



Steinway & Sons (A)

A Steinway is a Steinway. . . . There is no such thing as a "better" Steinway.
Each and every Steinway is *the best Steinway*.

Theodore Steinway

The 1990s was a period of change for the music industry. Foreign competition in the mid-price upright piano market was intense. In addition to well-entrenched players from Japan (Yamaha and Kawai), two South Korean firms (Young Chang and Samick), were emerging as competitors. Moreover, Yamaha and Young Chang had already established a presence in China. Forecasts indicated that the future growth market for pianos will be concentrated in Asia.

This case discusses Steinway & Sons' history, the evolution of its value system, and the current market conditions facing the firm. It highlights the issues faced by Steinway & Sons as its top management formulates its strategy toward the growing Chinese piano market.

COMPANY BACKGROUND

The Steinway Family Years — 1853 to 1971

Steinway & Sons was founded in 1853 by Henry E. Steinway, Sr. and his sons, Henry Jr., Charles, and William. In 1854 the firm entered and won its first competition. A year later it won first prize at the American Institute Fair in New York. By 1860 Steinway & Sons built a manufacturing facility at 52nd Street and Fourth (now Park) Avenue, on the site now occupied by the the Seagrams Building. Here 350 men produced 30 square pianos and five grands per week. In 1864 the firm opened a showroom on 14th Street. In 1865 sales topped \$1,000,000.

From the beginning, piano building at Steinway & Sons was a family affair. Each of the Steinway sons concentrated on gaining expertise in a different aspect of piano manufacturing: William was a "bellyman" who installed the piano soundboards, Henry, Jr. focused on piano "finishing," and Charles concentrated on "voicing" the piano. By 1854 the Steinways were employers, and the family members had become managers. Henry Sr. was in charge overall, while Henry Jr. focused on research and development, Charles managed the plant, and William took care of marketing.

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Music historians consider the competition at the 1867 Paris Exhibition as the turning point in the piano industry because it was there that the "American" system of cast-iron frames, heavier strings, solid construction, and more powerful tone took the competitive honors from European pianos. The jury report gave the Steinway piano a slight edge over the other major US manufacturer, Chickering & Sons, due to its expression, delicate shading, and a variety of accentuations.

With this recognition, Steinway's domestic piano sales and exports grew rapidly, requiring greater production capacity. In 1870, under William's leadership, the firm purchased 400 acres of remote farm land in Astoria, Queens with the idea of moving the factory from Manhattan. By 1873 the new factory was operating, and Steinway-sponsored employee housing, transport, and other facilities were built. Two years later, the firm opened a showroom in London. Ten years later, to build a global presence, the firm built a factory in Hamburg, Germany. Pianos manufactured there were marketed in Europe and exported to the rest of the world. Today, these two factories remain the firm's only manufacturing centers.

In the 1870s, low-price piano producers were a significant competitive threat. Conflict emerged between William and Theodore concerning the best way to respond. (C. F. Theodore was the fourth son of the founder and had joined the firm following his brothers' deaths in 1865.) The choice was to continue to emphasize class and high quality, as William favored, or to make inexpensive models, as advocated by Theodore. William's view won out. Ever since, the firm has remained steadfast in its focus on the high-end segment of the market.

At the turn of the century, the public developed an interest in player pianos. Steinway & Sons, however, showed no interest in these add-on technologies. Sales of player pianos plummeted after radio broadcasting began in 1920. In contrast Steinway's sales continued to climb. They were supported by extensive advertising and a generous sponsorship program that deployed 600 Steinways to support performance tours of artists.

Successive generations of Steinways sought to follow the founder's advice: "We provide customers with the highest quality instrument and services, consistent with Steinway's reputation for excellence, by building the finest piano in the world and selling it at a reasonable profit." This approach was threatened when the US economy entered a depression in the 1930s and the firm's survival was at stake. To market pianos to people of more modest means with smaller homes, Steinway developed and introduced two new models, the five-foot one-inch "baby grand" and a 40-inch upright piano. At the outbreak of World War II, production was stopped.

When piano making resumed in 1946, the television set was at the center of the American home. The task of rebuilding Steinway & Sons fell to Henry Z. Steinway, a fourth-generation Steinway, who took over the responsibility for manufacturing. His brother John took over promotions and marketing. To help consolidate the firm financially, Henry Z. sold Steinway Hall on 57th Street in Manhattan (the company's showroom) and leased back the lower two floors.

In the 1960s new competition emerged from Asia. Yamaha and Kawai began exporting thousands of pianos to the United States. A Yamaha piano sold for about one-half the price of the equivalent size Steinway model. By the early 1970s, the Japanese threat raised questions about the future of Steinway & Sons and the entire US piano industry. Henry Z. decided to sell:

Among the active family members, none were getting younger. And no young Steinways were interested in the firm. In the mid-twenties, two stockholder managers could get in a room and do anything they wanted. With the depression, shares were diluted bringing many new owners. The New York factory was located in an area hostile to manufacturing. Other piano makers had moved South to where they appreciated manufacturers. If we chose to move, we needed lots of capital.

In 1972 the firm was acquired by CBS and merged into the CBS Musical Instruments Division. Henry Z. observed:

Japan represents both an opportunity and a menace. As the largest market in the world for

new pianos, having surpassed the US, possibly Steinway could enter that market effectively with the aid of CBS. Conversely, free from restraints imposed by antitrust legislation in the US, one huge company [Yamaha] has the avowed purpose of overcoming Steinway. Why CBS and not General Motors or US Steel? CBS wanted us at a price we thought right. More importantly, we thought CBS could and would handle our product in the right way.

The CBS Years — 1972 to 1985

CBS increased capital spending from \$100,000 annually to between \$1 and 2 million. Workers received the medical and retirement benefits of other CBS employees. These were a big improvement over what had been provided previously. To facilitate continuity, Henry Z. remained president. Nevertheless, concerns arose. According to industry reports:

Once CBS entered upon its own period of decline, Steinway was plagued by bureaucratic confusion, changing strategies and parades of efficiency experts. There were four Steinway presidents in [16 years]. "Quality control" slipped. . . . There were pianists who began to say that the Steinway was no longer a great instrument; the market for half-century old rebuilt Steinways boomed.¹

Recalling the top management changes under CBS, Henry Z. Steinway observed:

Each new [division] president wanted to do something different. It was like riding a different horse every six months -- first it was quality, then it was volume, then it was automation. The firm was drifting from one program to another. Also, I got so many memos from the parent corporation [CBS Musical Instruments Division] that after a while, I simply ignored them. I also thought it was rather amusing that I reported to the head of the division in California who, in turn, reported to a guy at the [CBS] headquarters just a few blocks from our offices in Manhattan.

Further, CBS often showed little regard or understanding for Steinway's established traditions. Steinway tradition, for example, encouraged workers to bring their relatives to work for the firm. Steinway believed this was a good way of preserving established skills and also encouraged loyalty and a reliable, motivated work force. Under CBS, however,

such nepotism was strictly forbidden. Annoyed, Henry Z. retired from the firm in 1980.

During the early 1980s, under the fourth CBS president, quality was reinforced and the firm introduced a new upright. This new 52-inch piano was aimed at institutions and music schools. Then CBS decided to divest all of its music businesses. The *Smithsonian Magazine* reported:

That announcement alone nearly completed what earlier sloppiness and mismanagement could not. . . . In 1985, the year of the sale, Steinway was earning \$8 million on \$60 million in revenues. The sale involving at least 18 interested parties, dragged out over a period of ten months. There were rumors that the factory would be sold for its real estate value. CBS claimed to be concerned over the future of the company, but finally it needed cash to fend off attempts to take it over. And so CBS sold Steinway & Sons.²

This brought morale among Steinway workers to an all-time low.

The Birmingham Years — 1985 to 1995

CBS sold Steinway & Sons and the rest of its musical instruments division in December 1985 to John and Robert Birmingham, two brothers from Boston who had made their fortune through a family-owned heating-oil business. The Steinway work force which had just survived the uncertainty and confusion of the CBS years, was not predisposed to trust strangers.

Lloyd Meyers, the last CBS president, had tried to organize a leveraged buyout. Following the firm's acquisition, Myers was asked to leave, as was the chief financial officer. Bruce Stevens became President. The sales force, which had been managed by a two-day-a-week manager, was placed under Frank Mazurco, a long-time Steinway district sales manager. The number of US dealers was reduced from 152 to 92. Bruce established a program to strengthen the ties between Steinway & Sons and its dealers. A formal five-day program for technicians was established to provide hands-on training at the New York and Germany plants. Additionally, the firm instituted a three-year strategic planning process. To

¹ E. Rothstein. "To Make a Piano It Takes More Than Tools," *Smithsonian*, November 1988.

