SEAGATE TECHNOLOGIES: OPERATIONAL HEDGING

On July 10, 1997, Ron Verdoorn, Executive Vice President of Seagate Technologies, and Chief Operating Officer of its Storage Products Group, was reading the Capital Appropriation Request (CAR) for the Barracuda 9LP and the Cheetah 9LP. The Barracuda 9LP and Cheetah 9LP were two of Seagate’s new high-end disk-drive product families that were scheduled to go into volume production in the first calendar quarter of 1998. The CAR called for a $63 million capital investment in two final assembly facilities, one for the Barracuda and one for the Cheetah, and one joint test facility. The capacities of the new facilities would enable the execution of the master production plan, which was derived by the Material Division based on the sales forecast by the Marketing Division.

While the capital investment plan was definitely reasonable, Ron knew from experience that the plan could be adjusted to provide Seagate with a better hedge against demand uncertainty, which was intrinsic to the sales forecast in the highly volatile disk drive industry.

Company Background

Seagate Technology, Inc. is a data technology company that provides products for storing, managing, and accessing digital information on the world's computer and data communications systems. At more than $8.9 billion in revenue for its fiscal year ended June 27, 1997, Seagate is the largest independent disc drive and related components company in the world. (Selected financials are shown in Exhibit 1.) Founded in 1979, the Scotts Valley, California-based company had shipped more than 100 million disc drives by 1997.

Seagate designs, manufactures and markets disc drives for use in computer systems ranging from notebook computers and desktop personal computers to workstations and supercomputers, as well as in multimedia applications such as digital video and video-on-demand. Seagate leads the disc drive storage industry offering the broadest product line including disc drives with 2.5, 3.5 and 5.25 inch form factors and capacity points up to 23 Gigabytes. The company sells its products to original equipment manufacturers (“OEMs”) for inclusion in their computer systems or subsystems, and to distributors, resellers, dealers and retailers.

Seagate has pursued a strategy of vertical integration and accordingly designs and manufactures rigid disc drive components including recording heads, discs, disc substrates, motors and custom integrated circuits. It also assembles certain of the key subassemblies for use in its products including printed circuit board and head stack assemblies. Products are manufactured primarily in the Far East with limited production in the United States and the Republic of Ireland.

As of June 27, 1997, Seagate employed 111,000 persons worldwide, approximately 93,000 of whom were located in the company's Far East operations.

Disk Drive Technology

Magnetic disc drives are used in computer systems to record, store and retrieve digital information. Most computer applications require access to a greater volume of data than can economically be stored in the random access memory of the computer's central processing unit (commonly known as "semiconductor" memory). This information can be stored on a variety of storage devices, including rigid disc drives, both fixed and removable, flexible disc drives, magnetic tape drives, optical disc drives and semiconductor memory. Rigid disc drives provide access to large volumes of information faster than optical disc drives, flexible disc drives or magnetic tape drives and at substantially lower cost than high-speed semiconductor memory.

Although products vary, all rigid disc drives incorporate the same basic technology (Exhibit 2). One or more rigid discs are attached to a spindle assembly that rotates the discs at a high constant speed around a hub. The discs (also known as media or disc media) are the components on which data is stored and from which it is retrieved. Each disc typically consists of a substrate of finely machined aluminum or glass with a magnetic layer of a “thin-film” metallic material.

Rigid disc drive performance is commonly measured by four key characteristics: