

Case 1-2

Nasdaq Japan: E-Merging Markets¹

The most difficult thing to change is culture. Japan is not a culture of individual investors. There is some ¥1400 trillion sitting in postal savings accounts.² People above 60 years old own 80 percent of this private household money. They don't know English. They don't want to use computers. They don't care about the Internet. They invest in postal savings accounts because they don't trust stock. We've also got to change the culture of the companies that issue stock. They announce only good news. They don't want to tell bad news. We've got to change the culture of brokerage firms. And we need to create a new culture for our company. We have to blend a spirit of innovation and change with traditional Japanese values. Considering all of the change required, it's a miracle we made this happen.

Tatsuyuki "Ted" Saeki, President and CEO of Nasdaq Japan³

The success of Nasdaq Japan's new market model will represent much more than a shift in Japan's financial markets from indirect to direct financing. This shift will stimulate structural reform in Japan's economy and contribute to a rebirth . . . The Nasdaq Japan market represents the Osaka Securities

This case was prepared by Professor Lynda M. Applegate with assistance from Research Associates Kristin Kohler, David Lane, Evelyn Goldman, and Heather Miller.

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²At the time of the case, the exchange rate was approximately 100 yen = 1 U.S. dollar. To check today's rate visit the XE.com Universal Currency Converter at <http://www.xe.com/ucc/>.

³Casewriter interview, November 16, 2000.

Exchange's (OSE's) best chance to become a world market. We should seize it by whatever means possible.

Goro Tatsumi, President and CEO, Osaka Securities Exchange⁴

Now Japanese companies and investors can benefit from the strength and success of the Nasdaq brand. By creating an efficient market that links investors and entrepreneurs directly and easily, Nasdaq Japan has created more opportunities for the growth and success of emerging Japanese companies—especially high-tech, growth-oriented companies.

Masayoshi Son, President and CEO, Softbank⁵

Our vision is one of a global exchange. The Nasdaq market is a network of markets influenced by network effects. Liquidity seeks liquidity—first nationally, then regionally, then globally. There is no longer a need to stop at the borders of a country. Our approach is to establish a position in the three major capital markets in the world. The United States, Japan, and Europe control 80% of the world's financial transactions. Once we build a successful market in each region, we will connect those markets to enable 24-hour global trading. Around the world the Nasdaq brand will mean jobs, a strong economy, and innovation.

John Hilley, Chairman and CEO, Nasdaq International⁶

⁴Casewriter interview, February 22, 2001.

⁵Nasdaq Japan press release, June 19, 2000.

⁶Casewriter interview, January 8, 2001.

On June 19, 2001, the four Nasdaq Japan, Inc. (NJI), founders quoted above and employees in their respective organizations gathered with members of the Japanese and world financial communities at the NJI headquarters in Tokyo to celebrate the first birthday of the Nasdaq Japan Market (NJM).⁷ For the past two years, these visionaries had worked together to create and launch a new securities exchange in Japan. The ultimate goal was to establish a global securities market. To further this goal, on November 21, 2000, Nasdaq U.S. announced a joint venture with the Montreal Stock Exchange to create Nasdaq Canada. In March 2001, Nasdaq and the London International Financial Futures and Options Exchange (LIFFE) partnered to create the Nasdaq Liffe Markets.⁸ On March 27, 2001, Nasdaq U.S. acquired a 58 percent stake in Easdaq, a major pan-European over-the-counter securities exchange headquartered in Brussels, and changed its name to Nasdaq Europe.⁹ "I am more convinced than ever that the stock market in the new millennium must be available to anyone, anywhere in the world, twenty-four hours a day, seven days a week," stated Frank Zarb, chairman and CEO of Nasdaq Inc.¹⁰

⁷Visit the Nasdaq Japan company website at www.nasdaq-japan.com.

⁸Established in 1982, LIFFE was one of the world's leading markets for exchange-traded derivatives.

⁹With the joint venture, the Easdaq securities exchange was renamed Nasdaq Europe. On June 8, 2001, new trading technology was launched and a new "Rule Book" was approved by the Belgian finance minister to enable consolidation of order flow, trading of U.S. listings during European trading hours, and the development of a robust market for European initial public offerings (IPOs). These changes enabled Nasdaq Europe to offer functionality similar to Nasdaq U.S. while also responding to the regional needs of the European market. See www.nasdaq.com press releases for information on the Nasdaq globalization strategy.

¹⁰F. Zarb, "The Challenges of Building a Global Stock Market." Prepared remarks delivered at the Financial Executives Institute, November 6, 2000.

When I started in this business, it was really a business of rich men selling stocks to each other. That is obviously no longer the case . . . The use of the Internet by investors is shattering geographic boundaries and swelling the ranks of equity investors worldwide . . . [For example,] in Japan alone it is estimated that the number of Internet users will be about 120 million in only four years. That is up from about twenty million in 1999 . . . Currently only 9% of Japanese investors hold securities. However, that is poised to change. It is estimated that online accounts will triple from year-end 1999, and there are currently fifty brokerages offering online trading.

See Exhibit 1 for Japanese investment community demographics.

The realization of this far-reaching vision would depend on establishing successful markets in Japan and Europe during a global downturn that threatened the most established capital markets. "The Japanese economy was bad before we launched, and now it's worse," said Lee Congdon, senior vice president, Nasdaq U.S. *The Economist* summarized the situation in early 2001:¹¹

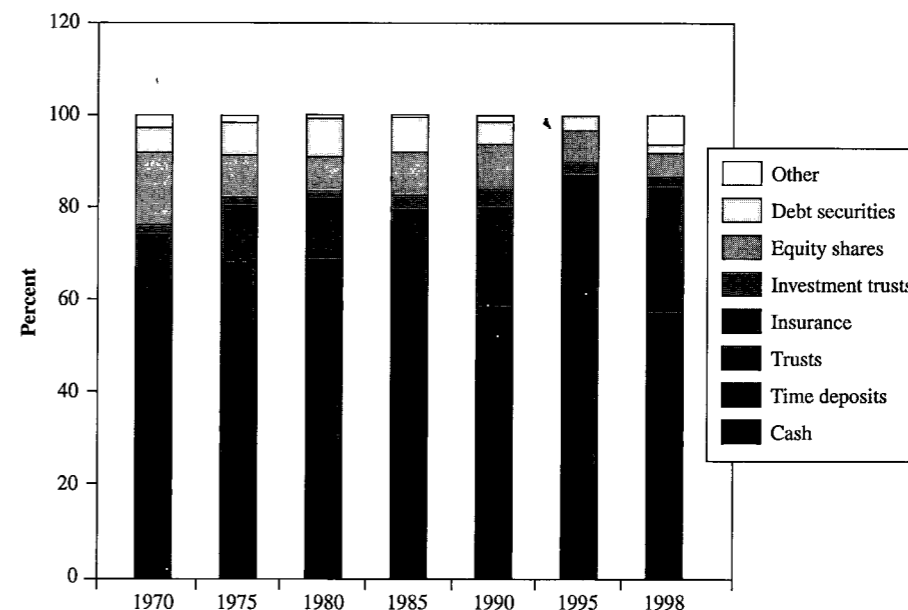
Last year, the world economy enjoyed spectacular growth. This year, America and Japan, the two biggest economies, accounting for 46% of the world output, are both teetering on the brink of recession. Stock markets almost everywhere are tumbling: over the past year nearly \$10 trillion has been wiped off global share values. Is the world heading into recession?

Larry Stein, senior vice president of strategic planning for Nasdaq, believed that over time, the NJM would be very successful. "Even though we are in a downturn," he said, "the market forces that created the economic boom of the late 1990s are still there. There is a huge pent-up demand in Japan right now. Japanese entrepreneurs and high-growth companies require capital to bring new technologies to market, and

¹¹"Can the World Escape Recession?" *Economist.com* (www.economist.com), March 22, 2001.

EXHIBIT 1A
Percentage
Composition of
Household
Assets in
Japan,
1970-1998

Source: Adapted from *Securities Market in Japan 2001*, Tokyo, Japanese Securities Research Institute.



Year	Total (¥ trillion)	Cash	Time deposits	Trusts	Insurance	Investment trusts	Equity shares	Debt securities	Other
1970	78.3	15.4%	41.9%	5.2%	12.2%	1.6%	15.6%	5.4%	2.7%
1975	183.9	15.5%	47.5%	5.6%	12.3%	1.3%	9.2%	7.0%	1.5%
1980	353.1	11.4%	51.4%	6.0%	13.3%	1.5%	7.4%	8.3%	0.8%
1985	587.8	8.9%	48.1%	6.9%	15.7%	3.1%	9.4%	7.5%	0.5%
1990	945.5	8.8%	43.5%	6.8%	20.9%	3.9%	9.9%	4.8%	1.4%
1995	1,183.0	10.0%	45.1%	6.6%	25.4%	2.7%	7.0%	3.1%	0.0%
1998	1,316.2	10.4%	44.4%	2.5%	27.6%	1.9%	5.1%	1.8%	6.3%

Japanese investors are hungry for information about these companies."

