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SHIMANO AND THE HIGH-END ROAD BIKE INDUSTRY

Shimano is known worldwide as THE brand of bicycle parts. People tend to ask not, 'Who's the maker?' but, 'Which grade of Shimano components was used?' when attempting to determine a bicycle's capabilities.

—Morgan Stanley Dean Witter Analysts¹

Cyclists often speak of the wind in their faces while riding or the rush they feel when a peloton of bike racers rides by at 35 miles per hour. Like any sport, road biking and racing has its own specific vocabulary and culture. But even most non-cyclists have heard of Lance Armstrong and his epic seven victories in the Tour de France. Although cycling has traditionally been Europe's sport—just witness the spectator crowds on any Tour de France mountain climb—Armstrong's cycling feats helped turn it into a global one.

Cyclists in events like the Tour de France rode road bikes which were characterized by drop-handlebars and skinny tires on a tall frame (versus the fatter tires, mechanical suspension, powerful brakes, and low/easier gearing of mountain bikes and other cross-terrain bikes). Armstrong's 2005 Tour-winning bike carried the names of several prestigious brands. The carbon-fiber frame, designed to maximize power and minimize weight, was a Trek Madone 5.9.² Bontrager (acquired by Trek in 1995) made the fork, the ultra-thin road racing wheels, tires, saddle, seat post, and handlebars. Shimano made the pedals, shifters, hubs, cranks, derailleurs, cogs, and the cassette.³

¹ Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 5.

² Professional bike racers also need different bikes for different purposes—time trial bikes, climbing bikes, etc.

³ The fork is the part of the frame that allowed the rider to steer the bike. Pedals held a cyclist's special shoes in place so they could "clip in" for greater control and power, similar to a ski binding, and several companies made different models of pedals. Shifters are used to shift gears to make it easier to climb hills or to go faster on flat terrain (Armstrong's bike included a front shifter that controlled two gears and a rear shifter that controlled 10 gears, for a possibility of 20 possible gear combinations). Hubs are the center of the wheel, where the spokes

Victoria Chang prepared this case under the supervision of Professor Garth Saloner as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Toyo Shimano, MBA2, conducted several company interviews and research.

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Shimano was founded in 1920 by Shozoburo Shimano in Sakai City, Japan, an Osaka suburb famous for making gun barrels and sushi knives. By 2006, Shimano had grown from a family-based business that focused on freewheels, to a \$1.6 billion dollar global company with net income of \$186 million, which not only manufactured bike components but also made fishing tackle.⁴ Eighty percent of the company's bicycle component sales were from high-end components and most of the rest were for mid-range components. Shimano led the bike component industry with a more than 80 percent share of the high-end market,⁵ and the company was often called the "Intel of the bike business." Growth did not come overnight: in 1985, Shimano components were specified on less than 35 percent of all new high-end bicycle models sold in the U.S.; by 1990, its share had risen to 69 percent and by 1996 to 79 percent.⁶

As the Shimano leaders reflected on the company and its growth trajectory, they were particularly proud of the market position that Shimano had achieved. However, Shimano wondered how to continue its growth in the components market as new technologies, new companies, and new products such as those of component rival SRAM began to enter the market, and the longer-term sales trend of a mature road bike industry remained relatively flat (3 to 4 percent per annum).

THE BICYCLE MARKET

The global bicycle market could be divided into many segments, but the industry usually split the market into three main segments—the low-end market (below \$300), the mid-class market (\$300-\$500), and the high-end market (from \$500 to well over \$4,000). Low-end bikes included children's bikes and bicycles used for basic transportation, while the high-end segment included those used for rigorous recreational activities. Some 100-130 million bicycles were sold globally each year. The biggest domestic market was China, accounting for 30 percent of unit sales. The U.S. bicycle market constituted approximately 17 percent of unit sales, and the European and Japanese markets were about two-thirds and one-half the size of the U.S. market respectively.

The bicycle industry had gone through several booms, slowdowns, and consumer interest shifts. Technology improvement spurred the 1970s "bike boom." In the 1980s, high gasoline prices encouraged a further increase in bike sales. Then there was a surge in mountain bike sales in the 1990s (almost entirely displacing road bike sales). And in the 2000s, Lance Armstrong's Tour de France victories helped to revive public interest in road bikes, particularly in the United States where mountain bikes had dominated in the prior decade.

High-end bicycles accounted for a relatively small portion of the total bicycle markets in Japan and the U.S.—10 percent and 17 percent, respectively—compared to 39 percent in Europe.⁷ "High-end" was defined more by the quality of the inputs than the end-use. For example some

connect. Cranks allow the rider to transfer human energy through pedals. Derailleurs move the chain across cogs (metal discs that had teeth on them or rear sprockets). The cassette is a set of matched cogs for a rear hub.

⁴ Fishing tackle accounted for a quarter of the company's sales, a percentage that was rising.

⁵ Bikes with some form of Shimano components on them.

⁶ By 1990, Shimano equipped 90 percent of mountain bike models. Paul Isely and Matthew R. Roelofs, "Primary Market and Aftermarket Competition in the Bicycle Component Industry," *Applied Economics*, 36, p. 2098, 2004.

⁷ Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 2.

road bikes were built purely for speed while others took into account the comfort of the rider, especially over rough terrain or for long periods on the saddle. So-called “comfort” road bikes were gaining popularity with baby-boomers as they reached middle-age. The “geometry” of these bikes was somewhat more forgiving than racing bikes, accommodating a slightly more upright position. Another growing segment was the “hybrid” that had a mix of road bike and mountain bike characteristics. Carbon-fiber was still the material of choice at the high end of comfort bikes and hybrids because of its ability to absorb road shocks.

High-end bikes, like the one that Armstrong rode, could be quite expensive, ranging anywhere from \$2,000 to \$4,000 off the rack (Armstrong’s bike was even more), not including pedals. For example, many different variations of the Trek Madone bike that Armstrong rode could be purchased at a Trek retailer and prices ranged from \$2,600 to \$7,000, depending on a particular model’s components.

SUPPLY CHAIN: FROM VERTICAL INTEGRATION TO FRAGMENTATION

In the 1890s, the early years of the bicycle industry, vertically integrated companies manufactured entire bicycles. This changed rapidly, however. Once there was a dominant bicycle design in place, competition turned to price. A plethora of bike companies entered the market and the price of bicycles halved. Competition from automobiles also decreased demand for bicycles and put pressure on early companies. The economic boom after World War II in the 1950s was the catalyst for the industry’s global shift, and eventually internationally accepted (but not mandated by any governing body) standards for products and components emerged.⁸ Standardization of the interfaces that specified how components attached to each other meant that manufacturers could “mix-and-match” components from different suppliers. To cut costs, early bicycle companies began to outsource components to specialist suppliers. By the 2000s, no company integrated to the extent that it manufactured an entire bicycle.

Another advantage of this “modularity” was that components could be improved upon without affecting other parts of the system, as long as the interface remained consistent. “This ability to effect change upon just a single component can provide firms with resource, organizational, and strategic flexibility.”⁹ However, the lack of vertical integration may have inhibited innovation beyond the component level: “Without a dominant firm or industry leader, or at least a leading group of firms that communicate sufficiently such as to be able to discuss new designs, the potential to overturn any architecture is limited.”¹⁰ For example there were 40 crank manufacturers and 35 pedal manufactures in the high-end market alone, thus requiring extreme coordination for any major change. “The one exception to this is Shimano. It is here that architectural changes have occurred (in linked mechanical components), but otherwise the potential for change beyond the component level is limited.”¹¹

⁸ The UCI, the international cycling union, did develop rules for major cycling events in terms of size of wheels, seat position, handlebars, weight of bike, etc., but such rules were only for bikes within the professional racing environment.

⁹ Peter Galvin and Andre Morkel, “The Effect of Product Modularity on Industry Structure: The Case of the World Bicycle Industry,” *Industry and Innovation*, April 2001, vol. 8, issue 1, p. 31.

¹⁰ Ibid.

¹¹ Ibid.

In 2006 the bicycle supply chain consisted of four groups: frame manufacturers, mechanical components, other industries' parts, and non-moving components.¹² Each of the latter three groups provided components to frame manufacturers who were responsible for overall bicycle design and who usually also assembled the bicycle (although sometimes even assembly was left to specialists).