² Rothstein, 1988.

instill more “discipline” into manufacturing, top management replaced the factory manager with Daniel Koenig, a manufacturing engineer who had spent 21 years at GE.

Under Koenig, the firm introduced state-of-the-art machines for manufacturing such components as hammers so that tolerances could be brought within carefully established limits. The whole “action-mechanism” department was reorganized and moved into a single location. New programs, such as statistical process control, were introduced. Engineers were hired and provided with state-of-the-art computer-aided design technology. The goal was to document the design and manufacturing process using old Steinway drawings, many of which dated back to the turn of the century.

These changes were viewed as controversial by some employees, music critics, and other followers of the firm. They observed that the changes top management had introduced to increase quality control and efficiency were working to the detriment of Steinway’s historical tradition of craftsmanship and quality. Steinway management countered by arguing that employing a modern, scientific approach to manufacturing was not a break with, but a continuation of, Steinway traditions.

In 1991 Steinway & Sons introduced a new line--the Boston Pianos--designed to compete in the mid-range piano market. This line was designed by Steinway & Sons and manufactured at Kawai’s factory in Japan. According to Bruce Stevens:

Steinway dealers had suggested that a logical step-up strategy to a Steinway piano was needed. The availability of many competent lower-priced pianos made making a Steinway sale to a novice pianist harder to justify. We decided that a new line of mid-priced pianos was necessary.

Steinway dealers now had a piano they could offer to compete against similarly priced pianos made by Baldwin, Yamaha, Young Chang, Kawai, and Samick. Currently, the Boston line includes five grand piano models ranging in length from 5-feet one-inch to 7-feet, 2-inches, as well as four upright models ranging in height from 45 to 52 inches. The line does not include a full-size concert grand. As they were originally intended strictly as an

export from Japan, Boston pianos sell for 25 percent more than Japanese domestic pianos.

According to John Birmingham, perhaps the most important ingredient that the new owners brought to Steinway was their attitude. Noted John:

We did not purchase the company to move it and make a fortune in real estate, or to silk-screen Steinway t-shirts, or to go public and make a killing on the stock offering. It was our intention to operate the Steinway piano business in a vigorous and creative way. Our guiding principle has been to guard and nurture the quality and integrity of the Steinway piano.

During the Birmingham’s tenure, worker morale was gradually reestablished. Discussions between management and workers evolved so appropriate modernization of technical equipment occurred while respect for the unique aspects of the craft mode of production associated with a Steinway piano was maintained. In 1995 one of the firm’s harshest critics from the *New York Times* acknowledged the following:

A recent tour of the Steinway’s factory in Queens showed an apparently serious effort to improve the instrument. The final stages of manufacture receive more attention than they did a few years ago. Outside technicians have also reported improvements in Steinways, a heartening sign.³

Enter Selmer Company, 1995

In 1995 Steinway & Sons was purchased by the Selmer Company, for nearly \$100 million. This Elkhart, Indiana, firm had manufacturing facilities in La Grange, Illinois, Cleveland, Ohio, and Monroe, North Carolina. The Steinway & Sons management team installed by the Birmingham’s remained intact and in charge.

Commenting on the merger, Dana Messina, an investment banker and a controlling shareholder of Selmer’s parent corporation, noted:

The combination of Steinway and Selmer is an exciting opportunity for both of the companies and their employees. Our extensive investigation has made it clear that Steinway’s New York factory today produces excellent instruments of a

³ E. Rothstein. “Made in the USA, Once Gloriously, Now Precariously.” *The New York Times*, May 28, 1995.

quality unequaled in many years, and the Steinways made in the company's Hamburg factory continue to dominate the European and Asian concert scene. . . . We intend to continue the mission of producing great instruments that has been pursued by Steinway.

The new owners made an IPO stock offering to raise \$60 million in August 1996.

THE STEINWAY LEGACY

There are two fundamentals in understanding the origins of the Steinway legacy: technical innovation and marketing. Around 1800 the piano's identity was still in a formative stage, but by the 1850s, the instrument's basic structure had been defined. Taking the basic structure as a given, the Steinways improved the piano and, ultimately, the entire industry.

Building Technical Capabilities

In 1850 producers were working to make piano performance more reliable and louder. New piano works by romantic composers had appeared and they demanded a broader range of tones. In addition, larger concert halls were being built. These developments served to establish a need for pianos with a louder tone. The general objective of Steinway & Sons' efforts was to develop reliable pianos that offered a more powerful tone.

Experimentation at Steinway & Sons was done primarily by two of the founder's sons, Henry, Jr. and Theodore. These Steinway brothers experimented and developed theories about improvements to both the design and the manufacture of pianos. In 1911 Alfred Dolge described Theodore's approach as follows:

Step by step he invaded the fields of modern science, investigating and testing different kinds of wood in order to ascertain why one kind or another was best adapted for piano construction, then taking up the study of metallurgy, to find a proper alloy for casting iron plates which would stand the tremendous strain of 75,000 pounds of the new concert-grand piano that was already born in his mind, calling chemistry to his aid to establish the scientific basis for felts, glue, varnish oils, -- in short, nothing in the realm of science having any bearing on piano construction

was overlooked.⁴

Over a 50-year period starting in 1857, the firm obtained 58 patents for various innovations to piano design. At international exhibitions in Europe, the Steinways proudly showed off their new methods and basked in the resulting acclaim. One consequence was that their methods were copied widely, especially in Europe. By the 1870s, the "Steinway system" was well recognized and by the end of the century it became the *de facto* industry standard.

During the mid-19th century, new industrial technologies emerged to cause a revolution in piano manufacturing. Steinway & Sons was at the forefront of these developments, implementing innovative and unique approaches to piano manufacturing. At their large facility, opened in 1860, they standardized various parts of the piano to facilitate volume manufacturing, refitting and servicing. Though the firm used increased mechanization to produce standardized components, it retained a "craft" approach for other components and for assembling pianos. The combination of the mechanized technologies and individual craft skills quickly became a hallmark of the Steinway approach to piano manufacture.

Building Reputation

From the beginning, Steinway & Sons faced intense competition from rivals such as Chickering & Sons and Mason & Hamlin in the US, and Erard and Broadwood in Europe. Facing this competition, the firm sought to highlight not only the unique construction of the Steinway piano but its "superior" sound.

To do this, the firm entered its pianos in contests that compared manufacturers' products. In 1854 for example, the firm exhibited a square piano at the Metropolitan Fair held in Washington, D.C., and received a prize medal. A year later Steinway & Sons entered the American Institute Fair at the Crystal Palace in New York and the judges awarded it first prize from among 19 competitors.

⁴ A. Dolge. *Pianos and Their Makers* (Covina, CA: Covina Publishing Company, 1911), p. 303.

[Steinway & Sons'] great triumph came at the great fair of the American Institute in New York in 1855, where their overstrung square piano with full iron frame created a sensation in the piano world. As a result their business expanded so rapidly that in 1859 the erection of that mammoth factory on Fifty-Third Street and Fourth Avenue, New York, became a necessity.⁵

To gain international recognition, Steinway & Sons, along with 130 other manufacturers, entered the International Exhibition held at the Crystal Palace in London in 1862. Steinway & Sons was recognized as the best American manufacturer and was awarded a major prize. The main prize went to Broadwood. In 1867 the firm entered the Paris Exposition, along with 178 other firms. Both Steinway and Chickering were awarded gold medals at this exposition.

Winning by Not Competing. At the major manufacturers' competition held in Vienna in 1873, around two-thirds of the pianos exhibited were built according to the Steinway system. Steinway & Sons itself did not compete, however, having reached an agreement with Chickering not to do to avoid continuation of the shrill accusations that had arisen between the two rivals after the Paris Exposition.⁶ With the competition over, however, the judges issued a statement regretting that "Steinway & Sons, the celebrated inaugurators of the new piano-making system, had chosen not to exhibit." From the standpoint of enhancing its reputation for making a superior piano, Steinway & Sons "won" in Vienna by not competing.