Indeed, despite the gloomy economic picture, the NJM had outperformed other Japanese stock markets. (See Exhibit 2 for a summary of the key securities exchange markets in Japan and Exhibit 3 for a comparison of market performance.) "Within four months of launch, 32 companies had listed on the Nasdaq Japan market; 29 of them were profitable, and 26 of the companies met our standard listing criteria," explained Rich Bartolotta, CFO of Nasdaq Japan. By the end of 2000, the number of companies listed on the NJM had risen to 40, and by summer 2001 to over 60. The Tokyo Stock Exchange's (TSE) Mothers market had 33 listings at the same time,

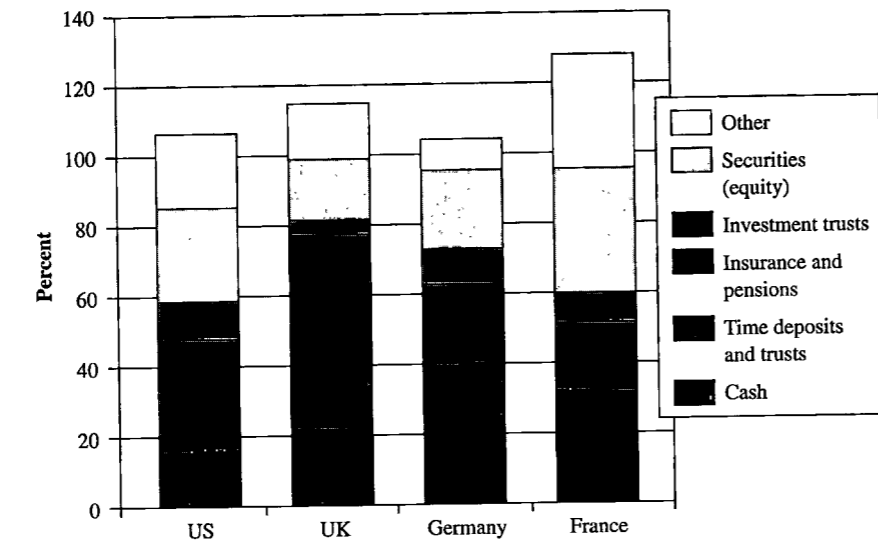
despite the fact that Mothers opened in December 1999 (see Exhibit 4).¹² Bartolotta continued:

During 2000 there were 203 IPOs on all Japanese markets. Of this, the Nasdaq Japan

¹²As discussed in Exhibit 3, the Tokyo Stock Exchange housed three markets: TSE Section 1 traded securities from large, established firms; TSE Section 2 traded securities of midsize firms; and TSE Mothers traded securities of small, young firms. The ultimate goal of the NJM was to enable trading of securities from firms of all sizes. As such, it would compete with all three sections of TSE. In practice, however, during the first year of launch, the NJM had attracted primarily newer and younger firms and thus competed most directly with Mothers. Visit the Tokyo Stock Exchange and Mothers at <http://www.tse.or.jp/English/mothers/index.html>.

EXHIBIT 1B
Percentage
Composition of
Household
Financial
Assets in
Selected
Advanced
Economies,
1998

Source: Adapted from *Securities Market in Japan 2001*, Tokyo, Japanese Securities Research Institute.



	US	UK	Germany	France
Total (billion)	\$ 30,265	£ 2,701	DM 5,683	FF 16,260
(¥ trillion)	3,486	516	395	351

Cash	1.5%	21.1%	8.8%	17.1%
Time deposits and trusts	14.0%		30.5%	14.3%
Insurance and pensions	31.2%	54.7%	22.2%	19.0%
Investment trusts	10.7%	4.2%	10.0%	8.3%
Securities	26.3%	17.1%	22.1%	35.0%
Other	20.8%	15.6%	8.7%	32.0%

- Note: 1. French figures are as of year end 1997.
 2. Except for the United States and Germany, household sector includes unincorporated enterprises.
 3. Except for Germany, which is based on book value, equity shares are based on market value.

market captured 33 IPOs, which is 16 percent market share overall. As of February 19 2001, there were 26 IPOs approved for listing in 1Q. NJM listed 8 IPOs, which is 31 percent share. So we are gaining share, which is critical to our success.

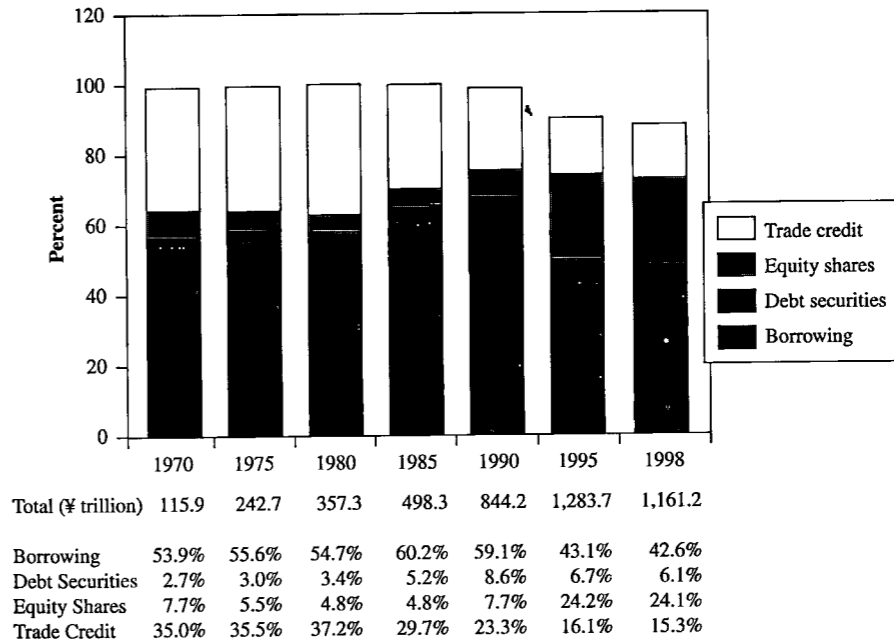
During the first-year birthday celebration, Zarb praised employees and guests for helping to make Nasdaq Japan a success:

When we started together a year ago, I said to Ted Saeki: "Ted, go slow. We are in no hurry.

We are changing the world, and when you do that, you've got to be careful. You've got to take it one day at a time and make sure that you [stress quality and proceed] with judgment." Now, the Japanese economy helped us go slow, so it became a little easier to follow my instructions than I had originally thought . . . [But despite going slow,] we have a 30 percent market share in IPOs. We have grown the organization in an orderly way, and we just [received word] from Japanese regulators that our new hybrid market structure was

EXHIBIT 1C
Selected
Sources of
Corporate
Capital in
Japan,
1970-1998

Source: Adapted from *Securities Market in Japan 2001*, Tokyo, Japanese Securities Research Institute.



Total (¥ trillion)	1970	1975	1980	1985	1990	1995	1998
Total (¥ trillion)	115.9	242.7	357.3	498.3	844.2	1,283.7	1,161.2
Borrowing	53.9%	55.6%	54.7%	60.2%	59.1%	43.1%	42.6%
Debt Securities	2.7%	3.0%	3.4%	5.2%	8.6%	6.7%	6.1%
Equity Shares	7.7%	5.5%	4.8%	4.8%	7.7%	24.2%	24.1%
Trade Credit	35.0%	35.5%	37.2%	29.7%	23.3%	16.1%	15.3%

approved.¹³ I asked the press: "Where in the world have you ever seen any company that went across borders to start a new business and had a 30 percent market share in the first 12 months? If you can point one out to me, I'd like to see it." So I think you can all share in the pride. You've all made a contribution to this success, and it is only the beginning.

But attracting new listings was only the first step in building a successful market. Trading value, market activity, and liquidity were other important measures of performance (refer to Exhibit 3). Yoshiro Katsuya, executive vice president and chief market operations officer, explained:

Since our market has been in operation for less than one year, we don't have the data needed to calculate formal liquidity measures. [As a result], I calculate [a surrogate for]

¹³The hybrid market model is discussed in more detail later in the case.

market liquidity by dividing the trading value—the amount traded per day in yen—by the total market capitalization in yen. I call the result market turnover. When you compare the turnover of the NJM to other Japanese markets, our performance is very good. In general, the turnover of Japanese markets is low. This is, in part, due to the type of market—a pure auction market—that has traditionally been used in Japan.

While performance exceeded expectations—especially considering Japan's, and the world's, overall economic performance—the founders knew that it was too early to celebrate victory. The NJM had yet to prove it could sustain—and even accelerate—the growth of listings, attract individual and institutional investors, and achieve market liquidity. NJM executives and employees also recognized that the organization they had created had to successfully manage the transition from a start-up to an established company. To accomplish the founders' goals, a new market model would need to

EXHIBIT 1D
Japanese Economic Data (1960–1998)

Year	Interest Rate (%)				GDP (Real)				Wholesale Price Index (y/y, %)	Trade Balance (US\$ bil)	Yen/\$ Exchange Rate	Nikkei 225 Index ^d	Land Prices (major cities, 1990 = 100)	Oil Price (per barrel, US\$) ^e
	ODR ^a	10-year Government Bond ^b	Over-night Rate ^c	Savings Rate	Growth Rate	Per Capita (US\$)	Money Supply (y/y, %)							
1960	6.9	—	8.4	2.6	12.2	474.9	—	—	—	360.0	1357	4.6	2.9	
1970	6.0	—	8.3	2.3	8.2	1,965.4	17.9	2.1	—	360.0	1987	22.8	3.2	
1980	7.3	8.2	10.9	2.8	2.6	10,128.7	8.4	12.8	2.1	217.3	7116	52.8	21.6	
1990	6.0	6.8	7.2	2.1	5.5	25,912.7	10.2	1.1	69.3	141.3	23848	100.0	20.0	
1991	4.5	5.8	5.5	1.5	2.9	29,530.0	2.6	-1.2	96.1	133.2	22983	110.4	16.5	
1992	3.3	4.8	3.8	0.4	0.7	30,349.3	0.1	-1.5	124.8	124.8	16924	108.4	16.0	
1993	1.8	3.5	2.4	0.2	0.3	34,047.6	1.5	-3.3	139.4	107.8	17417	102.4	14.3	
1994	1.8	4.6	2.2	0.3	0.6	38,385.5	2.5	-1.4	144.2	99.4	19723	97.7	13.2	
1995	0.5	2.9	0.4	0.1	2.5	37,452.9	2.9	-0.9	131.8	96.4	19868	94.1	14.6	
1996	0.5	2.8	0.4	0.1	3.3	34,264.8	3.2	0.4	83.6	112.6	19361	90.9	18.5	
1997	0.5	2.0	0.4	0.1	-0.3	30,945.7	3.5	1.2	101.6	122.7	15259	86.3	17.2	
1998	0.5	1.0	0.3	0.1	-1.9	34,025.7	3.7	-2.5	122.4	128.0	13842	83.3	10.9	

^aODR = official discount rate.