A representative higher-range Madone bike might cost around \$5,000 and include a Trek carbon frame, Bontrager Race XXX Lite Carbon Fork, Bontrager race Lite Aero Wheelset, Shimano Dura-Ace Cranks, a Shimano Dura-Ace Rear and Front Derailleur, and many other components (see below). A complete bike was usually less expensive at retail than one "built" from scratch, but the table below provides a sense of each components' percentage of the complete retail sales price and illustrates the fragmentation in the industry. Typically, Shimano components comprised over 20 percent of any high-end bike's retail sales price and about one-third of the materials' cost for the bike. For a mid-range bike, Shimano components comprised 10 percent of the sales price and nearly 20 percent of materials' cost.¹³

Cost of Building a Bike

Part/Component	MSRP	% of Total
Trek Carbon Frame	\$2,800	38%
Bontrager Race XXX Lite Carbon Fork	500	7
Bontrager Race Lite Aero Wheelset	1,800	24*
Bontrager Race X Tires (front and rear)	100	1.3
Shimano Group Set <ul style="list-style-type: none"> • Bottom bracket • Crankset • STI shifters/brake levers with cables and housing • Front and rear derailleur • Brake calipers • Cassette • Chain 	1,530	21
Bontrager Race X Lite Pro Saddle	170	2.3
Bontrager Race X Lite Carbon Seat Post	100	1.3
Bontrager Race X Lite Carbon Handlebars	280	3.8
Bontrager Race XXX Lite Carbon Stem	100	1.3
Cane Creek Headset	70	0.9
Pedals	200 (usually not included)	NA
TOTAL (excluding pedals)	\$7,450	100

Source: <http://bokoobikes.com/>, all prices are estimates and retail prices (with some rounding).

*Usually a lower percentage on mid- to high-end bikes. Wheel sets usually ran below \$1,000.

Some detail on each supply chain group follows.

¹² Ibid.

¹³ Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 14.

Group I: Frame Manufacturers (Bike Manufacturers/Assemblers)

Basic materials to make high-end bike frames were steel, aluminum, titanium, and carbon fiber (the most popular). One of the key vertical integration decisions in the bike industry was whether or not to outsource frame fabrication. For U.S. companies, the attraction of lower labor costs and economies of scale of Asian suppliers motivated outsourcing for some manufacturers such as Specialized, while others such as Cannondale and Trek made their own frames. An obvious shortcoming of Asian manufacturing was potentially longer lead-times for products. For a long time, Taiwan had been the leading Asian supplier, but China had recently made significant inroads: “Originally, when we started the migration from Taiwan to China, the low cost of labor allowed for lower prices. That’s not so much of a factor now.... Taiwan is still ahead in quality, but China has caught up very quickly. We used to buy from China for price, it was 7 to 12 percent less—that’s not true anymore.... It used to be that you wouldn’t consider sourcing a bike over \$300 in China—now it’s \$500, and it will continue to go up.”¹⁴

In addition to the major and leading brands discussed below, numerous other brands such as Pinarello, Colnago, LeMond (marketed by Trek), Scott, Cervelo, and Litespeed sold high-end bikes in the marketplace. Eighty-two manufacturers produced 95 percent of all high-end bikes. In the recreational segment, price was the main driver, but at the high-end of the market, performance and distribution determined a company’s success. Bike racers and enthusiasts were always hunting for a stronger, lighter, more comfortable, more aerodynamic, and more efficient bike.

The frame industry as a whole was fragmented: “Getting into the bike business is easy. Anyone who can buy a plane ticket to the Taipei bike show can be a bike supplier. Only the big three [Trek, Specialized, and Giant in order of market share] have distribution/retail front, product spread, financing, marketing support, and operational capabilities to support dealers. This pushes the small brands to compete on price.”¹⁵ Competition in the low end led Giant and many other players to focus on the high-end bike market where margins tended to be higher and innovation in design, technology, and manufacturing played a larger role in a company’s success. Between 1986 and 2006, bicycle manufacturer margins declined from 32 to 26.6 percent.¹⁶ Cannondale’s gross margins on its bicycles hovered around 36 percent, with margins on some of its parts approaching 50 percent.¹⁷ Some bike manufacturers who were unable to improve earnings by focusing on the high-end market did not survive—GT/Schwinn’s demise in 2000 was an example (eventually they were acquired by Pacific Cycle).

Giant

Founded in 1972, Giant was originally established in Taiwan as a dedicated OEM¹⁸ bicycle manufacturer and in 1981, the company began transforming itself into an OBM (Original Brand Manufacturer) company. Giant derived 70 percent of its sales from its own bicycle brands, and

¹⁴ Ray Keener, “Retailers’ Bike Margins Have Risen, But Trend May Soon End,” *Bicycle Retailer & Industry News*, October 1, 2005, vol. 14, pp. 92-93.

¹⁵ GSB student, Toyo Shimano interview with Skip Hess in January 2006. Subsequent quotes are from this interview unless otherwise noted.

¹⁶ Ray Keener, *op. cit.*

¹⁷ Ross Kerber, “Bicycles: Bike Maker Faces a Tactical Shift,” *The Wall Street Journal*, October 12, 1998, p. B1.

¹⁸ OEM: A company that acquires products or components to embed or sell under the company’s own brand.

the remainder from OEM for worldwide brands such as Trek and Specialized, where Trek was the major client, making up around one-third of Giant's OEM business (75 percent of Trek's products were supplied by Giant).

By 2006, Giant was the number one bicycle manufacturer in the world with a strong global reputation. The company was both a manufacturer and wholesale distributor with global sales of over \$450 million by 2005 (U.S. market: 32 percent, Asia: 31 percent, Europe: 27 percent, and Other: 10 percent) and net income in the \$20 millions. Net income nearly quadrupled between 1996 and 2000. The company had a 25 percent market share in Taiwan alone and 18 percent of the independent bicycle dealer segment in the United States. It was the largest brand in China (mostly lower-end bikes) and one of the top three in Europe.

The company had factories in Taiwan, China, and the Netherlands and 75 percent of the company's production took place in China. Key to Giant's strategy was its flexible manufacturing base in Taiwan, China, and Europe, along with its extensive global distribution network that included over 10,000 retail outlets in more than 60 countries. Giant also planned to focus on electric bicycles to markets such as China in the future. Giant had a lean staff of 100 employees in the United States.

Trek

Trek was founded in 1976 by Dick Burke and was based in Waterloo, Wisconsin. Burke was lured in by the "bike boom" of the 1970s and attempted to find a line of bicycles to distribute, but eventually gave up. During this search, he saw a market opportunity for a higher-end bicycle produced in the United States. Burke started Trek to build higher-end framesets and bicycles and in 1989, the company opened offices in Germany and the U.K., followed by Austria, Switzerland, Spain, Holland, and Japan. Eventually Trek sold its bikes in over 70 countries around the world. In addition to its own brand, Trek also marketed LeMond road bikes and Gary Fisher mountain bikes. By 2005 sales were over \$400 million. Trek employed 400 people.

Asked how Trek differentiated itself, John Burke, president, said:

First, we create a partnership with the majority of our retailers. While our competitors are selling product specifications, we are selling customer profitability. We have numerous programs to help dealers increase their profits. We try and figure out what our customers' biggest problems are and we try to solve them. A good example is that we purchased a software company three years ago because we believed one of our retailers' biggest problems was and continues to be Information Technology. Second is great customer service. We take care of our customers, both retailers and consumers. I think we have won the industry award for best customer service 15 years in a row. Third, we focus on great product. We lead the industry in technology—especially carbon fiber. Fourth, our competitive advantage is our value. Dollar for dollar, when someone buys a Trek, they are getting a real value when you figure everything in. Finally,

we put a lot of resources into race sponsorship through Lance Armstrong and the Postal/Discovery team.¹⁹

In terms of key issues Trek faced, Burke discussed the long lead times and poor supply in terms of Trek's supply chain. Lead times could range from 90 to 120 days: "The competence of suppliers outside of Shimano is pretty weak," noted Burke. "In our supply chain, we are usually no more than 10 percent of any given supplier's business and so it is difficult to get the suppliers to make changes we would like them to make." Like many of the larger bike manufacturers, Trek tried to control some of its supply chain issues through its own line of components under the Bontrager brand, which included seat posts, stems, wheels, cranks, etc.

