relationship displaced the competition that had previously existed between them.

The OEM agreement required IBM to purchase certain minimum volumes and to make substantial payments to STK if it failed to meet the minimum purchases. The OEM agreement committed IBM to purchase annual and quarterly minimum volumes of STK's DASD products. For each of the years 1997 and 1998, IBM had to purchase minimum volumes of 710 terabytes, and thereafter, the parties were to negotiate new volume terms. If IBM failed to purchase the minimum volumes, STK would be free to terminate the

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<sup>2</sup> Data search times measurable in milliseconds and high data-transfer rates make DASD suitable for on-line transaction processing, large volume batch processing, and other applications in which rapid access to large amounts of data is important.

<sup>3</sup> The OEM agreement was not subject to the pre-notification requirements of § 7a of the Clayton Act, 15 U.S.C. § 18a.

agreement, and IBM would be obligated to pay liquidated damages of \$75 million for a termination based on IBM's failure to meet the 1997 minimum volumes and \$27 million for a termination based on IBM's failure to meet the 1998 minimum volumes.

Under the OEM agreement, IBM was also required to pay STK "recovery payments," which increased proportionately with lower levels of purchases by IBM, but declined to zero as the purchases approached 400 terabytes in 1996 and 1500 terabytes in 1997 and 1998. For example, if IBM sold only the minimum 710 terabytes in 1997, it would owe STK up to \$60 million in recovery payments for falling 790 terabytes short of the 1500. These recovery payments also took into account the proportion of IBM's total sales of STK's DASD products versus IBM's sales of its own DASD, so that the higher the proportion of STK products sold by IBM, the lower the recovery payments. The OEM agreement also required IBM to contribute \$100 million over three years to help fund STK's on-going efforts and plans to improve the performance and capabilities of its mainframe DASD products.

Although the OEM agreement did not expressly provide that IBM would be STK's exclusive mainframe DASD distributor, it contained provisions that made independent sales by STK so unattractive economically that it gave IBM de facto exclusivity. The OEM agreement provided that if STK sold mainframe DASD to anyone other than IBM, IBM would be freed from its purchase volume commitments, its obligation to make recovery payments or pay liquidated damages upon failure to achieve those commitments, and its duty to help fund STK's product development programs --

obligations that in total were worth hundreds of millions of dollars to STK. Due to these prohibitive contractual consequences, internal STK documents referred to STK sales of mainframe DASD to anyone other than IBM as "forbidden" under the OEM agreement.<sup>4</sup> Shortly after entering into the OEM agreement, STK stopped all efforts to sell mainframe DASD to customers other than IBM; and STK became completely dependent on its former competitor to sell STK mainframe DASD to end-users.

**C.    The OEM Agreement Violates  
Section 1 of the Sherman Act**

The Complaint alleges that the OEM agreement unlawfully restrained competition in the mainframe DASD market in the United States and worldwide, in violation of Section 1 of the Sherman Act. Mainframe DASD is a relevant antitrust market because there are no substitute products to which mainframe DASD purchasers would turn even if prices of mainframe DASD were to increase substantially.<sup>5</sup> The OEM agreement greatly increased the level of concentration in a market that was already highly concentrated.

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<sup>4</sup> To protect STK in the event it unintentionally entered into transactions that would trigger these severe financial penalties, STK insisted that it be allowed to make up to 12 otherwise "forbidden sales" over the life of the agreement. Another exception allowed STK to sell its mainframe DASD to others without penalty so long as STK first sold it to IBM and then repurchased it from IBM.

<sup>5</sup> Although other types of data storage devices exist -- for example, tape, optical and electronic memory products -- because of performance or cost differences, none of these other products are effective substitutes for DASD. Conversion to a non-mainframe computer system is also not an effective way to substitute away from mainframe DASD because of the substantial costs and risk of switching to an alternative computer platform.