^bNewly issued 10-year bond.

^cUncollateralized call rate.

^dEnd of December closing price.

^eAnnual average wellhead price of crude oil in current \$.

Source of data: International Monetary Fund, *International Financial Statistics Yearbook 1998*; American Petroleum Institute, *Basic Petroleum Data Book*, July 1999; Bank of Japan, *Chosa Geppo*, various issues; Japan Economic Planning Agency, *Keizai Hakusho*, various issues.

EXHIBIT 2 Comparison of Japanese Securities Exchanges

During 2000, Japan had five major stock exchanges. The bulk of trading was concentrated on the Tokyo (TSE), Osaka (OSE), and Nagoya (NSE) stock exchanges. Of these, TSE accounted for more than 70% of shares listed, 80% of trading value, and 90% of trading volume. The OSE held 8.5% of national trading volume at the end of 2000, and the NSE, 3%. A brief description of the TSE, OSE, and Over-the-Counter JASDAQ markets is provided below.

Tokyo Stock Exchange (TSE Section 1, 2, and Mothers) In 2001, TSE was organized as a self-regulated, nonprofit association. Established under a provision of the Securities and Exchange Law, TSE was managed and maintained by its members (securities companies). TSE operated three different markets: Section 1, Section 2, and Mothers (Market of the High-Growth Emerging Stocks). Until the Mothers market was opened in November 1999, it often took 20 years or more for a company to meet the criteria to go public, often listing initially on Section 2. A company moved to Section 1 once it had achieved certain goals concerning profits (e.g., ¥1 billion or more), shares listed, number of shareholders, and trading volume. The Tokyo Stock Exchange established the Mothers market to trade stocks of high-growth and emerging companies, to provide venture companies access to funds at an early stage of their development, and to provide investors with more diversified investment products.

Osaka Securities Exchange (OSE Section 1, 2, and the Nasdaq Japan Market) In 2001, OSE was in the process of shifting from a membership firm to a private company. The OSE market for domestic stocks was composed of two primary sections: the First Section and the Second Section. Like TSE, newly listed stocks were first assigned to the Second Section, and then transferred to the First Section when they met specific criteria. In June 2000, OSE partnered with Nasdaq Japan to open the Nasdaq Japan Market. Unlike the Mothers market, the NIM hoped to attract high-growth companies at all stages of development.

JASDAQ Over-the-Counter (OTC) Market Japanese OTC securities trading was launched in 1963. In 1983, as part of a sweeping reform, the OTC market adopted trading rules similar to the Nasdaq U.S. market. In 1991, the JASDAQ automated trading system was launched.

* A third OSE market, the New Markets section, was opened in 1998 to provide capital to entrepreneurial ventures.

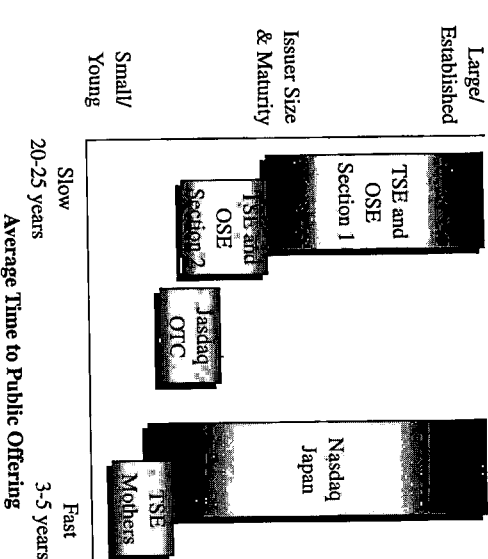


EXHIBIT 3 Market Performance Statistics for Japanese and U.S. Securities Exchanges
Measuring Market Performance

Measures of Market Liquidity	
Trade volume	Average number of shares traded per day
Turnover	Volume of shares traded as a percentage of total shares listed on an exchange during a period, usually a day or a year
Measures of Market Growth	
No. of listings	Listed securities are stocks or bonds that trade on one of the organized and registered securities exchanges
No. of IPOs	An initial public offering (IPO) is a company's first offering of stock to the public; the number of IPOs on exchange is a metric of the potential growth of that exchange
Measures of Market Value	
Market value	Total value of all securities listed on a particular securities exchange
Average price/share	Average per share price of a listed security

EXHIBIT 3 Market Performance Statistics for Japanese and U.S. Securities Exchanges (continued)
Market Performance Comparisons

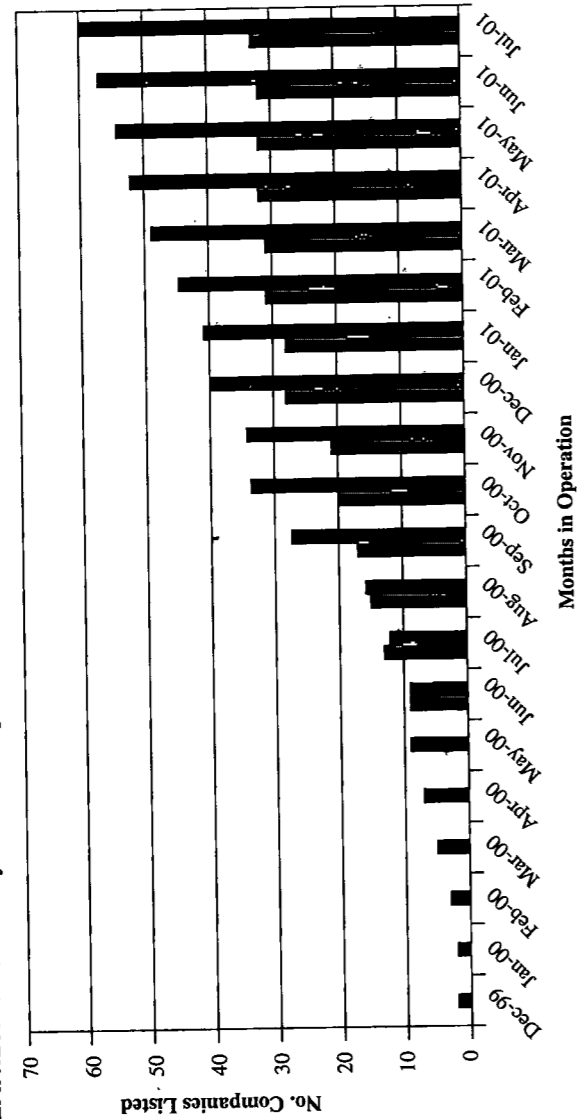
Securities Exchange	Average Daily Trade Volume (millions) (as of 12/31)			Turnover (%) (as of 12/31)			No. of Listings (as of 12/31)			No. of IPOs (as of 12/31)			Market Value (trillion US\$) (as of 12/31)			Average Price/Share (as of 12/31)		
	98	99	00	98	99	00	98	99	00	98	99	00	98	99	00	98	99	00
Japanese Securities Exchanges																		
TSE	492.3	617.1	692.6*	35	44 (1)	18	1340	1364	1447	12	20	38	2.3	4.3	3.1	4.62	6.79	4.57
Section 1				(1)														
Section 2	6.5	16.2	NA	NA	NA	20	498	526	579	NA	NA	92	.06	.13	.06	NA	NA	NA
Mothers	NA	NA	NA	NA	NA	20	NA	2	29	NA	NA	26	NA	.008	.006	NA	NA	NA
OSE	48.9	56.2	69.8 (1)	9.5	9.6	9.9	1272	1293	1282	NA	NA	NA	1.9	2.9	2.3	NA	NA	NA
Section 1				(1)	(1)	(1)	(1)	(1)	(1)				(1)	(1)	(1)			
Section 2	2.9	4.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NJM	NA	NA	NA	NA	NA	43	NA	NA	40	NA	NA	33	NA	NA	NA	NA	NA	NA
OTC (Jasdaq)	5.3	17.5	NA	NA	NA	18	NA	NA	880	NA	NA	NA	NA	NA	NA	NA	NA	NA
U.S. Securities Exchanges																		
NYSE	673.6	808.9	1041.6	76	78	88	3114	3025	2862	68	49	48	10.9	12.3	12.4	46.38	43.77	42.14
Nasdaq U.S.	801.8	1152.4	1761.4	NA	NA	NA	5068	4829	4734	273	485	397	2.6	5.2	3.6	31.30	46.35	31.64
AMEX	28.9	32.7	53.0	NA	NA	NA	770	769	765	21	11	6	.15	.14	.12	37.19	68.71	55.83

*Reflects both Sections 1 & 2

IPOs = initial public offerings; TSE = Tokyo Securities Exchange; OTC = over the counter; OSE = Osaka Securities Exchange; NJM = Nasdaq Japan Market (offered through the Osaka Securities Exchange); NYSE = New York Stock Exchange; AMEX = American Stock Exchange.