Specialized

Specialized was founded by Mike Sinyard in 1974 in Morgan Hill, California, and quickly developed a reputation as a top mountain bike brand. By 2006, Specialized had sales of over \$200 million with 80 percent from bicycle sales and 20 percent from components and accessories. The company's "Stumpjumper" was the industry's first commercially available mountain bike. The company eventually expanded to other categories such as hybrid bikes and road bikes. Specialized used eight different materials for its 210 bicycles and the company's bicycles came in only 36 geometry/size combinations. Specialized located production in Taiwan and China. The company did attempt to build their most high-end bike in the United States, but ultimately decided to move production overseas, where it employed 200 people.

According to Bob Margevicius, vice president: "It was necessary for Specialized to have a strong brand position in our home market (U.S.) before branching out into other countries. This set a foundation for success. Specialized is a 'local brand which thinks globally.' This means, all products we offer under the Specialized brand are designed, engineered, developed and marketed by Specialized corporate (Morgan Hill). There is no localization of the product. This gives the brand global consistency and integrity.... We view ourselves as the brand innovator in the marketplace."²⁰

Margevicius also discussed supply chain issues for a bike manufacturer such as Specialized stating that:

Our suppliers all want forecasts and long lead times. Our customers (retailers) all want product 'on demand.' Our time frame to supplying a bicycle from an order placed to the retailer is more than 150 days, including transit time. Local weather, global micro-market economic conditions and media opinions all contribute to business volatility. The end-consumers all want flawless product quality and today's buyers are very knowledgeable, savvy, and value-driven. Shimano is controlling about 90 percent of our drive train content for our bikes. Global raw material demands in rubber products, carbon, alloy, and steel contribute to our escalating product costs. Specialized's manufacturing production facilities are

¹⁹ GSB student, Toyo Shimano interview with John Burke in January 2006. Subsequent quotes are from this interview unless otherwise noted.

²⁰ GSB student, Toyo Shimano interview with Bob Margevicius in January 2006. Subsequent quotes are from this interview unless otherwise noted.

mostly in Asia so there is tremendous volatility of the U.S. dollar on a quarter-by-quarter basis. Finally, the big are getting bigger, and the small are getting smaller. This is with both brands and suppliers.

Cannondale

Cannondale was founded in 1971 in Georgetown, Connecticut. By 2006, the company had sales of approximately \$150 million. The company quickly developed a reputation for innovation and skilled craftsmanship. In 1983, Cannondale produced the industry's first affordable aluminum bicycle and in 1991, the first fully suspended mountain bike. Its product mix included mountain, road, hybrid, and tandem bikes. Cannondale used a single material for its 196 bicycles, while its products came in 60 different geometry/size combinations. Since its founding, Cannondale had located its production facilities in the United States in Bedford, PA. The company welded and manufactured its frames and assembled final bicycles in Bedford for distribution throughout North America and Asia. Cannondale also had a bicycle assembly plant in the Netherlands. The company shipped its frames to the Netherlands from the U.S. and purchased components for those bikes throughout Europe. Cannondale also had a small assembly and distribution center in Japan and a smaller one in Australia. But every Cannondale frame came out of its Pennsylvania factory.

Cannondale became a public company in 1994. But as it entered the motorcycle and four-wheel ATV market, financial difficulties plagued the company, forcing it to declare bankruptcy in 2003. Eventually Pegasus Partners, a private equity firm, purchased Cannondale. The firm sold the motorcycle and ATV business to a Taiwan company, and the bicycle business gradually gained back its original momentum as a private company.

Group II: Mechanical Components

The second group of players in the supply chain comprised the mechanical parts of the bike, including the drive train (cranks, bottom bracket, chain cluster), brakes, gears, and hubs. Major players were Shimano, Campagnolo, and SRAM, of which the leading player, by far, was Shimano. In terms of mid- to high-end bicycle components, the largest market remained Europe (\$400 million of high-end components and \$54 million mid-class components), with the Americas in second place (\$173 million of high-end components and \$43 million of mid-class components), and Japan in third (\$60 million of high-end components and \$46 million of mid-class components).²¹ Total bicycle component sales were forecasted to be slightly over \$1 billion in 2006, with U.S. sales estimated to be \$277 million and European sales at \$600 million.²² Most component companies like Shimano sold products to bike manufacturers with which they had developed relationships. Other component companies sold products in the OEM market and the aftermarket (where consumers sometimes purchased components to complete their own bikes or to upgrade certain components—e.g., through Colorado Cyclist or Excel Bikes online).

²¹ Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 3.

²² Koki Shiraishi, "Shimano," *Daiwa*, July 1, 2005, p. 10.

This group within the supply chain generally achieved higher profit margins than bike manufacturers. Shimano's operating profit margin tended to hover around 14 percent, while bike manufacturer operating margins were much lower (e.g., Giant, 6 percent and Cannondale, 4 percent).

Shimano's Rise to Leadership

By 2006, Shimano had become the major brand in bicycle components with sales around the world (Japan: 25 percent; the Americas: 22 percent; Europe: 34 percent; Asia: 19 percent). Shimano did business with almost every major bicycle manufacturer including Trek, Giant, Bridgestone Cycle, National Bicycles in Japan, and Cycle Europa in Europe, but no one manufacturer accounted for more than 10 percent of its sales.²³ Bicycle manufacturers that relied on Shimano components had "merely become distributors," according to Cannondale founder and CEO, Joseph Montgomery.²⁴ Some bike manufacturers such as Cannondale, Trek, and Specialized had begun to manufacture their own components in the late 1990s, but few had major success, as home-produced components were often pricier than Shimano's components. In fact, by 1997, over 90 percent of bicycle manufacturers produced no parts themselves beyond the frame and 90 percent of part manufacturers produced only one type of bicycle part.²⁵ Product quality and technological superiority were always key components of Shimano's strategy. Shimano's successful execution of its strategy has allowed it to have a "powerful brand," consisting of "top quality" products, with a "global presence" (three of the company's mantras as stated in its 2004 Annual Report).²⁶

Shimano's rise could be traced to several developments. Its earliest big break came 40 years after its founding when it developed a three-speed gear that U.S. manufacturers became strongly interested in. Shimano progressed to making 10-speed drivetrains, which allowed it to prosper during the U.S. bike racing boom of the 1970s and the rise of triathlon. In the mid-1980s, the company developed and packaged/integrated professional-quality road-racing components, allowing it to compete more directly with Campagnolo (the only major player in the category at the time). At the same time, Shimano completed development of its index shifting system (SIS or Shimano Index System), a technological breakthrough, which made shifting easier and more efficient. The shifting gave riders more confidence and reliability during races because racers could lose important seconds during a race using the old system of shifting. STI was a mechanical integration of shifters into the brake levers. This innovation allowed racers to accurately shift without letting go of the handlebars. Finally, the birth and rise of mountain biking helped fuel a resurgence in the popularity of bicycling in the United States.²⁷ Shimano completely redesigned its gear shift so that it suited mountain bikes after noting that fanatical California mountain bikers were racing specially geared custom-made mountain bikes. Shimano emerged with a 15-speed mountain-biking components in 1982 and later 21-speed versions, the

²³ Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 14.

²⁴ Ross Kerber, "Bicycles: Bike Maker Faces a Tactical Shift," *The Wall Street Journal*, October 12, 1998, p. B1.

²⁵ Peter Galvin and Andre Morkel, "The Effect of Product Modularity on Industry Structure: The Case of the World Bicycle Industry," *Industry and Innovation*, April 2001, vol. 8, issue 1, p. 31.

²⁶ Shimano Annual Report, 2004, p. 1.

²⁷ Paul Isely and Matthew R. Roelofs, "Primary Market and Aftermarket Competition in the Bicycle Component Industry," *Applied Economics*, 36, p. 2098, 2004.

mainstay of modern mountain bikes. Other innovations included a computer-designed elliptically shaped chainwheel, which increased pedaling efficiency and reduced biker fatigue.