Industry rivalries also persuaded Steinway & Sons and 15 other piano-making firms from the eastern US to boycott the 1893 World's Fair held in Chicago. As expected, W. W. Kimball, a Chicago piano manufacturer won the highest award. At the time, however, Steinway & Sons was promoting a US tour of

the Polish virtuoso, Ignace Jan Paderewsky. Paderewsky was invited to play at the exhibition's inauguration, but only if he would play on a piano entered in the competition. Paderewsky countered that he could only play on a piano he was used to playing. The organizers relented and Paderewsky played his Steinway. Again, unfolding events enabled Steinway & Sons to enhance their reputation by not competing.

A Steinway Is a Steinway. Steinway & Sons always sought to establish a reputation for itself as the firm that built the best piano for musicians, especially concert artists. It also sought to establish itself as being a contributor, supporter, and leader in the cultural arts. As Dolge noted:

They never relaxed in letting the public know that they manufactured a fine piano. William Steinway, with far-seeing judgment, was not satisfied only to use printer's ink with telling effect, but he also began to educate the public to appreciate good music. Steinway Hall was erected, the Theodore Thomas orchestra generously supported and the greatest piano virtuosos from Rubinstein to Joseffy engaged for concerts, not only in New York but in all large cities of the United States and Canada.⁷

Steinway Hall, designed and built by William Steinway in 1866, was the largest concert hall in New York City. Notes Dolge:

The opening of this hall was the inauguration of a new era in the musical life of America. Anton Rubinstein, Annette Essipoff, Teresa Carreno, Fannie Bloomfield-Zeisler, Rafael Joseffy, Eugene D'Albert, Leopold Damrosch and Anto Seidl made their bows to select audiences from the platform of Steinway Hall. William Steinway knew that the American people needed musical education. He provided it.⁸

Concert artist endorsements was another method used by Steinway & Sons to convince the public that their pianos were superior. Initially, the effort at Steinway & Sons was largely opportunistic and informal. But the benefits of more large-scale efforts were recognized as a result of the 215-concert US tour in 1872 by the virtuoso Anton Rubinstein, who was sponsored by Steinway &

⁵ Dolge, p. 302.

⁶ Both Chickering and Steinway attempted to depict the results of the Paris Exposition as confirming they (not their rival) were the leading US piano manufacturer. This competition escalated into a notorious series of claims and counterclaims as each firm claimed additional endorsements and awards in their efforts to convince the public that it was they who had "really won" in Paris.

⁷ Dolge, p. 174.

⁸ Dolge, p. 309.

Sons. Rubinstein and his Steinway dazzled audiences. In 1891 the Steinway-sponsored concert tour of Ignace Jan Paderewsky was also a great success. Paderewsky cleared an unprecedented \$200,000 from his tour, and the promotional value to Steinway & Sons was immeasurable.

These concerts, the artists involved, and the sponsor all received extensive press coverage and acclaim. In 1912 Charles Steinway, the president of Steinway & Sons, observed: "It was without doubt the most effective of all advertising methods we employed, since it not only made the piano and its maker widely known, but assisted in laying the foundation for a broad national culture."

Though Steinway & Sons never offered to reduce the price of its pianos, it sought endorsements from New York's social elite.⁹ To this and other groups, the firm presented itself as offering a high-quality product worthy of a high price. Today, the Steinway pianos are priced the highest in the industry. Often this price is nearly double that of an equivalent Yamaha, the firm's most competitive rival in the United States.

Steinway & Sons has consistently emphasized its commitment to the cultural enrichment of the nation and the world. The firm's promotions argue, for example, that the act of buying a piano is not the same as the act of buying a Steinway. Buying a Steinway is depicted as an indication of appreciation for high cultural taste and, hence, was a sign of high achievement. The firm also built upon its international presence. Dolge noted:

Having established the fame of his piano in America beyond dispute, William [Steinway] looked for other worlds to conquer, and opened a branch house in the city of London about the year 1875. Steinway Hall in London was formally opened in 1876. In 1880 Hamburg factories were started, to supply the ever-growing European Trade.¹⁰

The Hamburg facility was established primarily to challenge the domination of European piano markets by companies such as Bechstein, Bluthner, and Ibach. At the time, the firm was the only piano-maker that served all well-known concert artists in every major city in America and in Europe. According to D. W. Fostle, an author, "A Steinway piano soon became recognized as an admired cultural icon in any refined home, a necessary element on any prominent concert stage, and part of the necessary baggage of any prominent pianist."¹¹

Building a Marketing Approach

Like its competitors, Steinway & Sons originally sought out and paid for endorsements from prominent concert artists. Over time, however, Steinway and other firms ceased paying for endorsements. Concert artists, however, still chose to endorse the Steinway piano over others. Today, more than 95 percent of all classical music concerts featuring a piano soloist are performed on a Steinway concert grand piano.¹² This endorsement has remained stable for many decades. Music schools and conservatories such as Juilliard, Oberlin, and Indiana University have always showed a great fondness for Steinways.

Steinway & Sons sought to be associated with high culture, style, status, and class. In 1855 the firm started advertising daily in the *New York Times*. Gradually, Steinway & Sons moved to much more extensive advertising campaigns.

To the astonishment and chagrin of the older and more conservative houses in the piano trade, William [Steinway] started an aggressive and heretofore unheard-of advertising campaign. As a competent judge he knew that his factories turned out the best pianos that could possibly be made, and he was bent not only on letting the world know it, but on making the world believe it, as

⁹ As judges, newspaper proprietors, music publishers, teachers, clergy, music critics or others prominent in New York social or cultural circles indicated they'd like to buy a Steinway, the firm offered them generous credit terms to encourage the purchase. By having a Steinway in influential New York homes, Steinway & Sons calculated its status by association tended to grow.

¹⁰ Dolge, p. 309.

¹¹ D. W. Fostle, *The Steinway Saga* (New York: Scribner, 1995).

¹² Currently, the Concert Artists' Department maintains a bank of 330 Steinway concert-grand pianos spread about 160 cities. Once an artist achieves sufficient stature to be considered eligible by Steinway & Sons to receive concert service, he or she is offered the opportunity to use Steinway pianos for all performances. The only expense to the artist is the cost of hauling the piano to the recital hall.

he did. This was revolutionary, even shocking, but William persisted until he carried his point.¹³

Steinway as an Investment. In 1900 Steinway & Sons hired N. W. Ayer & Son, the oldest full-service advertising agency in the country, to promote Steinway pianos. Ayer & Son emphasized that many potential Steinway buyers were not only interested in music but were greatly interested in class and status. Their interest in owning a Steinway would increase if the class and status associated with the Steinway name was emphasized.

Systematically, the firm broadened the message in its promotions. The firm's advertising emphasized, for example, that one did not "buy" but "invested" in a Steinway, that there was no such thing as a better Steinway for a Steinway was the best, that owning a Steinway was more important than being able to play it, and that a Steinway piano was always made just a little bit better than was necessary. Steinway advertising was targeted to emphasize family values, the contributions to art and music of Steinway & Sons, Steinway's technical excellence, or some combination of these. Forging a link with the art community, the firm commissioned paintings showing famous artists and composers, past and present, linked to the Steinway piano. The "timeless" excellence of a Steinway was emphasized.

The commission and use of modern art in Steinway ads of the 1920s was an extension of the advertising style that the New York firm had employed for decades. . . . [W]ith Steinway the association was natural. However much another product's image was improved by its proximity to art, it remained a mere product. The Steinway itself became art.¹⁴

In the 1920s the program to make sure that all outstanding concert artists used a Steinway grew to include more than 600 concert artists. With a consistent and overwhelming advertising message and its US competition in retreat, the firm convinced the public that a

Steinway was the only "artistic" piano.¹⁵

According to *Forbes*, a Steinway piano outperforms Mercedes-Benz auto-mobiles, power boats, wine, and gold as luxury items for investment. A Steinway created between 1929 and 1958 is now worth nearly six times its original cost; for those dating from 1959 to 1978 the factor of appreciation currently stands at nearly three times. Piano rebuilders are known to scour the world in search of old Steinways because regardless of its age or neglect, a Steinway grand can often be restored to its original magnificence.

The 1970s and 1980s saw new competition emerge from Asian competitors. Of particular interest was Yamaha's announced intention to overtake the status associated with a Steinway. Yamaha's president claimed this would be done by promoting Yamaha's sound quality and tone along with the status and class associated with the Yamaha name. Despite Yamaha's avowed threat to overtake the status of Steinway & Sons, the firm's reputation as producer of the best sounding piano has remained pretty much intact. In 1991 Dolge noted:

Just as a most masterful copy of a Raphael or Correggio will ever be only a copy and far from the original, so it has proved impossible to produce a piano equal to the Steinway piano, even though the Steinways were copied to the minutest detail. No art product can be duplicated by copying.