Source: Company websites; Bloomberg Online Information Service; Nasdaq-Japan Market data. All collected during the first half of 2001.

EXHIBIT 4 Month-by-Month Comparison of the Growth in Number of Listings, December 1999 to July 2001

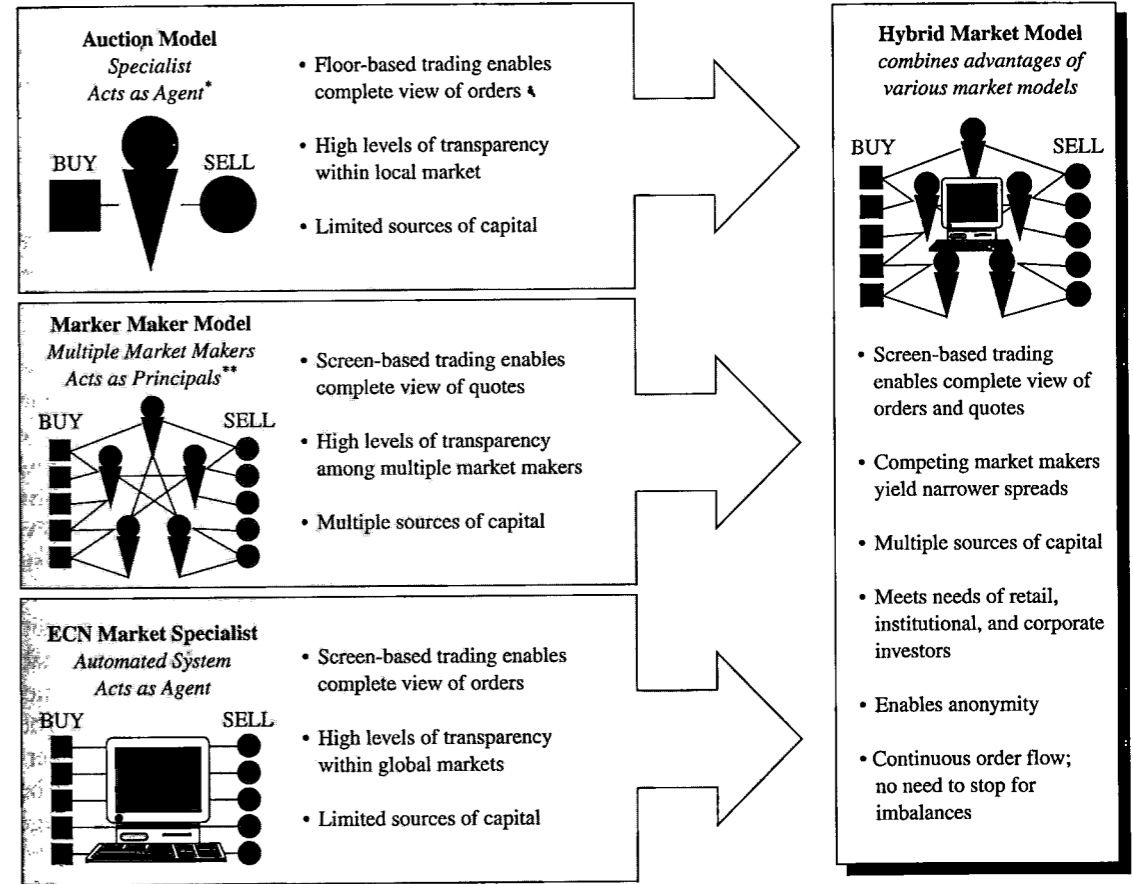


Mothers (launched 12/99)
Nasdaq Japan (launched 6/00)

	Dec. 99	Jan. 00	Feb. 00	Mar. 00	Apr. 00	May. 00	Jun. 00	Jul. 00	Aug. 00	Sep. 00	Oct. 00	Nov. 00	Dec. 00	Jan. 01	Feb. 01	Mar. 01	Apr. 01	May. 01	Jun. 01	Jul. 01	
Mothers	2	2	3	5	7	9	9	13	15	16	17	20	21	28	28	28	31	31	32	32	33
Nasdaq Japan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Adapted from Nasdaq Japan document.

EXHIBIT 5 Nasdaq Japan Hybrid Market Model



* An agent facilitates transactions between buyers and sellers but does not take ownership of the item being traded. Money is made from transaction fees. The New York Stock Exchange uses this market model.

** A principal commits his or her own personal capital or a firm's capital to take ownership of the item being traded. Money is made on the difference between the price paid to the seller and the price paid by the buyer plus any transaction fee charged. Nasdaq U.S. uses this market model.

Source: Casewriter based on Nasdaq U.S. website, July 2001.

be introduced into the Japanese securities industry. (Exhibit 5 describes the new hybrid market model that would be launched in the first half of 2002.) In addition, new operating and management processes would need to be developed that extended throughout the network of market participants that made up the NJM. Finally, a new market and organizational "culture" would need to be created.

Building Nasdaq Japan

Nasdaq Japan Inc. was founded on June 15, 1999, as a Kabushiki Kaisha with the aim of creating a new securities market and market model for Japan. "If you want to be a corporation in Japan and operate an independent business, you

generally become what's called a Kabushiki Kaisha, or KK," Bartolotta explained:

A company's goal for entering the Japanese market determines the structure you choose. For example, if you just want to set up a sales channel through which you will sell the same products and services you sell elsewhere, then you might choose to set up the Japanese location as a branch office or a sales office. But Nasdaq Japan is going to invest in developing a new market model. We plan to sell products and services that would be developed in Japan. We have developed specialized assets to create and deliver these new products and services. As a result, the logical choice was to go right to a KK structure.

The initial capital for NJI came from Nasdaq, headquartered in the United States, and Softbank Corporation, headquartered in Japan, each of which contributed ¥300 million in return for 50 percent ownership and three seats on the board of directors. "A mutual friend at the U.S. Embassy introduced us to Masayoshi Son," Hilley explained. "We met in February 1999, and we described our vision for developing a new securities market in Japan and later extending it to a global market presence. Son-San saw the opportunity immediately. We shook hands and put together a planning company to work out the details. We signed the formal joint venture agreement in June 1999."

The joint venture agreement also gave Softbank the right to choose the representative director, Ted Saeki.¹⁴ The agreement gave Nasdaq U.S. the right to appoint the other officer positions. In addition, the agreement outlined the authority of the board of directors (for example, the board was responsible for approving the annual

operating plan) and defined the use of the Nasdaq and Softbank brands and logos, and so forth. A stock option plan was established in 2000 that set aside 10 percent of the company stock for employees, and it was formally stated that the goal of the founders was to take the company public in the future.

Nasdaq agreed to send people to Japan to help establish and evolve the NJM, and Softbank agreed to help the company recruit employees and issuers and help with the development of the technology infrastructure for running the company.¹⁵

Early in the development of the NJI business model, members of the launch team met with members of the Japanese Ministry of Finance (MOF) and the Financial Services Agency (FSA) to discuss regulatory and policy issues.¹⁶ While the founders initially planned to launch the NJM as an independent stock exchange, it became clear during the summer of 1999 that it made sense to partner with a Japanese stock exchange. "It would have taken years to develop the NJM if we had tried to go it alone," Stein explained. At the time, there were seven stock markets in Japan. The largest was the TSE, which handled over 80 percent of all securities trading activity in Japan. The next largest was the Osaka Securities Exchange (OSE). Jasdaq handled over-the-counter trade. While all three markets were approached in late 1999, the decision was made to partner with the OSE. The relationship between NJI and the OSE was structured as a 15-year business cooperation agreement with options to renew over the next 20 years. Hilley recalled:

There was a general understanding among the financial community in Japan that OSE was

¹⁵Nasdaq U.S. assumed responsibility for developing the software required to run the NJM.

¹⁶Traditionally, the Ministry of Finance was responsible for all regulatory and supervisory activities regarding the Japanese financial services industry. During the 1990s, the Japanese government created the Financial Services Agency to provide more comprehensive regulatory oversight.

the right partner. They had a strong derivatives market but were losing share in their equities market to TSE. They had implemented robust technology for trading, clearance, and settlement, and, most importantly, they were committed to working with us to establish a new market structure.

An important player in bridging the gap between Nasdaq Japan and the OSE was Yoshitaka Kitao. A former high-ranking Nomura executive and a key member of the Softbank group of companies, Kitao served as chairman of several key negotiating sessions. He was able to prod, cajole, and force the two sides toward an agreement.

But despite strong commitment on both sides and the help of influential and knowledgeable negotiators, the development of the formal agreement was complex and time-consuming. "It takes time to negotiate agreements in Japan," John DeSaix, senior vice president and chief strategic planning officer, recalled. "It is a very formal process in which both sides use translators."

I've been involved in most of the deals that we've negotiated here in Japan, and one thing that I've learned to anticipate is that things happen in the background. People don't come forward with an idea or propose something until they know everybody's going to support it. This is what happened during the negotiations with Osaka. A number of background negotiations went on, and then the senior executives met and agreed to the partnership. During the meeting, the high-level terms of the agreement were worked out. It was then up to us to work out the details.

Saeki explained some of the background negotiations that took place prior to the meeting at which senior executives finalized the OSE deal:

The top two people at OSE at the time we began negotiations in January 2000 were ex-Ministry of Finance people. As such, they brought with them a regulatory perspective. By mid-March, we still weren't close to agreement in five major areas and time was running out since we wanted to announce the

opening of the market in mid-June. We needed someone close to the securities industry who could influence negotiations from the OSE side. It just so happened that the chairman of the Japan Securities Dealers Association in the Osaka Region was Mr. Goro Tatsumi-San. He was also running his own securities firm and was very, very powerful in the Japanese securities industry. I called him up at 11 in the evening shortly before the meeting and told him that we needed to close these negotiations at the meeting, and if we didn't, the deal would fall through. Tatsumi-San took charge in the meeting, and the negotiations were finalized. Shortly afterward, the top two people resigned and Tatsumi-San became president and CEO of OSE.

Tatsumi provided his perspective:

In the beginning, the views of Nasdaq and OSE were quite far apart. I stated my own position to the Osaka securities community. I told them that the Nasdaq Japan Market represented OSE's best chance to become a world market and should be seized by whatever means possible. The agreement was signed in April 2000, and we opened the market with eight companies listed on June 19, 2000.

Under the terms of the agreement, OSE was responsible for operating and managing the NJM, which was run as an independent market alongside OSE's other two market sections: OSE Section 1 and OSE Section 2 (refer to Exhibit 2). OSE was responsible for ensuring a fair and efficient market, clearance and settlement, and all regulatory and legal issues. Nasdaq Japan was responsible for generating listings, attracting investors, promoting and marketing the NJM, building the brand, and, as part of its agreement with OSE, constructing a new market structure and new technology. Toshio Morono, vice president of information and services, explained:

We are responsible for educating investors and issuers, for attracting and retaining loyal stakeholders, and for developing and selling market information. The Nasdaq brand stands for high-

¹⁴A KK company is headed by a "representative director" who has the legal authority to bind the corporation to contracts and has a seat on the board of directors. Initially, the six NJI directors included three people from Nasdaq U.S., two people from Softbank, and Ted Saeki.

growth new economy listings and for an open and fair marketplace. A fall 2000 survey of seven hundred privately held Japanese companies ranked Nasdaq Japan number one—ahead of TSE Mothers and Jasadq—as the securities exchange that these entrepreneurs and small business owners would most likely choose when they decided to go public.¹⁷

Bartolotta explained cash flow during 2000 and projections for 2001:

During 2000 and 2001, the company built a management team and launched the NJM. We burned through about ¥1.9 billion during that period.¹⁸ In addition to the ¥600 million that we raised from our initial investors, we also received a bridge loan of ¥1.4 billion between April and December 2000. By late 2000, we knew we would need at least an additional ¥5 billion to finance activities during 2001 and 2002. In October 2000, we sold 2,100 shares of NJI stock at a price of ¥2.5 million per share, and raised approximately ¥5.25 billion from 13 strategic investors.¹⁹ Ten investors contributed ¥500 million each for a 1.4 percent share of the company, two contributed ¥200 million, and one contributed ¥50 million. These latter three firms became “limited partners” and collectively shared a 0.8 percent equity stake. After the investment, the Nasdaq U.S. and Softbank equity stake decreased to 42.6 percent each.²⁰

¹⁷Nikkei Net Interactive (<http://www.nni.nikkei.co.jp>).

¹⁸The budget for 2002 called for spending about \$24 million (at the rate of 120¥/U.S.\$), or about ¥240 million per month. Executives expected that the “burn rate” would be cut in half to about ¥120 million per month during 2003.

¹⁹The ¥1.4 billion in loans from the founders was repaid after NJI closed the private placement.

²⁰On December 21, 2001, Nasdaq Japan announced that it had completed a private placement offering that had raised ¥1.875 billion from its initial investors, Nasdaq U.S. and Softbank; each company contributed ¥937.5 million for 1,500 new shares. The money, which raised the percent ownership of each of the initial founders from 42.6 percent to 42.9 percent, would help pay for continued operations and ongoing development of its hybrid market trading systems. See Nasdaq Japan press release, December 21, 2001.

In addition to an equity stake, the strategic investors formed an advisory council that met quarterly. Finally, one additional seat for a member of the strategic advisory council was added to the board of directors. (See Exhibit 6 for an overview of the Nasdaq U.S. financials, which served as a model for NJI as a mature market. Exhibit 7 provides an overview of the company’s financing history.)

The decision to seek funding from strategic investors was motivated by a desire to broaden commitment to NJI and the new hybrid market model that would be launched during Phase II. Bartolotta continued:

We went to 15 strategic investors that we felt would be helpful to us as we launched our new hybrid market model. The investors were among the top securities firms in Japan, the United States, and Europe. The Japanese firms included Daiwa Securities Group, Nikko Securities, Nikko Salomon Smith Barney, Nomura, and Kokusai Securities. The U.S. investors included Goldman Sachs, Knight Securities, Lehman Brothers, Merrill Lynch, and Morgan Stanley Dean Witter. The European investors included UBS Warburg, Deutsche Securities, and Dresdner Kleinwort Benson. We also approached two Japanese venture capital firms, but they turned us down.

In addition to gaining commitment from the market maker community, NJI sought to attract companies that would list on the NJM. In keeping with the Nasdaq brand and the goals of the founders, NJI focused on attracting new ventures and high-growth companies, especially high-growth technology ventures. They also sought to develop a “culture of entrepreneurship” and a more “robust IPO process.” To help achieve those goals, under the leadership of Son-San, NJI established the Nasdaq Japan Club. Saeki explained:

Traditionally, the capital markets in Japan have not been very friendly toward start-up companies. Often it’s younger people who come up with the good ideas and start new

EXHIBIT 6 Nasdaq U.S. Financials

The Nasdaq Stock Market, Inc. Consolidated Statements of Income (in thousands, except share amounts)

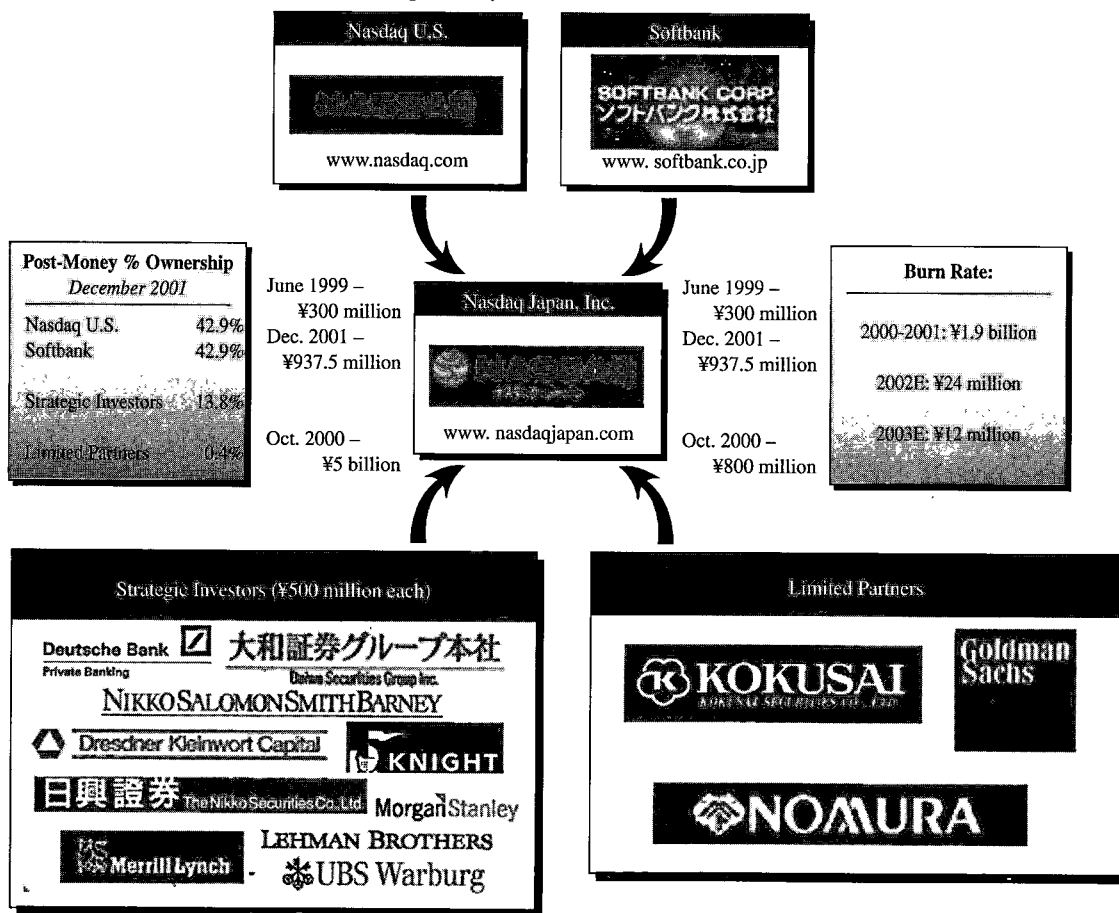
	Years ended December 31		
	2000	1999	1998
REVENUE			
Transaction services	\$395,123	\$283,652	\$160,506
Market information services	258,251	186,543	152,665
Issuer services	184,595	163,425	137,344
Other	30,040	628	308
Total revenue	\$868,009	\$634,248	\$450,823
EXPENSES			
Compensation and benefits	\$133,496	\$98,129	\$78,565
Marketing and advertising	45,908	62,790	42,483
Depreciation and amortization	65,64	43,696	34,984
Professional and contract services	61,483	35,282	35,127
Computer operations and data communications	138,228	100,493	72,111
Travel, meetings, and training	12,113	10,230	7,750
Occupancy	14,766	6,591	5,354
Publications, supplies, and postage	7,181	4,670	5,208
Other	26,505	24,809	16,704
Total direct expenses	\$505,325	\$386,690	\$298,286
Support cost from related parties, net	\$128,522	\$115,189	\$100,841
Total expenses	\$633,847	\$502,879	\$399,127
Net operating income	\$234,162	\$132,369	\$51,696
Interest	20,111	12,201	9,269
Provision for income taxes	(105,018)	(58,421)	(26,010)
Minority interests in earnings	872	—	—
Net income	\$150,127	\$86,149	\$34,955
Basic earnings per common share	\$ 1.34	\$ 0.86	\$ 0.35