The late Keizo Shimano, one of the original brothers who had led the company and second son of the founder, attributed Shimano's success to two revelations that struck the company in the 1970s. The first was that making improvements to bicycle performance demanded an integrated approach, which involved developing systems that brought together all of a bike's control functions from steering, to shifting, to braking (prior to this, Shimano, like others, only focused on a few individual parts). The second, was that bicycles were "anything but rider friendly," meaning Shimano would focus on developing more user-friendly machines.²⁸

One of Shimano's key early competitive advantages was that it bundled derailleurs, brakes, shifters, pedals, cranks, and other components into tiered, modular packages (groups), which "much to the bike manufacturers' chagrin, have come to define the bicycle's performance level."²⁹ Shimano called the groups "System Components." Shimano offered components (from highest to lowest quality) in the Dura-Ace, Ultegra, and "105" groups. Higher-end components were usually lighter, more durable, and had better performance characteristics (e.g., smoother shifting or better braking).

According to a Bain & Co. study: "In essence, Shimano's successful standardization of bike componentry has made it more difficult for the bike manufacturers to differentiate themselves, and forced many of them towards an uncomfortable parity with their competitors."³⁰ The different bicycle components required different competencies, which limited economies of scope. An integrated bicycle manufacturer would require many different technological competencies. Shimano, for example, innovated in drive systems, becoming the de facto standard across the industry. Given the fact that the bicycle component business had become so fragmented and specialized, Shimano's bundling idea was actually not that easy to come up with at the time and its first mover advantage allowed it to gain market share quickly, despite other component makers' adoption of the same strategy. Other analysts called this concept of bundling in the component industry "technical lock-in."³¹ This existed in bicycle components because "many of them are designed to work specifically, or at least work most efficiently, with matching components from the same manufacturer. Although one can mix and match parts from two different manufacturers, the result is often a bicycle that does not operate as smoothly as one equipped solely with parts from one manufacturer."³²

Technological prowess (as manifested through the company's commitment to R&D) was one of the keys to Shimano's success, with a quarter of the company's 5,400 employees located in R&D. Central to Shimano's technological strength was its metal processing, centered on cold forging, a technology where metal objects are formed at room temperature without heating. Shimano's capabilities in cold forging were exceptional and admired by its competitors. Cold forging led to a high degree of precision and was suited for mass production of small metal parts.

²⁸ Bob Johnstone, "Riding High," *Far Eastern Economic Review*, December 1989, p. 103.

²⁹ http://www.bain.com/bainweb/publications/publications_detail.asp?id=29&menu_url=publications_results.asp.

³⁰ Ibid.

³¹ Paul Isely and Matthew R. Roelofs, op. cit.

³² Paul Isely and Matthew R. Roelofs, op. cit.

Shimano's parts were used by cycling professionals and others in major cycling events around the world. Such professionals were extremely selective in the components that they used. Shimano's technology strategy was to apply what it had learned from the pros to products for general users. In 2005, Shimano sponsored over half of the 16 professional bike racing teams in the Tour de France, while Campagnolo sponsored the remaining teams.

Coupled with technology were a carefully intertwined production and marketing team, as well as a keen focus on the end-user, all of which helped Shimano continue to grow, according to Kozo Shimano, grandson of the founder. Keizo Shimano said: "Right after the war, Japanese goods were regarded as having a good price but bad quality. We tried so hard to prove that our quality was okay. Also, we had to show that Japan was a reasonable country. We had to overcome prejudice, but that's usual for anything new coming in."³³

Due to Shimano's comparatively greater funds, "it could focus its energies on developing new products and strengthening its line-up.... Looking at its basic series alone, the company boasts a total of 14 product series, with seven for mountain bikes, five for road bikes, and two for comfort bikes...and this is more than double the number that competitors can offer. Shimano is the only bicycle component maker in the world that has such a broad line-up in all three of these categories, and this is another factor behind its competitiveness."³⁴

In terms of pricing, Shimano's critics believed that the company's market strength had allowed it to institute and maintain tough pricing policies. Shimano set unified global prices, offering no discounts of any kind (no volume discounts either). Critics also argued that constant changes of specifications of component systems on Shimano's parts made replacement of a given part difficult and customizing nearly impossible.³⁵ Shimano and its advocates argued that if Shimano desired to be the best at what it did, research and development in the search for more efficient components (and thus potential frequent changes) was a crucial part of the equation. Shimano believed that it set global prices firmly in order to eliminate arbitrage (gray market) issues and also to reduce antitrust potential. Despite the disagreement about Shimano's business tactics, it was indisputable that Lance Armstrong won his seven Tour de France victories using Shimano's components and the company capitalized on such favorable publicity.

Another key to Shimano's success was its commitment to customer relations. Each year, it sent more than a dozen employees to work with bike manufacturers and retailers for several months at a time to gauge consumer trends. And the president of Shimano American Corp. regularly met with top professional bike racers such as Armstrong to discuss products and prototypes.

Shimano's Competitors: Campy and SRAM

Shimano's key competitors were the 72-year-old Italian company, Campagnolo (Campy), and U.S.-based SRAM. Campy specialized in high-end components for racing bicycles. Campy's sales were slim compared to Shimano's sales (around \$106 million) and the company had a reputation for slower growth and a general lack of innovation. Shimano had filed a lawsuit against the newer player, SRAM in 2004, alleging that the company infringed Shimano's shift-

³³ Dan Thisdell, "Shimano's Dream Machine," *Management Today*, March 1990, p. 74.

³⁴ Koki Shiraishi, "Shimano," *Daiwa*, July 1, 2005, p. 7.

³⁵ Jonathan Friedland, "Components of Success," *Far Eastern Economic Review*, November 18, 1993, p. 66.

indicator patent—SRAM had hit a home run in 2003 with its updated trigger shifters. In 2001, SRAM had sales of \$120 million, one-tenth that of Shimano. Initially, SRAM focused on a shifting product that did not sell because of the shift in 1990 from road bikes to mountain bikes. After rejiggering their “grip shifter” for mountain bikes, they ran into another problem—Shimano had begun to bundle its shifter, front and rear derailleurs, brakes, and sprockets into a “group” pricing policy to bike manufacturers, offering a 10 percent discount if they used all Shimano parts. SRAM filed an antitrust lawsuit and the two parties settled out of court. Group pricing ceased, and SRAM’s new mountain bike shifter sales went from zero to 300,000 in one year; by 1996, SRAM controlled 60 percent of that market. Shimano responded by slashing prices of its shifters by 60 percent in 1996, according to SRAM, and SRAM’s revenues fell to \$40 million from \$70 million. SRAM filed suit again, citing predatory pricing, and SRAM was awarded \$9 million. The battle did not end, however, with SRAM instigating other charges against Shimano in Europe related to patent infringement assertions. SRAM certainly did not have the brand recognition or the muscle in the industry, but it hoped to gain momentum over time.³⁶

In 2005, SRAM announced that it would release its first road bike component group in 2007, putting it into the high-end road market. The road shifter supposedly pulled more cable than either a Shimano or Campy road shifter. SRAM planned to sponsor at least one Pro Tour team and one U.S. pro team, but had not announced potential teams yet. If SRAM’s product fulfilled its technical promise, both Campy and Shimano would be affected in some way. Some felt Shimano would also take a “big hit,” since its lead times were very long (the proliferation of models on its integrated component sets and annual upgrading of specifications, as well as emphasis on quality, potentially led to delays—for example, lead times reached 120 days in 1989). Matt Wiebe in *Bicycle Retailer & Industry News* said: “If SRAM comes in with shorter lead times and maintains its current level of customer support, many bike manufacturers will drop some Shimano in favor of SRAM.”³⁷

Group III: Other Industries’ Parts

The third group of players in the supply chain could be labeled “other industries’ parts” or parts of the bicycle that were manufactured by companies that focused on other areas of business. An example would be bicycle tire manufacturers such as Continental, Michelin, and Chen Shin Tire, which were all primarily involved in auto tire production.

Group IV: Non-Moving Components

The fourth group of players included the non-moving parts of the bicycle such as saddles, rims, seat posts, and handlebars. Such companies focused on strength-to-weight ratios and aerodynamic parts. At the lower end of the market, products were differentiated mostly on price, but on the higher end, comfort, aerodynamics, weight, etc. were all important factors.