In 1995, the last full year in which IBM and STK competed against each other, IBM had a worldwide market share of about 36 percent (based on total shipments of about 558 terabytes), while STK's share was about 10 percent (shipments of about 155 terabytes). The Herfindahl-Hirschman Index, a standard measure of market concentration, increased by 720 points, to a post-agreement level of 3767, as a result of the OEM agreement.<sup>6</sup> The reduction of competition from the OEM agreement has not been alleviated by new entry into the manufacture and marketing of mainframe DASD, and because such new entry would be extremely difficult and time-consuming, it is unlikely to occur in the foreseeable future.

The Complaint further alleges that the OEM agreement removed a significant competitive force from the marketplace. STK had been the low price bidder for numerous DASD sales, and IBM and STK products had been the top two choices for many customers. Competition from STK had contributed to the substantial erosion in prices of mainframe DASD in the years immediately prior to the

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<sup>6</sup> The HHI is well accepted as a measure of market concentration. It is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of thirty, thirty, twenty, and twenty percent, the HHI is 2600 ( $30^2 + 30^2 + 20^2 + 20^2 = 2600$ ). The HHI takes into account the relative size and distribution of the firms in a market and approaches zero when a market consists of a large number of firms of relatively equal size. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases. Markets in which the HHI is between 1000 and 1800 are considered to be moderately concentrated and those in which the HHI is in excess of 1800 points are considered to be highly concentrated. Transactions that increase the HHI by more than 100 points in moderately concentrated and concentrated markets presumptively raise antitrust concerns under the Department of Justice and Federal Trade Commission Horizontal Merger Guidelines (rev. 1997).

OEM agreement. In this marketplace setting, the OEM agreement eliminated direct and significant competition between IBM and STK and deprived mainframe DASD customers of the benefits of that competition. As a consequence of the OEM agreement, the rapid decline in the price of mainframe DASD eased, and the parties' output of mainframe DASD fell below levels they had projected prior to the agreement. Thus, the OEM agreement has been anticompetitive and it violates Section 1 of the Sherman Act.

### **III. EXPLANATION OF THE PROPOSED FINAL JUDGMENT**

The proposed Final Judgment bars IBM and STK from including in an OEM agreement terms that would prevent STK from selling mainframe DASD in competition with IBM. The modifications to the OEM agreement remove the provisions that made the agreement a de facto exclusive arrangement.<sup>7</sup> As a result, STK will suffer no economic penalty if it sells to customers other than IBM. The elimination of these restrictions makes the relationship between IBM and STK non-exclusive, and provides an incentive to STK to begin selling mainframe DASD as an independent competitor. Furthermore, the proposed Final Judgment creates additional incentives for STK to begin selling DASD independently by limiting the amount of mainframe DASD that STK may sell through IBM, unless STK sells significant amounts of mainframe DASD on its own. The purpose of these limitations, which are described in detail below, is to make it economically attractive for STK to

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<sup>7</sup> See modified OEM agreement dated December 18, 1997, a redacted copy of which is attached hereto as a determinative document under the APPA. The redactions are necessary to avoid disclosure of competitively sensitive information. An unredacted copy will be made available to the Court upon request.

seek out business from customers other than IBM. In setting these limitations, the proposed Final Judgment does not preclude STK sales through IBM that may arise under a non-exclusive OEM arrangement between them, but adds a positive incentive for STK to re-enter the mainframe DASD market as a seller independent of IBM.

Section IV of the proposed Final Judgment enjoins the anticompetitive contractual arrangements that have prevented STK from selling mainframe DASD independently of IBM. Except in limited specified contexts common in normal supply contracts,<sup>8</sup> Section IV prohibits IBM and STK from entering into or maintaining any agreement as to price, volume, or other terms that would be contingent upon either the level of IBM's mainframe DASD purchases from STK, or the level of STK's sales to customers other than IBM. The provisions of the OEM agreement that imposed upon IBM minimum purchase commitments and obligated it to pay recovery payments and liquidated damages if those commitments were not met, and that established contractual penalties to STK for making mainframe DASD sales to customers other than IBM, are prohibited by Section IV.