MANUFACTURING STEINWAYS

Manufacturing a Steinway piano is a labor intensive and time consuming process. A Steinway concert grand piano is one of the world's most complex pieces of hand-built machinery. It consists of over 12,000 parts and requires about a year to complete. Approximately 300 craftspeople have a hand in its development.

The 440,000 square-foot manufacturing

¹³ Dolge, p. 309.

¹⁴ C. H. Roell. *The Piano in America, 1890-1940* (Chapel Hill: The University of North Carolina Press, 1989), p. 180.

¹⁵ The firm's ads necessarily were--and are--devoted to maintaining an appeal to a minority audience of high culture that has not been swept into mass society. Hence the promotion of Steinway as art. According to the classical pianist Jose Feghali: "Steinways are a work of art; if they weren't, we wouldn't be playing them. . . . You can walk into a room with 10 pianos and it's like playing 10 different instruments."

facility manufactured about 67 percent of Steinway pianos sold in 1995. This facility consists of many linked buildings that house the factory and Steinway's offices. In 1985 260 direct workers and 61 nondirect workers were involved in manufacturing pianos. The production workers are represented by Local 102 of the United Furniture Workers, a small two-company local that has bargained with Steinway management for decades. In 1996 wages averaged approximately \$13 per hour (\$17 including fringes). Throughout the factory, there are workers who represent families that have been with the firm for generations. Currently, the work force has a multinational cast of first-generation immigrants. Over 17 languages are spoken in the factory.

The factory is part lumber mill, part fine-cabinet works, part manual-crafts assembly line, and part studio for industrial craftsmen and women working an art acquired through many years of apprenticeship. Although the buildings have undergone significant changes over the years, the piano-making operations have hardly changed in the last century.

The Lumber Mill. The mill, the factory's lumber yard, carries approximately 1.5 million board-feet of select woods (costing approximately \$2 million) such as hard rock maple and sitka spruce. Twice a year, the firm's wood technologist, Warren Albrecht, goes to Canada and the American Northwest to identify wood of sufficient quality and grain to be used by Steinway. These woods are air-dried in the open for about 18 months and then kiln-dried using recently installed computer-controlled equipment. Reduction of the wood's moisture content through drying is essential for the instrument's acoustics. Through years of trial and error, the firm has managed to establish ideal moisture content and drying times for each of the instrument's various wooden components. It is here, via the world's finest woods, that the foundation of what eventually becomes a Steinway piano begins.

Rim-Bending Operations. This operation focuses on the piano's rim (the curved sideboard giving grand pianos their shape and support). A concert grand's rim requires a 22-foot-long, three-and-one-half-inch wide board

of hard rock maple. Because boards of this length rarely occurred in nature, thin slats of maple laminates (18-layers thick) are glued together to form the piece. When bent, this wooden piece forms the piano's familiar outer and the hidden inner rim that extends below the sound board and frame. Steinway's processes for bending the inner and outer board remains unique in the industry. According to Henry Z. Steinway, it is this process that provides the instrument with greater strength and durability.

The rim-bending room consists of eight piano-shaped forms of steel presses whose perimeters are fitted with screws and clamps (see **Figure 1**). With the glue holding the 18 layers of laminates still wet, the piece is manually pressed against the form and secured by iron pinions.¹⁶ The bent rim is then heated by high-frequency radio waves. Although the rim is technically ready in minutes for the next process, it remains in the iron form for 24 hours. Once removed, the piece is stacked in a humidity-controlled environment for a minimum of 10 weeks. This curing period ensures that the rim retains its bent form. Following the waiting period, the rim is planed, sanded, and cross braced and then the key-bed and pin-block are inserted. Slowly the rim is transformed into a unitary piano case.

The Sound Board Assembly. In another part of the factory, highly skilled woodworkers create the piano's sound board. The sound board consists of 20 spruce boards, selected from the same lot of wood, meticulously cleared of any imperfections. These boards are matched for grain and color and glued along their lengths. Once glued, the board is thinned in certain places and tapered toward the ends. By the application of support ribs to its underside, the board is also slightly crowned. Then a bridge, the clef-shaped support for the strings, is affixed.

The Action Mechanism. The "guts" of the piano consists of the keys and the action.

¹⁶To prevent damage and facilitate conductivity, a brass strap equal to the length of the piece, is placed on the exterior side. The wet glue, along with the wood's slightly elevated moisture content, permits the laminates that formed the wooden piece to slide against each other just enough to permit bending.

Together, they constitute the mechanism by which the act of depressing the key causes the corresponding hammer to strike the string and return to its original resting place.¹⁷ Once assembled, the actions are mated with the piano's keys and the entire "key-action assembly" mechanism is regulated to ensure proper movement. After being regulated, the key-action assembly is moved to another part of the factory where the keys are weighted to ensure they provide the appropriate touch and recoil. Proper touch and recoil results in the piano's "even feel", an important trait of the legendary Steinway experience. The mechanism is then fitted into a piano case. The foundation that supports the key-action assembly is the spruce key bed.

The Final Assembly. The joining of the piano case and an iron-plate to support the strings is carried out in the factory's "belly" room. The bellying process involves attaching the iron plate and the sound board to the inner rim of the piano case. This process takes up to eight hours over the course of two days. During this process, the sound board is securely affixed to the piano case using a special hot glue that ensures a good seal between the board and the piano case. The board installation process is critical for the proper resonance of the strings and multiple measurements are taken to ensure a proper fit.

Once the hot glue sets and the clamps holding the board in place are removed, the cast iron-plate is lowered into the case. Accurate installation of the plate ensures the proper bearing of the bridge, which then helps maintain the right pressure on the piano's strings. Too little or too much pressure results in an instrument that sounds weak or muffled. With the sound board and iron plate installation complete, the piano is ready for

stringing.

The stringing process involves the hammering of pins into a pin-block underneath the iron plate and the insertion of about 243 strings. After the instrument is strung, it passes through a "banger" which mechanically pounds every key about 8,000 times within a 45-minute period. This "aging" process ensures that the sound notes emanating from the instrument are stable. The instrument is then regulated to ensure its moving parts (the key-action mechanism) interact properly.

The Steinway piano comes in flat and glossy finishes. The flat finish is the trademark of the Queens factory and the glossy finish is typical of the Hamburg factory. Each piano receives five coats of lacquer prior to the insertion of the sound board and iron plate, but is not truly finished until the time of shipment. Once assembled, pianos are polished and rubbed in a manually intensive process.

The Tone Regulating Department. Many of the sound-related operations are carried out in the tone regulation department by a group considered to include Steinway's most skilled technicians. Highly skilled artisans (as the firm prefers to call them) optimize the final tone of the piano and do all the fine-tuning. For the concert grands, this process can take as long as a week per piano.

Tuning involves adjusting the piano strings to get the proper tonal quality and "voicing" entails final adjustments to the shape of the hammer, the feel of the felt, and the movement and position of actions. With the personality or voice of the piano exposed, final adjustments are completed to optimize the instrument's sound qualities. The time taken to complete this process varies from eight to 24 hours. Variations in the production process are accommodated during the tuning and voicing processes and contribute to the distinctive sound of each Steinway piano. Given the nature of the craft production process, each step is contingent upon the success of the previous steps and there is little room for error. Each piano sounds and feels different. The firm encourages prospective buyers to play several pianos and then to pick the one they think sounds best.

By the time a piano is assembled, strung,

¹⁷ The piano key covers are made from a mock ivory polymer, in deference to the ban on ivory imports. The action consists of 17 different wooden parts including machined wooden parts, Brazilian deer hide, felt-covered maple hammers, metal pins, and Teflon impregnated wool bushings. The components of the action are milled on the third floor and then assembled on the second floor. The design of the actions, much like the rest of the piano, only work if all of the milled parts fit together perfectly. Employees are trained in determining the exact fit and, also, to spot problems through visual and physical inspection of the action components.

tuned, and voiced, it has gone through 25 to 30 quality checkpoints. The workers responsible for sound board placement, stringing, and tone adjustment and other big jobs often signed their work. According to one Steinway tuner, "It's an aspiration of everybody to be immortal, and so, like an artist who signs his painting, I sign the piano. I put into the piano the best of myself."¹⁸ In the 1980s John Steinway observed:

A Steinway is a Steinway only because we don't cut any corners. My great-grandfather started that 135 years ago. I often say we're probably thick-headed and stubborn; we stick to our principles. But it works.¹⁹

Arthur Loesser has chronicled the history of the piano and describes the sound of the Steinway concert grand piano most eloquently:

The end result of the Steinway effort was a tone-producing tool of matchless strength and sensitiveness. . . . It was a marvelous kind of sound for the music that people loved then: thick, thundering piles of chord, booming batteries of octaves, and sizzling double jets of arpeggios. But the single Steinway tone, struck gently and held, also worked its ineffable spell, taking an endless, yearning time to die.²⁰

The firm produced 2,698 pianos in 1994.