Source: Nasdaq U.S. Registration Statement (Forms 10-12G) April 2001 (available on Edgar Online, www.edgar-online.com).

companies. In Japan, these young people have very little credibility with Japanese banks, and the bankers hesitate to invest in them. So in the past, these new companies couldn’t get started. The Nasdaq Japan Club helps entrepreneurs find funding early and then provides education and support as they grow their firms and complete their IPOs. We held our first Nasdaq Japan Club conference in October 1999 and had over 2,500 in

attendance. Today [November 2000] we have about 6,000 members. About 350 are associated with issuer support firms (for example, venture capitalists, investment bankers, accountants, lawyers), and the rest are entrepreneurs and small business owners. The club holds regular meetings at which entrepreneurs can present their ideas. We also provide information and support on the IPO process.

EXHIBIT 7 Nasdaq Japan Financing History



Morono continued:

Until recently, restrictive listing standards on TSE meant that it took 15 to 20 years from the time a company started until it was of sufficient size and had achieved a level of profitability to issue an IPO on TSE.²¹ As a result, Japan did not have a very robust IPO market. In fact, the total number of IPOs in Japan over the past five years averaged 150 per year; in

²¹Only "large cap" firms—firms with a market capitalization of ¥300 billion or more—could list on TSE Section 1 and Section 2.

good years it reached 200, and in bad years it was less than 100. By comparison, the total number of IPOs in the United States averaged from 600 to 700 per year.

With the launch of Mothers, TSE relaxed its listing requirements, allowing firms to issue an IPO even before they reached profitability. But TSE Mothers has not put in place the same strict requirements as NJI. It's not enough to simply relax the standards. You must also ensure that investors have the information needed to assess the quality of a company's stock. The Nasdaq Japan Club helps entrepreneurs develop high-quality

companies and educates them about the strict disclosure standards that must be met to list on Nasdaq Japan. With these safeguards in place, we have also streamlined the listing process so that it can be completed in two months or less.

The information and services provided by the Nasdaq Japan Club were free of charge to members. NJI also developed a robust website designed to meet the information needs of all NJI stakeholders. "The website provides free information and services to investors and issuers [companies seeking to list on the NJM]," explained Morono. "As we evolve our new online offerings, we will begin to charge both advertising fees and agency commissions to investor support firms and to issuer support firms. In the end, we are competing with TSE for the attention of investors and issuers. TSE has around 90 percent of all the securities trading volume in Japan, and it is very difficult to compete with them directly. So our challenge is to establish ourselves as a niche brand that stresses trading in high-growth local and global firms using a more efficient and transparent market model."

Building and Launching a New Market Model

To achieve its short-term goal of creating a successful market within Japan and its long-term goal of establishing a global exchange, NJI planned to introduce a new market model into the Japanese financial services industry. Tatsumi explained why a new model was needed:

The success of Nasdaq Japan's new market model will enable a shift in the financial assets of Japanese investors from safe, low-growth categories to the more high-risk but also higher-growth equity markets. This will happen only if investors feel that the market is transparent, fair, and well regulated. The capital flowing into equity markets will provide the funding necessary to enable the growth of new businesses and new industries. But the success of the new market model

represents much more than a shift in Japan's financial markets from indirect to direct financing. It will also stimulate structural reform in Japan's economy and contribute to the country's rebirth as an economic power around the world.

Rick Ketchum, president of Nasdaq U.S., explained why a new market model was needed to accomplish these goals:

The auction securities trading model used in Japan—especially when combined with a lack of incentives to accelerate trading—does not enable us to achieve the liquidity and efficiency performance required of online markets in the twenty-first century. Our experiences with building Nasdaq U.S. taught us that the success of an online market could be achieved only if you have an open, transparent market that everyone trusts and believes is fair. Market makers must be motivated—by both incentives and regulations—to make quotes available immediately and to execute trades quickly and fairly. Clearance and settlement must happen automatically, and everyone must be able to monitor the transaction throughout the process. Once you set up the platform and policy to enable that kind of competitive, transparent market, you see the natural evolution of a market maker community that can take advantage of the new economics.

While the need to introduce a new securities trading market model into Japan was recognized from the earliest negotiations in 1999, the founders knew that it would take years to develop the technology, secure regulatory approval, and win the trust of Japanese investors and the financial services community. As a result, the NJM initially was established as a section of the OSE. "We changed the listing criteria," DeSaix explained, "but the underlying auction model and trading practices remained the same."

The company referred to its initial launch on June 19, 2000, as Phase I. Phase II, scheduled to

be launched during late 2002, would introduce a new hybrid market model. Looking ahead, NJI also saw a third phase that would begin when the Nasdaq Japan, Nasdaq U.S., and Nasdaq Europe markets were linked.

By the June 19, 2001, anniversary party, a beta version of the new hybrid market model technology was running on NJI servers and the regulatory changes that would be required had been identified. Ryuta Kitagawa, manager of the General Planning Department of OSE, explained:

There are three key categories of regulatory changes that need to be made to enable the launch of the new hybrid market model. First, we need to deal with issues concerning trading. For example, in Japan we have rules that limit daily price movements. These limits restrict market maker incentives. We also have a different definition of the executable price for short selling, which needs to be changed to be consistent with the U.S. model if we want to trade both U.S. and Japanese stocks. We also need to gain regulatory approval for changes in listings. For example, in Japan we have rules limiting when you can split a stock. As companies grow, stock prices increase and retail investors are excluded from the market because the share prices become too high.²² Finally, we have issues regarding trading of ETFs [exchange traded funds].

DeSaix provided details on the evolution of the market model from Phase I to Phase II. (Refer to Exhibit 5 to review the market models discussed in this section.)

Until recently, OSE and TSE operated an auction model. An order entry firm like Nomura, Daiwa, Goldman Sachs, or Merrill Lynch submitted an order to buy or sell a stock on behalf of a client. The order was received by a broker on the floor of the physical exchange. These orders could be market orders, instructing the broker to buy or

²²To split stock in Japan, a company was required to have minimum net assets of at least ¥50,000 per share after the split.

sell a security at market price, or they could be limit orders that provided the brokers with specific limits within which they could buy or sell. The orders created what was called a central order book that the brokers used to trade securities in a given firm through a face-to-face auction. Prior to 1997, TSE and OSE operated a physical trading floor. But unlike NYSE, they did not have specialists assigned to trade each stock.²³ In 1997, OSE switched from a physical trading floor to online screen-based trading. TSE implemented online screen-based securities trading in April 1999. Both markets implemented a fully automated central order book, auction-based trading model when they shifted to screen-based trading.

Nasdaq U.S., on the other hand, uses a quote-driven market model. Rather than centralizing all orders in one physical location or within a computer system, the Nasdaq market links broker/dealers²⁴ that use their own capital to make markets in securities listed on the Nasdaq market. As such, the Nasdaq market is really a network of markets, all of which compete for trade volume on the basis of the best "bid" (the price at which a market maker will buy a security) and "offer" (the price at which a market maker will sell a security) and the speed of execution. In 1999, the Nasdaq U.S. market linked over 400 market makers, each of which had authority to buy and sell specific securities, but not on an exclusive basis.²⁵ In addition to connecting traditional market makers, the Nasdaq network connects other trading systems, such as electronic communication networks (ECNs), which provide an electronic trading

²³Visit the company websites for more detail on the NYSE, Nasdaq U.S., TSE, OSE, and Nasdaq Japan trading models. *Understanding Securities Markets in the United States and Japan* (HBS No. 802-093) is also available.

²⁴These broker/dealers may be the same ones that also trade on the NYSE.

²⁵The average Nasdaq stock had 10 or more market makers that were authorized to act as either a principal or an agent.

platform that allows investors to trade directly without going through a market maker.²⁶ As a fully automated market, Nasdaq does not have a central trading floor.

The hybrid market model that will be introduced by NJM in Phase II combines the best features of the order-driven and quote-driven models. It enables competing market makers to trade stocks on behalf of clients and also enables the development of a centralized order book through which market makers or individual investors can trade. As such, it provides continuous screen-based trading (like an ECN) and competition among multiple market makers that can use their own capital to increase liquidity (like Nasdaq U.S.).