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<sup>8</sup> The proposed Final Judgment allows IBM to provide STK with monthly and quarterly forecasts of its purchases, in order to enable STK to anticipate capacity requirements to fill IBM orders, while imposing strict limits on the extent to which IBM may actually bind itself to make purchases (Section IV.D.); permits IBM and STK to set prices for IBM purchases that reflect volume-based discounts and any credits obtained as a result of STK's failure to meet on-time delivery, quality, or product deliverable requirements (Section IV.E.); and allows STK to pay IBM specified unit based royalties for its sales of DASD to other customers, which would enable IBM to recover a portion of its investments in STK DASD product improvements (Section V).

Section V of the proposed Final Judgment contains technology licensing provisions designed to ensure that STK will not be prevented from independently marketing mainframe DASD improvements that STK has developed with IBM funding. These provisions require IBM to grant STK a license to all mainframe DASD hardware or software product improvements funded by IBM or for which it provided assistance under the OEM agreement. The license is subject to STK's payment of reasonable royalties, however, to allow IBM an appropriate return on its contributions.

Section VI.A. of the proposed Final Judgment provides a positive incentive for STK to compete against IBM, by requiring that STK must sell DASD on its own as a condition of making unconstrained sales to IBM. Under Section VI.A., beginning on January 1, 1999, IBM's U.S. purchases from STK in a calendar year may not exceed 67 percent of IBM's U.S. purchases in 1998, unless STK has shipped over the preceding twelve months a substantial volume of mainframe DASD to U.S. customers other than IBM. If STK fails to sell the specified amount to customers other than IBM, it may make additional sales to IBM only if the parties obtain prior approval from the United States pursuant to Section VI.B. The United States will grant or deny such approval on the basis of whether vigorous competition from STK has been restored, and whether such competition would be substantially lessened as a result of additional purchases by IBM. Section VI.B. also sets

out a process and standard for judicial review should IBM or STK contest a denial by the United States.<sup>9</sup>

Other provisions of the proposed Final Judgment are also aimed at fostering STK's competitive independence from IBM. Section IV.C. prohibits IBM and STK from avoiding the proscriptions of the Judgment by entering into a sales agency or distribution agreement that would not entail actual IBM purchases of mainframe DASD. Section IV.D. restricts STK's reliance on IBM purchases by limiting the extent to which IBM volume forecasts and purchase orders may become binding. Section IV.E. limits the parties' ability to set IBM's prices on terms other than actual amounts purchased. Section IV.F. requires STK to allocate fairly production between the needs of IBM and that of other STK customers in the event of supply constraints. Finally, Section V.C. guarantees that IBM will continue to sell IBM disk drives used in STK's mainframe DASD products, at competitive prices and

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<sup>9</sup> The proposed Final Judgment imposes on Defendants the burden of proof in such proceedings. For the period up to January 1, 2001, the proposed Final Judgment permits the Court to overrule a denial by the United States of a request for additional IBM purchases only if Defendants establish that, notwithstanding STK's failure to supply the STK Minimum to United States customers, IBM faces vigorous and ongoing competition from STK in the United States for the development, production and marketing of DASD, and IBM's proposed additional purchases would not substantially lessen that competition. Beginning on January 1, 2001, the proposed Final Judgment expands the review criteria beyond whether STK is a vigorous DASD competitor in the United States. Here, the proposed Final Judgment also permits the Court to overrule a denial by the United States if the Defendants establish that, because of technological advances, the entry of new competitors, or other material competitive changes, IBM's proposed additional purchases would not substantially lessen competition in the United States in the development, production, or marketing of mainframe DASD.

terms, so long as IBM makes such drives generally available to other purchasers.