Historically grand pianos have accounted for the bulk of Steinway's production. Steinway offers eight models of the grand pianos that range in length from five-feet, one-inch for a baby grand to nine feet for the largest concert-style piano (see **Figure 2**). Grand pianos are at the premium end of the piano market in terms of quality and price, with the Steinway grands dominating the high end of the market. Retail prices in 1996 range from \$27,600 to \$101,200 in the United States.

THE MARKET AND COMPETITION

According to a 1990 survey conducted by the Gallup Organization for the American Music Conference, slightly more than four in 10 (43 percent) US households contained at least one

amateur instrumental musician. The survey reported that about 42 million music-making households exist in the United States. However, the proportion of households with one or more amateur musicians dropped from 46 percent in 1985 to 43 percent in 1990. About 44 percent of piano players were male and 56 percent were female.

Generally, players were under the age of 35 (the median age was 28). Among musical instruments, piano and the guitar topped the survey's list with about 40 percent of players choosing the piano and 17 percent the guitar. Amateur musicians came from households that had a higher median income level (\$45,860) than the total population (\$37,640) and were headed by an adult with more than a high school education.²¹

Domestic Competition

In the 1960s US piano manufacturers were first confronted with Japanese piano imports. The Japanese firms offered consistent-quality pianos at a much lower price than US manufacturers. By 1968 two Japanese firms, Yamaha and Kawai, were selling 10,000 units annually. Together they captured 5 percent of US upright piano sales and 28 percent of US grand piano sales.

The 1980s saw further significant change in the US piano market. Yamaha introduced the first all-digital synthesizer, which could effectively produce a range of high-quality sounds. Yamaha's introduction of the synthesizer effectively undercut the low-end acoustic piano market. In fact sales of acoustic pianos declined from a high of 233,000 per year at the beginning of the 1980s to 50,000 units annually in 1994. As sales of upright pianos decline, the number of grand pianos sold have increased (see **Exhibits 1 and 2**).

Although Japan and Korea held 11 percent of the US market in 1980, they held 38 percent of it by 1985. Several US firms have closed, and currently, only two major US firms, Steinway & Sons and Baldwin, continue to make pianos. Several foreign firms now have US manufacturing facilities: Kawai operates a plant in North Carolina and Samick has a

¹⁸ "Steinway's Key. . . One at a time," *Associated Press International*, 1985.

¹⁹ *ibid.*

²⁰ Quoted in R. V. Ratcliffe. *Steinway & Sons* (San Francisco: Chronicle Books, 1985), p. 102.

²¹ American Music Conference, *Music USA, 1991*, p. 21-23.

manufacturing facility in California. Currently, the high-volume producers are located in Japan, Korea, China, and the Soviet Union. Total US production is in third place -- at about the same level as that of South Korea.

US Piano Market in 1995. In 1995 the musical instrument industry in the US generated retail sales of approximately \$5.5 billion. The acoustic piano segment, which represents approximately 11 percent of the total musical instrument industry, had retail sales of \$598 million in 1995, up 7 percent from 1994.²² This included an 11 percent increase for grand pianos over five feet in length. During the period from 1991 to 1995, total dollar sales of grand pianos increased at an average annual rate of over 7 percent from \$288 million to \$372 million. Upright piano dollar sales, in contrast, increased at an average rate of only 1.5 percent during the same period.

Steinway's domestic market share of the grand piano units was approximately 7 percent in 1995. Approximately 90 percent of Steinway unit sales were made on a wholesale basis, with the remaining 10 percent sold directly by Steinway at one of its five company-owned retail locations. Steinway & Sons operates five retail stores in New York, New Jersey, London, Hamburg, and Berlin. The West 57th Street store in New York City, known as Steinway Hall, is one of the largest and most famous piano stores in the world. Steinway pianos are sold by dealers in 45 states across the country. The firm's leading markets are in and around major metropolitan areas. The two largest regions in terms of sales are California and New York, which together accounted for approximately 20 percent of domestic revenues in 1995 (see **Exhibit 3**). The institutional segment of the US piano market, which includes music schools, conservatories, and universities, represented less than 10

percent of Steinway's domestic sales.²³ Steinway's largest dealer accounted for approximately 8 percent of sales in 1995, while the top 15 accounts represented 28 percent of sales.

In 1994 the firm sold 2,698 grand pianos worldwide (see **Exhibit 4** for a history of Steinway grand piano sales). During this same year, the firm reported a net income of \$3.1 million on sales of \$101 million (see **Exhibit 5**). Approximately 50 percent of Steinway's total sales were in the US, 37 percent were in Europe, and the remaining 13 percent were in Asia. Steinway's Japanese and Korean market shares (in units) combined is less than 1 percent. Germany, Switzerland, France, the United Kingdom, and Italy accounted for the greatest percentage of sales outside the Americas. Steinway's largest European markets were Germany and Switzerland.

Steinway pianos are primarily purchased by affluent individuals highly skilled in pianos with incomes over \$100,000 per year. The typical customer is over 45 years old and has a serious interest in music. Steinway's core customer base consists of professional artists and amateur pianists, as well as institutions such as concert halls, conservatories, colleges, universities, and music schools. Customers purchase Steinway pianos either through one of the firm's five retail stores or through independently owned dealerships. Over 90 percent of the firm's piano sales in the US are to individuals. In other countries, sales to individuals are a smaller percentage of the total sales.

Baldwin. In 1862 Dwight H. Baldwin, a music teacher, founded this firm as a retail piano business in Cincinnati, Ohio. In 1865 Baldwin hired Lucien Wulsin as a bookkeeper and made him a partner in 1870. Until his death in 1912, Wulsin shaped the firm's development.

²² The US acoustic piano market consisted of two important segments -- grands and uprights. Grand pianos are larger and give a louder, more resonant sound. The grands were more expensive and the market for such pianos was generally smaller than that for uprights, and fewer firms were involved in their manufacture.

²³ Steinway provides restoration services and sells piano parts from its New York, London, Berlin, and Hamburg locations. It also provides tuning and regulating services. Restoration, repair, tuning and regulating services are important because they lead to potential new customers. In 1995 restoration services and piano parts accounted for approximately 7 percent of revenue, with gross margins of approximately 29 percent.

Branch stores were opened in Indianapolis, Indiana, Louisville, Kentucky, and other towns in Ohio. In 1887 when M. Steinert & Company, a Steinway franchisee, opened a retail store in Cincinnati, the Steinways canceled Baldwin's Steinway franchise. Wulsin responded by planning Baldwin's first manufacturing facilities, and production started in Chicago in 1889. To sell Baldwin pianos, Wulsin introduced a dealer consignment program whereby the dealer only paid for the piano after it sold. The company also experimented with installment sales contracts. This combination of consignment selling and installment contracts led to the firm's rapid growth at the turn of the century. Baldwin's successful approach was copied by most other piano manufacturers.

Rapid growth of the firm in the 1950s and the inadequacies of the company's manufacturing facilities in Cincinnati convinced the firm to move south. Eventually five plants were opened -- three in Arkansas and one each in Mississippi and Juarez, Mexico. Baldwin's offering included a line of high-quality grand pianos and a line of relatively inexpensive uprights assembled in the firm's highly automated Arkansas plants.

During the 1970s, the firm transformed itself into a conglomerate -- Baldwin-United Corp-- and acquired banks, savings and loans, and insurance companies. But the acquisitions also ran up a sizable debt. Unable to repay the debt, the firm filed for bankruptcy protection in 1983. A year later, R. S. Harrison and Harold Smith led a \$55 million leveraged buyout of the company's piano and organ operations and reestablished the firm as a dedicated keyboard manufacturer.