³⁶ David Armstrong, “A Stick in the Spokes,” *Forbes*, March 5, 2001, p. 148.

³⁷ Matt Wiebe, “SRAM Takes Aim at ’07 Spec with 10-Speed Group,” *Bicycle Retailer & Industry News*, November 1, 2005, vol. 14, issue 17, pp. 1-43.

FINAL SUPPLY CHAIN STEP: SALES AND DISTRIBUTION CHANNELS

Approximately 6,000 independent bicycle dealerships (IBDs) existed in the United States in 1997, with 1,500 dealers accounting for 60 percent of all unit sales.³⁸ Most (95 percent) high-end bikes were sold through independent bicycle dealers. Other channels included large wholesale retailers (e.g., Costco) and catalog sales (e.g., Colorado Cyclist). The retailer displayed the products and properly fit customers to the appropriate bikes. Depending on their capacity, many retailers had the appropriate sizes within the stores, but sometimes the bikes needed to be ordered from the manufacturer, which could take several weeks or more.

In the past decade, average gross margins for retailers increased, driven primarily by higher bike margins. In 1995, retailer average gross margins were around 37.3 percent, but by 2003, industry-wide average gross margin climbed to 44.3 percent, a rise of one margin point per year.³⁹ Some attributed this overall rise in margins to more efficient manufacturing (driven by a shift from Japanese to Taiwanese and Chinese factories) and a general efficiency on the part of bike companies. In addition, retailers became more cognizant of margin issues as they lost money on every bike sold into the early 1990s, and began to purchase bikes from manufacturers based more on potential margin realized. Even so retailers still showed a decline in overall profitability due to higher overhead and business costs.⁴⁰

There had been a gradual shift in the approach of retailers:

Their attitude was that they could get anything from anyone. This ‘pick and choose’ mentality led retailers to leverage benefits from bike manufacturers. Generally this took the form of chasing lower cost of goods sold in order to boost margins. Retailers did not think of business ideas such as operational improvements, operating expense reduction, retail environment changes, or improved marketing. Simply, if I buy lower, I’ll make more money, and survive.

But that retail environment began to change in the 2000s as dominant bike manufacturer players began to rise:

Now, the big three spend a lot on product development and marketing, so they are looking for a ‘concept store’ experience, with better support for the brand and retail exchange with the consumer. In essence, they are looking for a vertical alignment to create more secure networks for each brand. This is going against a 30-year tradition of retailers wanting choices, and playing the game to get better deals.

³⁸ Taylor Randall and Karl Ulrich, “Product Variety, Supply Chain Structure, and Firm Performance: Analysis of the U.S. Bicycle Industry,” *Management Science*, Vol. 47, No. 12, December 2001, p. 1593.

³⁹ Ray Keener, “Retailers’ Bike Margins Have Risen, But Trend May Soon End,” *Bicycle Retailer & Industry News*, October 1, 2005, vol. 14, pp. 92-93. Other general sports’ retailers such as Copeland Sports brought in bikes at a 45 percent margin, but with aggressive markdowns realized margins more near the 38 percent range.

⁴⁰ Ibid.

Some believed the retailers that were the strongest and most willing to work with bike manufacturers would survive, while the others would eventually die off due to industry retail consolidation: “Today, as the major brands (Trek, Specialized and Giant) all have complete product ranges which cover virtually every cycling experience, the basis for competition globally is shifting to distribution. The major brands are all working on exclusive concept stores, dealer penetration, and ways to manage the retail channel.

Different bike manufacturers usually signed deals with certain retailers so if a consumer were shopping for a certain brand, s/he needed to find the right dealer in the particular geographical location. For example, Giant had sold its bikes and accessories through Performance, the nation’s largest bicycle retailer, for 10 years. Specialized, since the previous decade, had sold its bikes and accessories through Supergo outlets, which Performance acquired in 2002. Some bike manufacturers had their own retail stores or some form of “concept store” (e.g., Giant, Trek, and Specialized—in this case, Specialized stores were owned by dealers that already carried the brand). In Specialized concept stores, only brands that were not direct competitors could be sold (e.g., Seven, DeRosa, but not Trek or Giant). In 2005, Performance decided to compete no longer with Giant and Specialized retailers, and stopped carrying those products. Instead, Pacific Cycle began shipping Schwinn and GT bikes to Performance. Giant had generated approximately \$9.4 million in annual business through Performance, and Specialized \$8.9 million through Performance Supergo outlets. Performance’s reason for discontinuing the two brands was frustration with manufacturers’ demands and a lack of a sense of partnership.⁴¹

THE FUTURE

Shimano’s leadership was pleased with the growth and leading market share of the company’s bicycle components throughout the world. Over the years, they had developed a strong brand with a reputation for reliable and high-quality products. But they knew that they could not rest on their laurels if they were to remain the number one mid- high-end component player in the world. At all times, companies with new technologies such as SRAM’s road bike components and Specialized’s (and other bike manufacturer’s) own mechanical components⁴² threatened to eat into Shimano’s market share. Moreover, both the road bike and mountain bike market was projected to be flat. And Shimano certainly could not rule out Italy’s long-time player, Campagnolo, a slower player, but one that still had a long-time reputation in the industry. Campagnolo in recent years had begun to push hard into lighter carbon-based materials in its components, thus saving grams off a bike’s weight, while Shimano has remained with aluminum and titanium, with the thinking that there would be too large a trade-off in durability. In addition, as Shimano’s global sales continued to account for 95 percent of net sales for the bicycle components operation, Shimano had expanded its overseas production. Managing an increasingly global operation provided additional challenges related to production and sales and

⁴¹ Ben Delaney, “Performance Splits with Giant, Specialized,” *Bicycle Retailer & Industry News*, August 15, 2005, vol. 14, pp. 1-33.

⁴² Specialized introduced the 2006 Tarmac SL road bike that launched the company’s own S-Works FACT SL carbon crank and bottom bracket, which was touted to be over 150 grams lighter than a Shimano Dura-Ace, but was still 11 percent stiffer. Only one of several Specialized models available, it was also more expensive and still utilized many other Shimano components. Moreover, cranks and bottom brackets were not as complex as a shifter, for example.

marketing, especially given the importance of quality and quality control at Shimano. All such challenges forced Shimano to innovate technologically, look for new markets to enter (often in conjunction with OEMs), and continuously become more efficient on all fronts. As the Shimano team looked to the future, they were both wary and excited at the prospects.

Exhibit 1 Parts of a Basic Touring Bike



- | | | |
|----------------------|----------------------------|-----------------|
| 1 =Top tube | 13 =Forks | 20 =Front wheel |
| 2 =Down tube | 14 =Handlebars | 21 =Gearshift |
| 3 =Seat tube | 15 =Back rack | 22 =Front rack |
| 4 =Seat stays | 16 =Chain rings | |
| 5 =Chain stays | 17 =Chain | |
| 6 =Headset | 18 =Toe clips | |
| 7 =Stem | 19 =Pedals | |
| 8 =Seat post | 20 =Front brake | |
| 9 =Saddle | 21 =Rear brake [Low Rider] | |
| 10 =Rear derailleur | 22 =Crank arm | |
| 11 =Front derailleur | 23 =Cassette | |
| 12 =Brake levers | 24 =Rear wheel | |

Source: www.bicycledoctor.co.uk/parts.html.

Exhibit 2
Trek Madone Bike



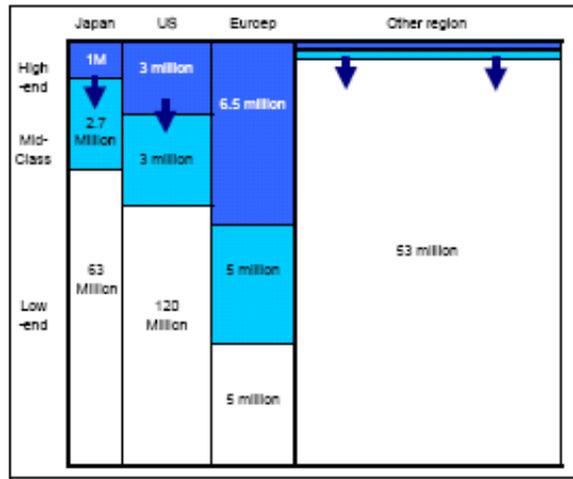
Source: <http://www2.trekbikes.com/bikes/bike.php?bikeid=1475000&f=1>.