The technical infrastructure required to implement the hybrid market model was being developed in partnership with IndigoMarkets, a software firm located in India. "One of the most important things to remember when faced with a highly uncertain technology project like this is to remain flexible in the beginning," said Gregor Bailar, executive vice president and chief information officer of Nasdaq Worldwide:

Initially, everyone thought that we would adapt the U.S. trading engine for Japan. A quick review of the pros and cons led us to

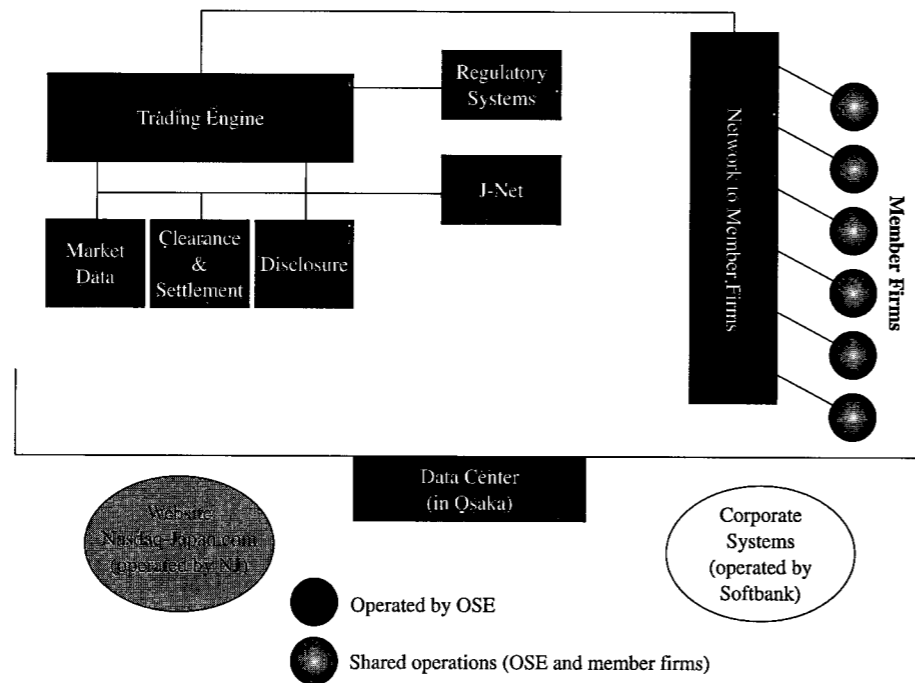
²⁶ECNs like Instinet and Island accept orders directly from their own subscribers in addition to orders routed from broker/dealers. Paying subscribers can see the entire order book, and some, like Island and Archipelago, enable access and trading through personal computers (PCs)—and now even handheld devices—connected to the Internet. The ECNs also act as one more broker/dealer in the Nasdaq market and display their best bid and offer on Nasdaq so that other market participants can see them. Because they have automated the role of the intermediary, ECNs are able to offer a very low price (often less than \$.0015 per trade compared to \$.025 to \$.05 per trade on Nasdaq), instantaneous execution, and anonymity. But, only 5 to 10 percent of trades are matched on the ECN site. In 2000, most ECNs did not commit their own capital to boost liquidity. Instead, if a trade was not executed within a short period of time, the ECN posted bid-offer quotes on Nasdaq.

quickly discard this option. Then we asked: "Do we build it ourselves or can we buy the technology we need?" While we would have traditionally built it ourselves, our need to move quickly drove us to search for a software partner. We talked to about a dozen market exchange software vendors around the world and quickly narrowed our search down to three finalists. All three had installed market exchange software in multiple sites. As a result, we were able to get benchmark data under run-time conditions. The three finalists also offered most of the features we required. In the end, we chose IndigoMarkets because they significantly outperformed everyone in terms of their ability to handle large volumes of trades. In addition, they were willing to do a joint venture with us that left Nasdaq with a controlling interest (55 percent) in the new company. Finally, they transferred ownership of the intellectual property (IP) to the joint venture so that we could use the code to upgrade systems in Europe and the other markets we enter if the opportunity to do so arose. Despite the fact that we changed over 50 percent of the code, we saved significant time and money. In fact, if we had tried to build it ourselves, we would still be coding.

Mark Mincin, senior vice president and chief information officer of NJI, explained how the IndigoMarkets technology enabled the hybrid market model:

The IndigoMarkets system is a trading engine that links to PC-based trading workstations and allows market participants to view and trade based on either best bid and offer quotes or a central limit order book. In the United States we call the future ability to display these multiple order types on a single screen a SuperMontage. But underneath the display is a trading engine that unites the quote-driven and order-driven market models. Broker/dealers can use the new trading system to gain more visibility into the entire market and can then quickly access quotes, negotiate the most favorable price, and complete the trade. The IndigoMarkets system can be accessed

EXHIBIT 8A
Nasdaq Japan
Phase I
Technology
Architecture



Trading Engine and Regulatory Systems: OSE software running on Fujitsu computers

Nasdaq-Japan.com website: Public Internet site; issuers, investors, investor services firms (e.g., brokers, financial analysts), and issuer services firms (e.g., investment bankers, lawyers, accounting firms, and PR firms) can access information for free

Data Center: Outsourced from OSE

Network: Dedicated leased lines, dial-up or broadband TCP/IP lines

EIS Data: Market information database including internal market data and imported market information from online information service providers (e.g., Reuters)

Clearance and Settlement and Disclosure ED-Net: Systems that notify regulatory agencies, banks, etc., register the trade, and settle accounts; in 2000 it took 3 days (T+3) to settle a trading transaction

Corporate Systems: Outsourced from Softbank

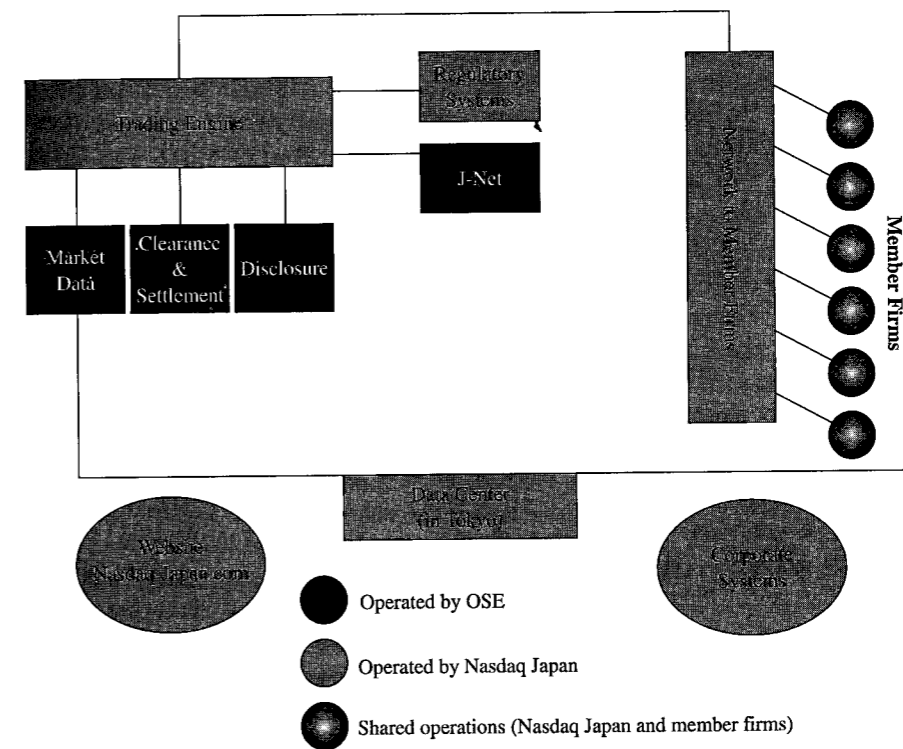
J-Net: Launched in 1999, J-Net links OSE with institutional investors that have a special contract with OSE to do large-lot trading (the conventional trading system links securities exchanges with member securities firms)

through proprietary networks or through PC-based trading systems.

(See Exhibit 8 for a comparison of the Phase I and Phase II NJI technology architecture.) The hybrid market model, with minor variations in

technology and market making process, was scheduled to be launched during 2002 in the United States, Japan, and Europe. Once it was successful in all three markets, it would be possible to link the markets to permit seamless, 24-hour global trading.

EXHIBIT 8B
Nasdaq Japan
Phase II
Market Model
Technology
Architecture



Trading Engine and Regulatory Systems: Indigo Markets/Nasdaq customized hybrid market model software running on a Tandem computer

Nasdaq-Japan.com website: Extranet and public Internet sites; issuers and investors can access information for free; investor services firms (e.g., brokers, financial analysts) and issuer services firms (e.g., investment bankers, lawyers, accounting firms, and PR firms) access special information for a fee

Data Center: Outsourced to a data center hosting partner; located in Tokyo

Network: ATM-TCP/IP based networks

EIS Data: Market information database including internal market data and imported market information from online information service providers (e.g., Reuters)

Clearance and Settlement and Disclosure ED-Net: Systems that notify regulatory agencies, banks, etc., register the trade, and settle accounts; in 2000 it took 3 days (T+3) to settle a trading transaction

Corporate Systems: Oracle Financials, HR, and Accounting purchased as an ASP; Customer Relationship Management for sales force automation

J-Net: Launched in 1999, J-Net links OSE with institutional investors that have a special contract with OSE to do large-lot trading (the conventional trading system links securities exchanges with member securities firms)

J-Net: Launched in 1999, J-Net links OSE with institutional investors that have a special contract with OSE to do large-lot trading (the conventional trading system links securities exchanges with member securities firms)

But not everyone expressed enthusiasm about the new market model. Bailar explained: "Most NJM participants don't fully understand the new market model. Some old-guard market participants don't want to talk to us. Others are interested but are quick to state that they aren't sure how they will make money." DeSaix explained that NJI executives spent time meeting with key stakeholders to present the new market model and get feedback:

Once we understood everyone's concerns, we modified our proposal to introduce a two-tiered market. The first tier (the hybrid market) would be made up of highly liquid stocks with ample order flow to support many market makers and a central order book. The second tier (the pure-dealer market) would have less liquid stocks. For these stocks, order flow would only attract a few market makers and could not sustain a central order book. (Most markets in fact have 90 percent of the order flow in 10 percent of the stocks.) The overall plan was for stocks to move from the pure-dealer market to the hybrid market as their liquidity (order flow) grows. While this was a compromise compared to Nasdaq's original plans, even this would be a significant step forward for Japanese investors in terms of market efficiency and investor protection.