Baldwin has over 800 dealers in the United States. Its dealership base and broad product line help attract students and other low-end users who generally stay with a Baldwin piano as they upgrade. In 1987 the firm sold 175,000 pianos, a figure well below the 282,000 units it sold a decade ago. With excess capacity in its Arkansas facility, Baldwin obtained a contract from Yamaha to manufacture the Everett piano line. Actions for Baldwin pianos are assembled at the Juarez plant. In 1995 the firm reported a net income of \$3.9 million on sales of \$122 million (see

Exhibit 6).

Japanese Competitors

In the early part of the century, there was little piano manufacturing in Japan, due to a lack of quality components, impoverished circumstances, and a work force that was uninformed about the subtleties of instrument design and construction. After the World War II, however, two Japanese companies, Yamaha and Kawai, quickly became important piano manufacturers. Figures for the 1980s indicate that these two firms together made more pianos than manufacturers in any other nation. In 1954 only one percent of Japanese homes owned a piano; currently, more than 20 percent do. In contrast to Steinway & Sons, the Japanese approach to piano manufacture emphasizes automation and assembly-line operations.

Yamaha Corporation. Founded in 1887 as Nippon Gakki, Yamaha's main plants are near Hamamatsu. From the time of its founding, the firm has built pianos.²⁴ It first exported pianos to the US in 1960. By the 1970s, Yamaha had developed a strong reputation for making high-quality pianos. In the United States, it took significant market share away from US producers. The company uses innovative engineering and automated manufacturing to produce its pianos. The firm markets its pianos world wide.

In 1987, its centenary year, Yamaha was the world's leading musical instrument maker. It commanded 30 percent of the world piano market, 40 percent of the organ market, and 30 percent of the wind instrument market. Currently, the firm markets a line of grands, uprights, consoles, and studio pianos manufactured in either Georgia in the United States, or Hamamatsu in Japan. These pianos are the company's pride. Concert grands

²⁴ In 1950 Genichi Kawakami took over the leadership of the firm from his father. In 1953 Genichi toured the United States and Western Europe and was struck by the emphasis being placed on recreational products and the waning interest in musical instruments. He returned home determined to stimulate an interest in musical instruments in Japan and opened a chain of franchised music schools, which have since graduated 4 million students. There are currently 10,000 franchised schools, and many have a showroom for Yamaha instruments on the ground floor.

represent the measure of its aspirations. Yamaha currently commands around 55 percent of the Japanese piano market.

In 1983 Genichi's son, Hiroshi Kawakami, took over the leadership of Yamaha. Under his direction Yamaha established several close working relationships with other firms in the late 1980s and 1990s. In 1984 Yamaha subcontracted Kemble & Co. of England to make pianos. In 1986 the firm subcontracted Baldwin to make the Everett piano line. In 1988 Yamaha established Tienjin Yamaha Electronic Musical Instruments for production in China. Further it obtained an option to buy 25 percent of Schimmel Pianofortefabrik in Germany. More recently, Yamaha held a 60 percent ownership of a \$10 million joint venture with Jiangzhu Piano, China's largest piano manufacturer, located in Guangzhou, China. In 1996 the joint venture started producing pianos at a monthly rate of 1,300 units. In 1995 the firm reported a net income of \$61.6 million on sales of over \$5.5 billion (see **Exhibit 7**).

Kawai Musical Instruments. In 1889, while he was an employee of Yamaha, Koichi Kawai, the founder of Kawai Musical Instruments, began his piano research. He developed the first rudimentary assembly line to make pianos. He was the first in Japan to design and build a piano action. Prior to his effort, all Japanese manufacturers had imported their actions from the United States or Germany. Kawai began the production of upright pianos a year after building his first piano action. It was the cost advantage of his domestically produced action that gave him a foothold in the fledgling Japanese market. Soon he began building grand pianos.

In 1955 Koichi's son, Shigeru Kawai, took over as president and has since overseen the firm's growth and the introduction of modern technology. In 1956 the firm had one plant, 546 employees, and production capacity was 1,776 units. By 1996 Kawai had nine factories and employed over 7,000 people who produced about 100,000 pianos. The firm's main manufacturing center, Ryuyo Grand Piano Facility, opened in 1980, and is known for the efficient methods it has developed to build grand pianos. Kawai emphasizes the engineering, research and development, quality

control, technological innovation and skill that goes into its pianos. Koichi's son, Hirotaki Kawai, is expected to take over leadership of the firm.

In its advertising, Kawai emphasizes the number of institutions and music venues (prominent universities, symphony orchestras, opera companies, music centers, theater companies, churches, music studios, and hotels) around the world that have purchased the Kawai piano. In 1995, however, the firm reported a loss of \$2 million on sales of \$877 million. This loss was attributed to the lingering economic recession facing firms in Japan (see **Exhibit 8**).

Korean Competitors

In 1964 the Korean government decided to promote musical instrument manufacture. To support this effort, it passed a prohibitive tariff on imported luxury goods like pianos. Three firms immediately benefited from this protection. They included Samick, which had already established its piano manufacturing facility, Young Chang, which formed a joint venture with Yamaha, and Sojin, a division of Daewoo. Industry assessments state that, "despite a harsh environment and a lack of Western musical tradition, Young Chang and Samick made the transformation from primitive manufacturers to global powerhouses in record time. Over the past century, no other manufacturers have come so far so fast."²⁵ Recently, Hyundai also became an additional Korean piano manufacturer. In the 1990s, with growing labor and raw material shortages, Samick and Young Chang have shifted their production to locations with either lower costs or better access to raw materials or markets.

Samick. Established in 1958 by Hyo Ick Lee, Samick has grown into the world's largest producer of pianos, with its main plant in Ichon. The firm produced 18,000 grand pianos in 1995. Samick pianos feature cabinets designed by Kenneth Benson and incorporate a high-tension imperial-German scale. In making its pianos, Samick makes extensive use of computer-controlled equipment to shape parts and perform finishing operations.

²⁵ *The Music Trades*, January, 1991.

In 1989 Samick Music Corporation, a wholly owned subsidiary of Samick, opened a 85,000-square-foot facility in California to assemble upright pianos. In 1991 monthly production at the facility had reached 325 units. While case parts were American, all actions, backs, and hardware were imported by Samick.

Recently Samick opened parts-producing facilities in Indonesia and China. Components and subassemblies from these plants are then shipped to the firm's main plant at Incheon for assembly. These new facilities have allowed Samick to hold costs down and minimize price increases. Samick offers the best warranty in the industry -- 10 years on the piano, plus a lifetime warranty on the iron plate, the sound board, and the pin block. In 1995 the firm reported a net income of \$13 million on sales of \$291 million (see **Exhibit 9**). At the end of 1996, Samick filed for bankruptcy protection due to financial difficulties.

Young Chang. Young Chang was founded by three brothers. Jai-Sup Kim had studied engineering, Jai-Young Kim had studied finance at New York University, and Jai-Chang Kim had studied music. In 1956 they began to produce pianos in a small storefront in Seoul, South Korea. They also secured distribution rights to Yamaha pianos in South Korea. In 1962 they became the first musical instrument manufacturer in South Korea and built their first assembly plant in Seoul in 1964.

In 1967 they entered into a partnership with Yamaha Corporation, receiving technical assistance to acquire the production skills necessary to create instruments capable of competing with those made in Japan, the United States, and Europe. In 1971 they began exporting. In 1975 Yamaha and Young Chang parted ways, and in the next year Young Chang opened its second factory in Incheon, which was expanded in the late 1980s. In 1979 Young Chang America was established.

Young Chang's economies-of-scale, in combination with its advanced manufacturing processes, have resulted in one of the best price/value offerings in the market today. With an annual production capacity of 200,000 pianos, Young Chang is also the largest piano manufacturer in the world. The

firm produces around 110,000 units annually, including 13,000 grand pianos. It holds over 50 percent of the expanding Korean market (around 150,000 units per year) and currently has over 4,000 employees. It offers a complete line of upright and grand pianos, as well as guitars. The firm sees piano manufacturing as a totally integrated activity and has facilities for making all the significant parts of a piano.

In 1990 Young Chang acquired Kurzweil, a music key board manufacturer, for \$20 million. In 1993 Young Chang acquired its own timber mill in Tacoma, Washington, for \$32 million. It opened a \$40 million production facility in Tienjin, China, with an annual production capacity of 60,000 units in 1995. As J.S. Kim observes:

In the short term, our balance sheet would look stronger if we were to stay out of China. But it is obvious that the future for the piano industry is in China and companies not willing to make the investment are in great jeopardy.

The firm anticipates that the Chinese market will eventually be the world's largest. In 1995 the firm reported a net income of \$9.6 million on sales of \$262 million (see **Exhibit 10**).