Exhibit 3 Specs of Armstrong's Trek Madone

FRAMESET	
SIZES	50, 52, 54, 56, 58, 60, 62cm
FRAME	OCLV 110 Carbon
FORK	Bontrager Race X Lite, carbon
WHEELS	
WHEELS	Bontrager Race X Lite
TIRES	Bontrager Race X Lite, folding, 700x23c
DRIVETRAIN	
SHIFTERS	Shimano Dura-Ace STI, 10 speed
FRONT DERAILLEUR	Shimano Dura-Ace
REAR DERAILLEUR	Shimano Dura-Ace
CRANK	Shimano Dura-Ace 53/39
CASSETTE	Shimano Dura-Ace 11-23, 10 speed
PEDALS	n/a
COMPONENTS	
SADDLE	Bontrager Race X Lite Pro
SEAT POST	Bontrager Race X Lite Carbon
HANDLEBARS	Bontrager Race X Lite Carbon w/BzzzKill, 31.8mm
STEM	Bontrager Race XXX Lite Carbon, 12 degree, 31.8mm
HEADSET	Cane Creek S-8 w/cartridge bearings, sealed
BRAKESET	Shimano Dura-Ace w/STI levers
EXTRAS	Bontrager BzzzKill harmonic dampers by Mathews

Source: <http://www2.trekbikes.com/bikes/bike.php?bikeid=1476000&f=1>.

Exhibit 4 Global Bicycle Market by Region and by Categories



Note: Unit base. Area indicates market volume.

Source: Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 3.

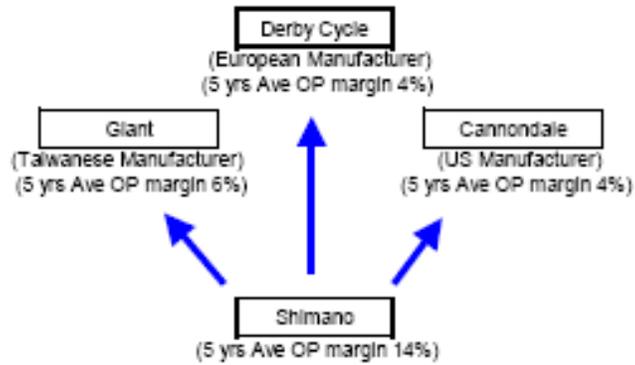
Exhibit 5
Specialty Bicycle Sales by Year in Units and Dollars 2002-2004

<i>Category</i>	<i>2002 Units %</i>	<i>2003 Units %</i>	<i>2004 Units %</i>
Mountain front susp.	25.46	27.21	28.91
Comfort	20.62	17.38	15.55
Hybrid/Cross	9.48	12.86	12.52
Freestyle	8.70	7.55	7.38
Youth 20"	6.18	5.98	5.79
Youth 19" and below	5.50	5.53	4.74
Mountain no susp.	5.43	3.08	0.82
Road/700C	5.32	7.37	10.85
Youth 24"	4.01	4.52	4.05
BMX	3.92	2.75	2.09
Mountain full susp.	3.01	2.76	3.20
Cruiser	2.22	2.77	3.89

<i>Category</i>	<i>2002 Retail \$ (%)</i>	<i>2003 Retail \$</i>	<i>2004 Retail \$</i>	<i>2004 Avg. Price</i>
Mountain Front Susp.	26.56	26.24	25.61	\$391.31
Comfort	18.03	14.44	11.70	\$332.23
Road/700C	16.40	20.79	28.32	\$1,152.68
Hybrid/Cross	9.89	12.87	10.95	\$386.48
Mountain Full Susp.	9.67	8.87	9.57	\$1,319.97
Freestyle	5.56	4.42	3.78	\$226.36
Mountain No Susp.	3.12	1.64	0.41	\$220.21
Youth 20"	2.60	2.41	2.24	\$171.04
Youth 24"	2.51	2.75	2.23	\$242.78
BMX	1.98	1.38	0.97	\$204.67
Youth 19" and below	1.76	1.72	1.36	\$126.72
Cruiser	1.57	1.90	2.38	\$270.22

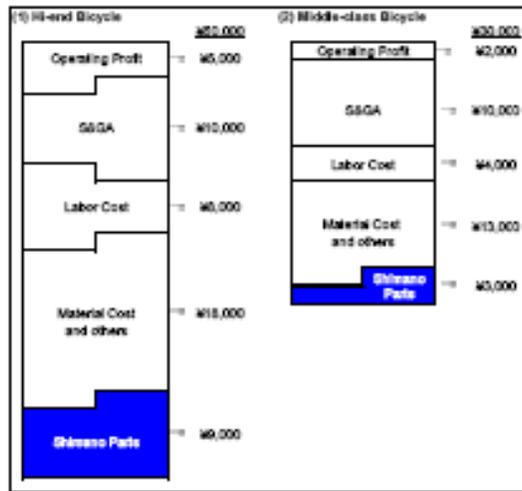
Source: National Bicycle Dealers Association Retail Data Capture Program. Tracks sales of top 19 bicycle brands through panel of retailers. <http://nbda.com/site/page.cfm?PageID=34>.

Exhibit 6 Profitability in the Supply Chain



Source: Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 5.

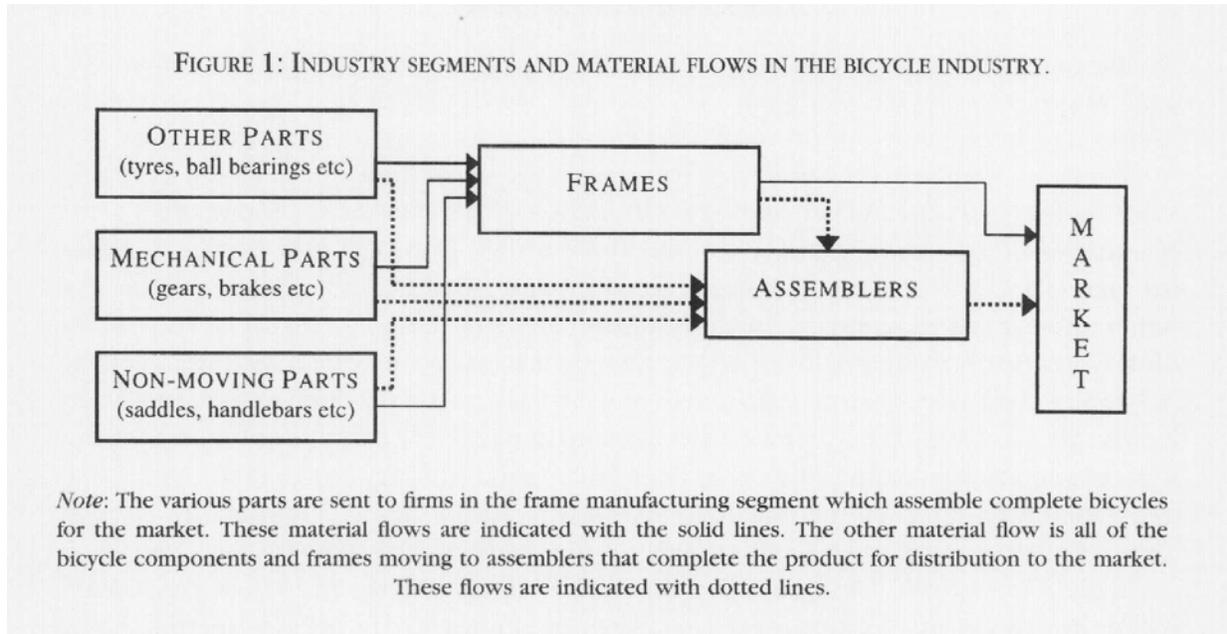
Exhibit 7 Analysis of Bicycle Cost Structure



Source: Yoshinao Ibara, "Hub Company in the Global Bicycle Industry," *Morgan Stanley Dean Witter*, July 18, 2001, p. 14.

Exhibit 8

Industry Segments and Material Flows in the Bicycle Industry



Source: Peter Galvin and Andre Morkel, "The Effect of Product Modularity on Industry Structure: The Case of the World Bicycle Industry," *Industry and Innovation*, April 2001, vol. 8, issue 1, p. 31.