#### **IV. REMEDIES AVAILABLE TO POTENTIAL PRIVATE LITIGANTS**

Section 4 of the Clayton Act (15 U.S.C. § 15) provides that any person who has been injured as a result of conduct prohibited by the antitrust laws may bring suit in federal court to recover three times the damages the person has suffered, as well as costs and reasonable attorneys' fees. Entry of the proposed Final Judgment will neither impair nor assist the bringing of any private antitrust damage action. Under the provisions of Section 5(a) of the Clayton Act (15 U.S.C. § 16(a)), the proposed Final Judgment has no prima facie effect in any subsequent private lawsuit that may be brought against Defendants.

#### **V. PROCEDURES AVAILABLE FOR MODIFICATION OF THE PROPOSED FINAL JUDGMENT**

The United States and the Defendants have stipulated that the proposed Final Judgment may be entered by the Court after compliance with the provisions of the APPA, provided that the United States has not withdrawn its consent. The APPA conditions entry upon the Court's determination that the proposed Final Judgment is in the public interest.

The APPA provides a period of at least sixty (60) days preceding the effective date of the proposed Final Judgment within which any person may submit to the United States written comments regarding the proposed Final Judgment. Any person who wishes to comment should do so within sixty (60) days of the date of publication of this Competitive Impact Statement in the Federal Register. The United States will evaluate and respond to

the comments. All comments will be given due consideration by the Department of Justice, which remains free to withdraw its consent to the proposed Final Judgment at any time prior to entry. The comments and the response of the United States will be filed with the Court and published in the Federal Register. Written comments should be submitted to:

John F. Greaney  
Chief, Computers & Finance Section  
Antitrust Division  
United States Department of Justice  
Suite 9500  
600 E Street, N.W.  
Washington, D.C., 20530.

The proposed Final Judgment provides that the Court retains jurisdiction over this action, and the parties may apply to the Court for any order necessary or appropriate for the modification, interpretation, or enforcement of the Final Judgment.

**VI. ALTERNATIVES TO THE  
PROPOSED FINAL JUDGMENT**

The United States considered, as an alternative to the proposed Final Judgment, proceeding to a full trial on the merits of its Complaint. The United States is satisfied, however, that the relief contained in the proposed Final Judgment should reestablish and maintain viable and effective competition in the mainframe DASD market that has otherwise been adversely affected by the OEM agreement. Thus, the proposed Final Judgment will benefit competition substantially to the same extent that the government could have obtained through litigation, but avoids the time, expense and uncertainty of a full trial on the merits of

the government's Complaint, including the uncertainty over whether a remedy imposed after a long delay would be efficacious.

The United States also considered a claim for damages arising from increased prices paid by the United States for its purchases of mainframe DASD as a result of the reduction of competition caused by the OEM agreement. However, calculation and proof of such damages to the United States is likely to be complex and difficult, and the litigation necessary to secure the damages would be costly and protracted. During the pendency of the litigation, moreover, the OEM agreement would remain in effect, depriving the United States and all other mainframe DASD purchasers of the benefit of STK as an independent competitive source of supply. Purchases by the United States constitute only a modest percentage of all domestic DASD purchases. The United States concluded, therefore, that the public interest is better served overall by securing the immediate, certain, and substantial relief set forth in the proposed Final Judgment.

#### **VII. DETERMINATIVE DOCUMENTS**

One determinative document within the meaning of the APPA -- the IBM-STK agreement dated December 18, 1997, which modifies the July 7, 1996, agreement in conformity with the terms of the proposed Final Judgment -- was considered by the United States in formulating the proposed Final Judgment. A redacted copy of this

document is attached hereto, is being filed with the Court, and will be available for public inspection.<sup>10</sup>

Dated: December 18, 1997

Respectfully submitted,

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<sup>10</sup> Certain confidential business information contained the modified OEM agreement, but not significant to consideration of the proposed Final Judgment by the United States, has been redacted from the filed and publicly available copies. Due to the length of the modified OEM agreement, it will not be published in the Federal Register.