European Competitors

Although German piano manufacturers make high-quality, high-priced pianos, they have been severely tested by the low-priced Asian competitors. As a consequence of this competition, the number of piano makers has fallen from several hundred to around 10. All surviving firms faced financial difficulties in the 1990s. In 1995 total annual production in Germany was over 20,000 units, with 20 percent being grand pianos. Bechstein Gruppe, the manufacturer of Bechstein and Zimmerman pianos, had annual sales of around DM30 million. Recently, the group has been working its way out of bankruptcy protection.

Other firms included Blüthner of Leipzig, which produced about 400 pianos annually with 50 percent marked for export, and Schimmel in Braunschweig, which has held around 11 percent of the German market. Schimmel has a close relationship with Yamaha, which has marketed Schimmel pianos in Japan. Steinway & Sons of Hamburg produces around 1,000 grands and 200 uprights

annually and exports around 300 grand pianos to Japan.

While English firms were world renown piano manufacturers during Steinway's formative years, today there is little piano making in England. The manufacturing that does occur involves subcontracting from non-British makers. The most prominent is Kemble & Co., a firm that employs 100 people and makes pianos for Yamaha (Japan) and Schiedmeyer (Germany).

In Austria, Bösendorfer continues to make a limited number of high-end concert grands and upright pianos for its parent, Kimball International. Until recently, Kimball was a US domestic piano maker with a single plant in Indiana. This facility, however, closed in 1995.

Significant numbers of pianos are made in the former Soviet Union. Few of these pianos have appeared in the United States. Recently, some imports have started to appear. Perhaps the best known brand is the Belarus piano from Borisov.

ISSUES FACING STEINWAY'S MANAGEMENT

Domestic grand piano sales increased 42 percent from 1992 to 1995. This increased growth was largely attributable to economic recovery in the United States as well as increased marketing efforts by the major piano producers.

Growing Importance of China

Industry forecasts indicate that the future growth market for pianos will be concentrated in Japan, Korea, and China. Bruce Stevens acknowledged that:

Although the Steinway Piano has an excellent reputation in Asia and is the piano of choice in virtually every Japanese concert venue, Steinway has not historically focused significant selling or marketing efforts in these markets.

According to Bob Dove, however, the situation was changing:

The Boston Piano currently has around 5 percent of the Japanese market in terms of units, and a higher percentage, about 8 percent, in terms of value (since the Boston line is more expensive

than your average piano). We are optimistic about future sales of both Boston and Steinway pianos in Japan. We believe the Boston piano is significantly better than that offered by competitors at similar prices.

The recent ownership changes and the growth of Asian markets had increased Steinway's interest in finding ways to find advantage in these developing situations. Bob Dove said:

The merger of Steinway & Sons with the Selmer Company and its woodwind and band instruments has introduced a number of new strategic possibilities. The future demand for the band instruments made by Selmer is predictable from demographic data, peaking as larger cohorts of children enter high school. So this gives the new company a predictable source of demand for its products. So far as growth is concerned, pianos are important and there is no doubt that growth in demand for pianos will occur mainly in Asia and so this is the current focus of company attention. . . . There are also other instruments that have high quality standards and which have high sales and growth rates, e.g. guitars. These may be areas which offer new opportunities for the enlarged firm. Finally, the Steinway brand name, itself, is unsurpassed in terms of its positive reputation. In the future, this too could be used in a number of different ways.

Additionally, the developing situation in China was intriguing. Estimates indicated that the Chinese domestic production of pianos had risen from 43,000 units in 1987 to more than 100,000 units in 1994. The Chinese government's policy of one child per family has encouraged parents to spend more money on their children. This, many observers believe, may keep unsatisfied demand for pianos relatively high. Moreover, children in school are being taught to appreciate music and this will have a positive impact on demand.

In 1994 there were four main piano-producing centers in China, including Beijing (30,000 units), Shanghai, Guangzhou (50,000 units), and Yingkuo in Liaoning Province. In 1996 Tienjin in North China also became a center of acoustic piano production when Young Chang established a plant there. Dove, however, was skeptical:

All expect that China will be the world's largest market for pianos. However, since the price of

pianos is currently set very low [the average price of a piano in China was around \$1,100] the reported levels of untapped demand there are probably a bit illusory. Further, there are already large piano-making facilities in China such as Young Chang's and Yamaha's factories. It is not clear there is a need for additional production capacity.

Although the demand at current prices far outstrips supply, it is uncertain how an increase in prices might affect demand. Bob Dove believes that Steinway's current approach is appropriate:

Given the emphasis on culture in China, the country's rapidly growing income levels, the small families and the interest parents have in their children, one can expect the usual developments to occur so far as piano penetration is concerned. But this takes time and people don't start off their interest in music by buying a Steinway. Rather, they work up to a Steinway. We already have an active Steinway dealership in Hong Kong and this firm has opened a branch in Shanghai. Currently, [therefore], we should be just watching to see how things develop.

Moreover, he is optimistic about other Asian markets:

Other Southeast Asian countries like Japan, South Korea, Hong Kong, Taiwan and Singapore have already achieved higher general wealth levels and have meaningful piano

penetration into homes. These countries, therefore, should be more immediate targets for both the Steinway and Boston line of pianos.

Among the many proposals Steinway & Sons is considering is the possibility of building a plant in Asia, perhaps in China. This new facility could to help service the demand for pianos in Asian markets. Dove commented:

Ideally, because quality is such an important issue and the desire to "do the job right" is so strong, it would be better for all Steinways to be built in one place. Perhaps standardized and mass-produced components could be supplied from different sources and could reduce costs, but for assembly and to do the other processes involving specialist skills, it would be better to have the Steinway piano built in a single place.

Irrespective of the approach the firm decides to pursue with respect to China and other Asian markets, Dove commented that:

In considering what to do, Steinway & Sons has to remember two things. First, the company has built up a tremendous brand name and enjoys an unsurpassed reputation for quality. So first, anything we do must be consistent with the idea that we are the "keepers of the flame." Second, as Henry Z. Steinway said, "capital loves growth." To generate growth, we also have to know where we are adding value...

Figure 1
The Rimbending Process Employed For Steinway Concert Grands



Figure 2
The Steinway Concert Grand Piano (Model D)



Exhibit 1
Historical Sales of Pianos in the United States

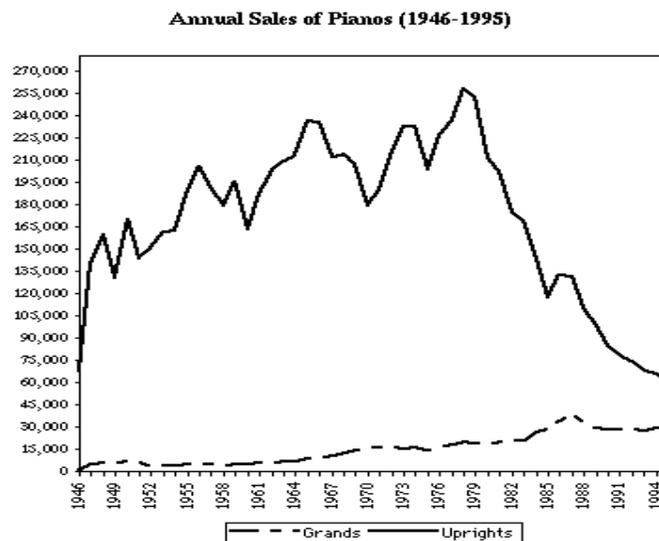


Exhibit 2:
Sales of US Pianos by Product Type — 1992 and 1987

Product Type	1992			1987		
	Firms with shipments of \$100,000 or more	Units*	Value * (mil.)	Firms with shipments of \$100,000 or more	Units*	Value * (mil.)
Verticals, uprights, consoles, 37" or less in height	1	-	-	3	40,900	\$38.5
Verticals, uprights, consoles, more than 37" in height	7	53,700**	\$84.1**	5	52,100	\$75.1
Grand Pianos	3	5,500	\$53.5	3	7700	\$58.2

Source: *US Bureau of Census, 1992.*

* No. of units shipped and value of shipments reported are for all producers in the industry, not just for those with shipments valued at greater than \$100,000.