Exhibit 9
National Retailer Average Gross Margins

Year	Average Gross Margin	Net Pre-Tax Income
1995	37.3%	4.5%
1997	39.5	5.3
1999	39.8	4.2
2001	43.5	3.0
2003	44.3	1.1

Year	Retailer Cost	Supplier (Bike Manufacturer Margin)	MSRP	Retailer Margin
1986	\$144.99	32.0%	\$219.95	34.1%
2006	127.00	26.0	219.95	42.3

Source: Ray Keener, "Retailers' Bike Margins Have Risen, But Trend May Soon End," *Bicycle Retailer & Industry News*, October 1, 2005, vol. 14, pp. 92-93.

Exhibit 10

The Philosophies of Team Shimano

Mission Statement

To promote health and happiness through the enjoyment of nature and the world around us.

Business Policy

- We strive to provide quality products and services that are reliable and trustworthy.
- We pledge to continually increase our corporate value and to ensure corporate management worthy of the trust placed in us.
- We strive to provide a fair and vibrant work environment where all can share in the pleasure and satisfaction that comes with achievement.
- We pledge to be a good corporate citizen, by preserving the environment and contributing to the prosperity of our community.

Team Shimano Guiding Principles

- To inspire ourselves to think creatively and to strive for continuous self-improvement.
- To continually improve our technical skills in order to meet the challenges of our dreams.
- To achieve our objectives through innovation and responsiveness to the challenges we face.

Source: Shimano Annual Report, 2004.

Exhibit 11 Shimano Financials

Consolidated Income Statements (Y mil; y/y %)													Chart 25	
	FY02		03		04		05 F		06 F		07 F		05 CP	
Sales	134,710	7	143,645	7	189,208	18	171,000	1	188,000	-2	174,000	4	170,000	0
Bicycle components	94,534	10	108,222	12	128,993	21	130,000	1	125,000	-4	130,000	4	128,800	-0
Japan	11,331	-10	13,108	16	14,120	8	14,500	3	14,500	0	14,500	0	-	-
North America	26,009	15	25,438	-2	30,514	20	32,500	7	32,500	0	33,000	2	-	-
Europe	50,402	14	61,180	21	77,309	28	76,500	-1	70,000	-8	73,000	4	-	-
Asia and other	6,792	10	8,498	-4	7,050	9	6,500	-8	8,000	23	9,500	19	-	-
Fishing tackle	37,229	-1	34,789	-7	37,141	7	38,000	2	40,000	5	41,000	2	38,300	3
Japan	18,451	-9	18,498	-11	17,118	4	17,500	2	18,000	3	18,000	0	-	-
Overseas	18,779	8	18,291	-3	20,024	9	20,500	2	22,000	7	23,000	5	-	-
Other	2,946	42	2,615	-11	3,074	18	3,000	-2	3,000	0	3,000	0	3,100	1
COGS	88,849	-0	95,298	7	108,287	14	107,000	-1	105,500	-1	107,900	2	108,200	-2
Margin (%)	66.0	-5.0pt	66.3	0.4pt	64.0	-2.4pt	62.6	-1.4pt	62.8	0.2pt	62.0	-0.8pt	62.5	-1.5pt
Gross profit	45,861	26	48,347	5	80,941	26	64,000	5	82,500	-2	66,100	6	63,800	5
Margin (%)	34.0	5.0pt	33.7	-0.4pt	38.0	2.4pt	37.4	1.4pt	37.2	-0.2pt	38.0	0.8pt	37.5	1.5pt
SG&A expenses	27,606	10	29,048	5	31,550	9	32,600	3	32,000	-2	32,900	3	32,800	4
Margin (%)	20.5	0.4pt	20.2	-0.3pt	18.6	-1.8pt	19.1	0.4pt	19.0	0.0pt	18.9	-0.1pt	19.3	0.6pt
Operating profit	18,254	62	19,298	6	29,391	52	31,400	7	30,500	-3	33,200	9	31,000	5
Margin (%)	13.6	4.8pt	13.4	-0.1pt	17.4	3.9pt	18.4	1.0pt	18.2	-0.2pt	19.1	0.9pt	18.2	-
Bicycle components	16,035	98	18,580	16	28,097	51	29,300	4	27,500	-6	30,000	9	28,800	3
Margin (%)	17.0	7.5pt	17.5	0.5pt	21.8	4.3pt	22.5	0.8pt	22.0	-0.5pt	23.1	1.1pt	22.4	0.6pt
Fishing tackle	2,642	-37	1,032	-81	1,588	54	2,000	26	2,800	40	3,100	11	2,000	28
Margin (%)	7.1	-4.0pt	3.0	-4.1pt	4.3	1.3pt	5.3	1.0pt	7.0	1.7pt	7.8	0.8pt	5.2	0.9pt
Other	-422	-	-314	-	-294	-	100	-	100	0	100	0	100	-
Margin (%)	-14.3	35.0pt	-12.0	2.3pt	-9.6	2.4pt	3.3	12.9pt	3.3	0.0pt	3.3	0.0pt	3.2	12.8pt
Non-operating profit	1,877	-38	2,825	51	2,188	-23	1,300	-40	1,300	0	1,300	0	-	-
Interest and dividend income	1,224	-13	940	-23	1,174	25	1,000	-15	1,000	0	1,000	0	-	-
Non-operating expenses	1,391	-12	1,203	-14	1,792	49	1,300	-27	1,300	0	1,300	0	-	-
Interest expenses	574	-17	495	-14	432	-13	500	16	500	0	500	0	-	-
Recurring profit	18,741	48	20,920	12	29,787	42	31,400	5	30,500	-3	33,200	9	31,000	4
Margin (%)	13.9	3.8pt	14.6	0.7pt	17.6	3.0pt	18.4	0.8pt	18.2	-0.2pt	19.1	0.9pt	18.2	0.6pt
Extraordinary profit/losses	-6,597	-	-585	-	-28	-	0	-	0	-	0	-	0	-
Pretax income	12,144	56	20,335	67	29,739	46	31,400	6	30,500	-3	33,200	9	-	-
Taxes	4,060	92	8,052	98	10,216	27	11,000	8	10,700	-3	11,600	8	-	-
Tax rate (%)	33.4	-	39.6	-	34.4	-	35.0	-	35.1	-	34.9	-	-	-
Minority interests	18	20	35	94	111	217	0	-	0	-	0	-	-	-
Net income	8,064	43	12,249	52	19,412	58	20,400	5	19,800	-3	21,500	9	20,600	6.1
Margin (%)	6.0	1.5pt	8.5	2.5pt	11.5	2.9pt	11.9	0.5pt	11.8	-0.1pt	12.4	0.6pt	12.1	0.6pt
Capex	6,671	-35	6,294	-6	8,344	33	9,000	8	7,000	-22	7,000	0	9,300	11
Bicycle components	4,174	-48	4,516	8	6,815	51	7,500	10	5,800	-23	5,300	-9	-	-
Fishing tackle	1,008	-24	1,742	73	1,387	-22	1,500	10	1,200	-20	1,200	0	-	-
Depreciation	7,760	-8	7,528	-3	7,457	-1	8,100	9	7,500	-7	7,000	-7	8,200	10
Bicycle components	5,719	-12	5,822	2	5,829	-3	6,200	10	5,700	-8	5,200	-9	-	-
Fishing tackle	1,877	4	1,432	-15	1,598	12	1,700	6	1,800	-6	1,800	0	-	-
R&D expenses	5,265	15	5,431	3	5,317	-2	5,100	-4	5,400	6	5,700	6	-	-
Bicycle components	3,492	23	3,723	7	3,640	-2	3,500	-4	3,800	9	4,000	5	-	-
Fishing tackle	1,522	17	1,523	0	1,503	-1	1,500	-0	1,500	0	1,500	0	-	-
Forex rate Y/\$	125.81	4	116.44	-7	108.28	-7	105	-3	105	0	105	0	105	-3
Y/euro	117.44	9	129.65	10	133.94	3	135	1	135	0	135	0	135	1
% of overseas production	37.3	4.2pt	37.5	0.2pt	39.2	1.7pt	42.0	2.8pt	44.0	2.0pt	45.0	1.0pt	42.2	3.0pt
Cash flow from operating activities	20,781	6	25,288	22	18,988	-25	29,200	54	29,300	0	27,200	-7	-	-
Cash flow from investing activities	2,564	-118	-11,061	-531	3,282	-130	-7,000	-313	-8,000	-14	-8,000	0	-	-
Cash flow from financing activities	-7,704	-2	-22,904	197	-32,991	44	-17,300	-48	-3,100	-82	-2,700	-13	-	-
Cash and cash equivalents at end of year	76,489	27	64,170	-15	52,113	-19	56,000	7	75,200	34	92,700	23	-	-

Source: Company materials; compiled by DIR.