** Represents combined figures for all vertical and uprights. Figures for 37" or less are not available separately.

Exhibit 3
Steinway's Top Ten U. S. Markets (1994, 000s)

City	Sales (Wholesale)
New York City	\$6,007
Los Angeles	2643
Baltimore/Washington D.C./Virginia	2250
Dallas	1642
Phoenix	1438
Boston	1144
San Francisco	1078
Salt Lake City	848
Minneapolis/St. Paul	793
Detroit	605

Source: Steinway & Sons

Exhibit 4
Historical Steinway Unit Sales (1965-1994)

Year	US Grands	Foreign Grands	Total Grands	Year	US Grands	Foreign Grands	Total Grands
1994	1,720	978	2,698	1979	1,815	1,357	3,172
1993	1,631	887	2,518	1978	1,819	1,334	3,153
1992	1,344	917	2,261	1977	1,590	1,372	2,962
1991	1,550	1,438	2,988	1976	1,908	1,241	3,149
1990	2,117	1,459	3,576	1975	1,875	1,160	3,035
1989	2,096	1,385	3,481	1974	2,001	937	2,938
1988	2,144	1,283	3,427	1973	1,919	1,131	3,050
1987	2,144	1,237	3,381	1972	1,809	1,212	3,021
1986	1,763	1,369	3,132	1971	1,540	1,173	2,713
1985	1,337	1,291	2,628	1970	1,470	1,142	2,612
1984	1,876	1,340	3,216	1969	1,806	1,163	2,969
1983	2,036	1,263	3,299	1968	1,932	1,250	3,182
1982	1,677	1,141	2,818	1967	1,603	1,043	2,646
1981	2,041	1,394	3,435	1966	1,770	1,056	2,826
1980	1,897	1,349	3,246	1965	1,659	1,259	2,918

Source: Steinway & Sons

Exhibit 5

Steinway & Sons -- Income Statement And Balance Sheet (000s)

	1990	1991	1992	1993	1994
Income Statement Data					
Net Sales	\$92,037	\$98,816	\$89,240	\$89,714	\$101,896
Gross Profit	33,673	35,586	30,759	26,139	31,636
Operating Income	10,096	9,124	4,556	1,919	8,795
Income (Loss) from Continuing Operations	3,077	2,753	(2,930)	(3,009)	2,847
Net Income (Loss) (1)	3,618	2,825	(10,335)	(3,009)	3,115
Ratio of Earnings to Fixed Charges (6)	2	2	1	(7)	2
Other Data					
EBITDA (2)	\$13,500	\$13,535	\$9,591	\$6,067	\$13,068
Nonrecurring Charges (3)	1,861	2,319	2,532	2,047	1,658
Interest Expenses, Net	3,448	3,186	3,307	4,390	3,842
Depreciation and Amortization (4)	1,669	2,099	2,675	2,695	2,664
Capital Expenditures (5)	2,451	1,889	1,936	1,237	1,145
Steinway Grand Pianos Sold (in units)	3,558	3,282	2,648	2,245	2,569
Margins					
Gross Profit, %	37	36	44	29	31
EBITDA, %	15	14	11	7	13
Balance Sheet Data					
Current Assets	\$68,306	\$70,120	\$73,300	\$56,259	\$58,760
Total Assets	85,701	87,832	91,784	72,677	76,019
Current Liabilities	30,327	32,078	45,602	31,896	32,969
Long-term Debt	31,921	29,395	28,715	26,394	25,379
Redeemable Equity	3,614	4,227	1,471	1,000	270
Stockholders' Equity	9,066	10,606	3,690	767	4,935

(1) Net loss for the fiscal year ended June 30, 1992 includes loss from discontinued operations of \$7405 as a result of Steinway's September 14, 1992 disposition of its Gemeinhardt Company, Inc. Subsidiary

(2) EBITDA represents earnings before tax expense (benefit), adjusted to exclude certain non-recurring charges and charges related to previous ownership, which are not expected to recur. While EBITDA should not be construed as a substitute for operating income or a better indicator of liquidity than cash flow from operating activities, which are determined in accordance with generally accepted accounting principles, it is included herein to provide additional information with respect to the ability of the Company to meet its future debt service, capital expenditure and working capital requirements. EBITDA is not necessarily a measure of the Company's ability to fund its cash needs. See the Consolidated Statement of Cash Flows of Selmer and Steinway and the related notes thereto included in this Prospectus. EBITDA is included herein because management believes that certain investors find it to be useful tool for measuring the ability to service debt

(3) Non-recurring charges represent certain costs and expenses primarily consisting of certain executive compensation and benefits and office related expenses of Steinway which, as a result of the Merger, are not expected to recur.

(4) Depreciation and amortization for the fiscal year ended June 30, 1994 excludes approximately \$563 of amortization of deferred financing costs written off pursuant to a debt refinancing effected in April 1994 (see note 6 to Steinway's financial statements).

(5) Capital expenditures of Steinway exclude expenditures for additions to the Concert and Artist Piano Bank.

(6) For purposes of this computation, fixed charges consist of interest expense and amortization of deferred financing costs and the estimated portion of rental expense attributable to interest. Earnings consist of income (loss) before taxes plus fixed charges

(7) Earnings were inadequate to cover fixed charges by \$3,065 for the year ended June 30, 1993.

Exhibit 6

BALDWIN PIANO & ORGAN COMPANY (Figures in US\$, 000s)

This firm is the largest domestic manufacturer of keyboard musical instruments that manufactures or distributes all major product classes of pianos and electronic organs.

	1995	1994	1993
Sales	\$122,634	\$122,347	\$120,658
Net Income	3960	345	4,561
Total Assets	101,429	97,460	89,928
Stockholders' Equity	54,114	50,154	49,892

Note: The company also manufactures grandfather clocks, wooden cabinets and printed circuit boards utilized in a wide variety of products outside of the music industry. Musical products and other accounted for 72% of 1995 revenues; electronic contracting, 23.2% and financing services, 4.7%.

Source: Compact Disclosure Database, 1996.

Exhibit 7

YAMAHA CORPORATION (Figures in US\$, 000s)

The firm products include pianos, electronic organs, digital musical instruments, wind instruments and percussion instruments, and audio equipment.

	1995	1994	1993
Sales	\$5,576,860	\$4,348,744	\$4,210,910
Net Income	61,665	-38,854	15,913
Total Assets	5,327,507	4,518,696	4,151,752
Stockholders' Equity	1,702,343	1,424,758	1,353,630

Audio and musical instruments accounted for 61% of fiscal 1995 revenues; electronic equipment and metal products, 18%; household utensils, 12% and other including sports goods and housing equipment, 9%. The company has 58 consolidated subsidiaries, 26 in Japan and 32 overseas. Overseas sales accounted for 30.5% of fiscal 1995 revenues.

Source: World Scope Database, 1996

Exhibit 8

Kawai Musical Instruments (Figures in US\$, 000s)

This second largest musical instruments firm in Japan is also an OEM supplier of pianos to the Boston Piano Co., wholly-owned subsidiary of Steinway Musical Properties.

	1995	1994	1993
Sales	\$877,742	\$881,114	\$899,657
Net Income	(2,733)	(2,200)	1,180
Total Assets	-	-	530,666
Stockholders' Equity	-	-	235,114

Pianos accounted for 25% of fiscal 1995 revenues; electronic equipment and metal products, 8%; other including musical instruments, 9%; metallic parts for electronic instruments, 13%; other products, 10%; and Music Schools, 35%. Overseas sales accounted for 11% of fiscal 1995 revenues.

Source: Japan Company Handbook.

Exhibit 9

Samick Corporation (Figures in US\$, 000s)

	1995	1994	1993
Sales	\$291,512	\$243,287	\$254,125
Net Income	13,350	225	14,062
Total Assets	477,887	474,387	414,575
Stockholders' Equity	31,037	26,737	25,000

Pianos accounted for 54.5% of fiscal 1995 revenues; guitars, 28.5%; amplifiers, 16.8%; and other, 0.2%.

Exhibit 10

YOUNG CHANG (Figures in US\$, 000s)

This firm produces pianos, guitars, electronic organs and other musical instruments. The company has six subsidiaries, two each in the United States and China, and one each in Canada and Germany.

	1995	1994*	1993
Sales	\$262,158	\$258,489	\$225,716
Net Income	965	8,209	3,368
Stockholders' Equity	131,818	135,698	126,536
Total Assets	302,437	292,172	233,889

* In 1994, export sales accounted for 37% of total revenues. Acoustic and digital Pianos for 80% of fiscal 1995 revenues; synthesizers, 5.5%; guitars, 2%; and other, 12.5%.

Source: World Scope Database, 1996.