F: DIR forecasts.

CP: Company projections.

Source: Koki Shiraishi, "Shimano," *Daiwa*, July 1, 2005, p. 23.

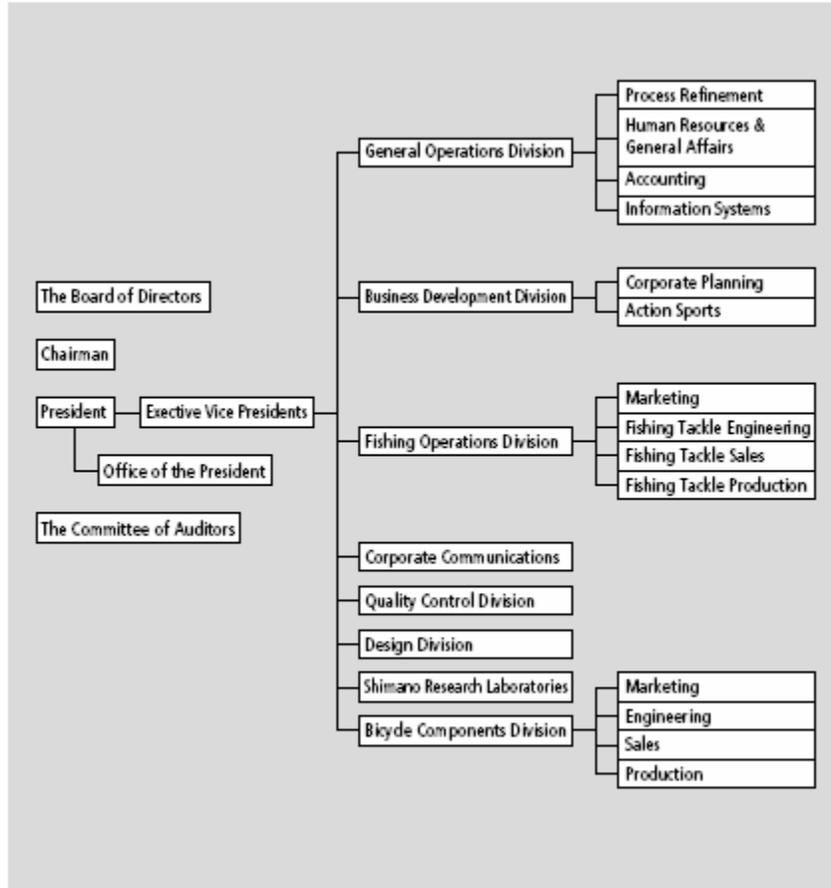
Exhibit 11 Shimano Financials (continued)

Consolidated Balance Sheets (Y mil; % of total)													Chart 26	
	FY98		99		00		01		02		03		04	
Assets														
Current assets	114,380	59.5	117,707	57.3	113,187	56.1	116,815	58.0	131,236	64.8	130,243	67.1	117,744	65.5
Cash and cash equivalents	56,042		61,279		62,853		66,405		78,726		64,223		62,086	
Accounts receivable	21,198		21,558		18,062		21,825		23,636		23,265		25,168	
Marketable securities	9,182		9,180		-		-		-		13,228		4,593	
Inventories	24,109		22,232		29,178		24,157		25,853		26,551		32,458	
Deferred tax assets	-		-		1,419		1,786		1,099		1,370		2,097	
Allowance for doubtful accounts	-407		-339		-319		-270		-256		-261		-765	
Fixed assets	77,145	40.1	81,852	39.8	88,742	43.9	84,577	42.0	71,178	35.2	63,902	32.9	62,043	34.5
Tangible fixed assets	43,668		41,787		45,304		44,358		42,170		40,858		41,036	
Intangible fixed assets	270		812		2,299		5,391		4,411		3,980		3,362	
Investments and other	33,207		39,053		41,138		34,827		24,594		19,063		17,664	
Total assets	192,215	100.0	205,345	100.0	201,929	100.0	201,392	100.0	202,412	100.0	194,145	100.0	179,788	100.0
Liabilities														
Current liabilities	20,376	10.6	21,832	10.5	14,729	7.3	14,559	7.2	12,491	6.2	18,923	9.7	20,520	11.4
Accounts payable	6,864		6,156		3,586		2,888		4,046		4,414		4,993	
Short-term borrowings	1,423		746		1,890		1,284		194		-		288	
Deferred tax liabilities	-		-		110		33		53		528		660	
Short-term reserves	-		-		-		1,858		-		-		-	
Long-term liabilities	3,110	1.6	3,212	1.6	6,700	3.3	7,089	3.5	5,558	2.7	5,358	2.8	4,122	2.3
Long-term borrowings	-		-		868		744		746		656		619	
Deferred tax liabilities	-		-		485		593		560		192		159	
Reserves	-		-		5,346		5,751		4,250		4,509		3,343	
Total liabilities	23,711	12.3	24,844	12.1	21,430	10.6	21,648	10.7	18,049	8.9	24,282	12.5	24,642	13.7
Minority interests	0	0.0	0	0.0	262	0.1	299	0.1	315	0.2	320	0.2	410	0.2
Shareholders' equity														
Capital stock	35,611		35,613		35,613		35,613		35,613		35,613		35,613	
Additional paid-in capital	42,064		38,109		35,248		32,046		31,822		31,822		31,830	
Earned surplus	2,418		-		-		-		122,771		108,538		99,307	
Capital surplus and retained earnings	90,546		106,781		114,791		116,809		-		-		-	
Unrealized gains on 'other' securities	-		-		1,222		-2,981		-381		1,334		2,187	
Forex translation adjustments	-		-		-8,637		-2,042		-1,640		-6,954		-8,637	
Treasury stock	-2,134		-3		0		0		-4,238		-811		-4,566	
Total shareholders' equity	168,504	87.7	180,500	87.9	180,236	89.3	179,444	89.1	184,046	90.9	169,542	87.3	154,734	86.1
Total liabilities, minority interests, and shareholders' equity	192,215	100.0	205,344	100.0	201,928	100.0	201,391	100.0	202,410	100.0	194,144	100.0	179,788	100.0
Additional Metrics														
Total assets	192,215		205,345		201,929		201,392		202,412		194,145		179,788	
Interest-bearing debt	1,423		746		2,758		2,028		940		656		907	
Liquidity on hand	65,224		70,459		62,853		66,405		78,726		77,451		66,679	
Net interest-bearing debt	-63,801		-69,713		-60,095		-64,377		-77,796		-78,795		-55,772	
Shareholders' equity	168,504		180,500		180,236		179,444		184,046		169,542		154,734	
Equity / assets ratio (%)	87.7		87.9		89.3		89.1		90.9		87.3		86.1	
D/E ratio (X)	0.01		0.00		0.02		0.01		0.01		0.00		0.01	
Book value per share (Y)	1,206		1,305		1,317		1,324		1,365		1,393		1,377	
Current ratio (%)	561		544		768		802		1,051		688		574	
Fixed ratio (%)	46		45		49		47		39		38		40	
Fixed assets / (long-term liabilities + shareholders' equity) (%)	45		44		47		45		38		37		39	
Inventories	24,109		22,232		29,178		24,157		25,853		26,551		32,458	
Inventories / average monthly sales (months)	2.0		2.0		2.6		2.3		2.3		2.2		2.3	

Source: Company materials; compiled by DIR.

Source: Koki Shiraishi, "Shimano," *Daiwa*, July 1, 2005, p. 24.

Exhibit 13 Shimano Organization Chart



Source: Shimano Fact Sheet, 2005.