Looking Ahead

As the Nasdaq Japan team members looked back on the two years of work and planning that had gotten them to the birthday celebration, they also looked ahead to the challenges they would face in the next year. Four key challenges were identified.

Launching the Hybrid Market Model

While an initial version of the hybrid market technology had already been deployed on Nasdaq Japan computers in Tokyo, the team recognized that much more needed to be done prior to launch. "One of the key challenges that we have moving

forward," Congdon explained, "is to complete testing and then to deploy the commercial version of the product and link it to all market participants." Mincin explained that the deployment would be most challenging for those firms that wanted to participate as market makers:

We will implement the market making system across a dedicated, ATM-based, secure, leased line, TCP/IP compatible network.²⁷ Firms that wish to increase the speed and capacity can pay for additional lines. Market making firms that wish to participate in the new hybrid market will need to have specialized software that will enable them to connect their internal trading systems with our networks and trading engine.

While the trading engine for the NJM in Phase I ran on computers at OSE, the new IndigoMarkets trading engine would run in a data center managed by an NJI hosting partner located in Tokyo. "Unlike Nasdaq U.S., we decided to outsource data center operations," Mincin stated. "We own the software and the computers on which it runs. We have a program manager that defines our requirements and does capacity planning. We also have a contract manager that oversees performance at meeting service-level agreements." Managing these partnerships and contracts and ensuring the security and 100 percent reliability of the networks and data centers were challenges that the Nasdaq Japan team had yet to face.

Clearance and settlement would continue to be managed by OSE. "There is nothing in our con-

²⁷TCP/IP is a global Internet communication protocol for transacting business, communicating, and sharing information on the Internet. A dedicated, leased line enables a firm to conduct business across a secure high-speed network that is not open to the public. ATM stands for Asynchronous Transfer Mode. It is a network protocol that specifies how data are packaged and communicated across high-speed networks. TCP/IP can work in conjunction with ATM to create a high-speed secure network that can still transmit information as if it were on the public Internet.

tract with OSE that says we have to continue using their clearance and settlement system," Mincin explained, "but the contract does specify that we must continue paying them agreed-upon service fees until 2005. We have yet to address how we will handle global clearance and settlement once we move to a global market in Phase III." "We're currently working on a pan-European clearance and settlement system that should be ready during 2002," explained Congdon.

"Overall, the implementation was much less expensive than a system of this magnitude would cost if we had been on our own," Mincin continued. "We've kept costs low by buying rather than building, by using offshore developers in India, and by leveraging the expertise of Nasdaq U.S. For example, as we defined the requirements for the vendors that would bid to run our data center and network operations, we had Pat DeLuca, who operates the Nasdaq U.S. data center in Trumbull, here, and he helped us develop the short list of vendors. When we needed a framework for our outsourcing legal contracts, we called Steve Luparello, executive vice president of NASD Regulation, and he helped us develop the contracts we needed."

Introducing New Products

During the early years of Nasdaq Japan, it had been thought that the major source of listings would come from IPOs. But by the time the NJM launched in June 2000, momentum investing in Internet-related companies had turned to momentum selling—first in the United States²⁸ and then in Asia and Europe. "When we went into Japan, we wanted to be the IPO market of choice," Kelly Morriss, director of international development, stated.

Within the first year of operation we met that goal, but the size of the IPO market decreased dramatically. Since 90 percent of NJI revenues

right now come from listings, we have not met our revenue forecasts. One of the biggest challenges we face, however, is that we are planning to launch our new hybrid market model later this year or early 2002. For the new model to be successful, we need to ensure access to a highly liquid market.

To meet this challenge, the Nasdaq Japan team focused attention on attracting high-liquidity growth stocks from the Nasdaq U.S. market. "Right from the beginning," Saeki explained, "we began to work to attract the top 20 or 30 Nasdaq stocks listed in the United States—for example, Microsoft, Intel, Cisco, and Dell." But this proved to be a challenge as U.S. stocks in general and tech stocks in particular declined in value throughout 2000 and 2001.

A second strategy for increasing market liquidity involved offering ETFs. Mike Spector, associate vice president of international development for Nasdaq International, explained:

The 800-pound gorilla of new products that we would like to introduce into the NJM is the Nasdaq-100 Trust Series I exchange traded fund (stock symbol QQQ). ETFs, a form of mutual fund, are less risky than a stock because the fund is made up of a number of different equities. But unlike a mutual fund, which prices only once at the end of the day, investors can buy and sell ETFs throughout the trading day. Since they were introduced by the American Stock Exchange in the United States in 1993, ETFs have become an increasingly popular alternative to traditional mutual funds.²⁹ We believe this type of product will be very attractive to Japanese investors because it presents much less risk than buying and selling a single stock yet allows the flexibility of a stock. It also allows for arbitrage and has favorable tax advantages.

²⁹At the end of April 2001, U.S. holdings in ETFs were \$73.3 billion, according to the Investment Company Institute, compared with \$3.7 trillion held in mutual funds. See J. Labate, "U.S. in Tokyo Dealing Alliance," *Financial Times*, June 19, 2001.

²⁸During the first six months of 2001 there were only 71 IPOs in the United States, and listing revenues had decreased to \$24 billion.

Other new products that would be actively sought for the NJM market included domestic (Japanese) ETFs and non-ETFs, such as structured notes. "The product vision fits with the strategic vision," said Spector. "We should have U.S. products available to Japanese investors and Japanese products available in the United States and other parts of the world. In the end, NJI should have a reputation for providing high-quality, innovative products that draw in investors and market makers to increase the value of the market for everyone."

Evolving the Organization, Market, and Culture

Prior to the launch of the hybrid market model, the NJI organization had functioned like a start-up. The NJI team was small—fewer than 100 people—with many employees on loan from Nasdaq U.S. Over one-third of the staff reported to Mark Mincin, the CIO, and were working to build the hybrid market software. (See Exhibit 9 for the NJI organization chart and management bios.) OSE handled current market operations. Bartolotta explained the management systems in spring 2001:

The private placement that we completed in October 2000 helped us evolve our corporate governance structure from a start-up to an established firm by evolving our investor base from strictly insiders to outsiders. The IPO process, which we plan for once we turn cash flow positive, will further that evolution.³⁰ In addition, we already have a formal authorization process and formal controls. For example, we have a formal budgeting process that provides each executive with spending limits. All of Saeki-San's direct reports must sign for expenditures above a certain amount. Then I sign as a backup. Depending on the type of expenditure and type of contract, we have

³⁰In late 2001, NJI executives expected to turn cash flow positive during 2004.

different levels of approval, and those are all spelled out. Now, that doesn't mean that everyone follows these rules every single time, but the controls are in place and the executives get a report every month that lists all expenditures within each business unit and also provides a view of how the company is doing on achieving its goals. If there is one area that is lacking, I would say we need better operating metrics and better market metrics. Right now, the systems that handle that part of our operation are run by OSE. Once we implement the hybrid market model, we will have access to that information directly and will be able to get much more detailed and timely operating information.

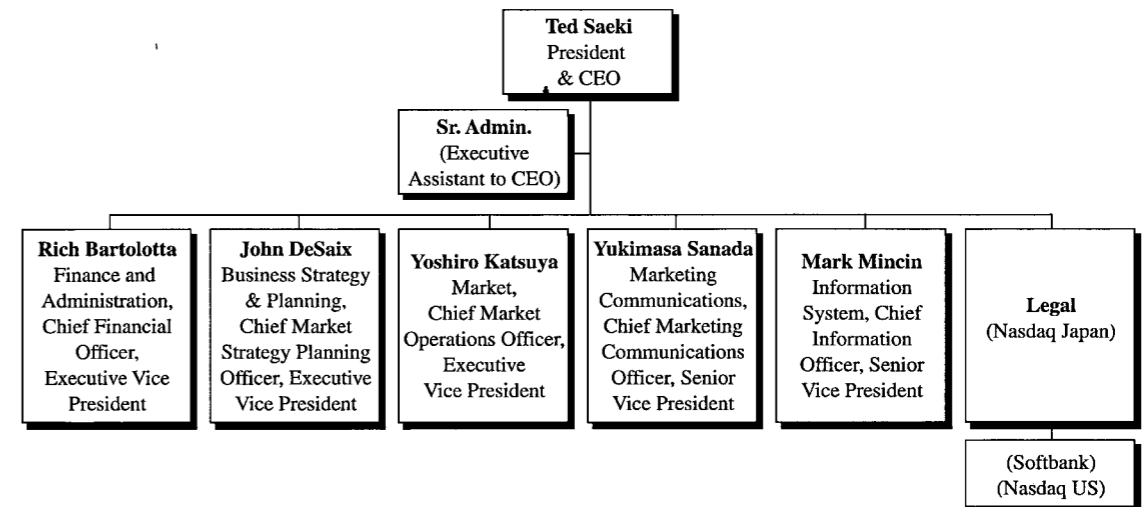
Mincin discussed how the vast network of alliances and partnerships complicated decision making as the company grew:

In most established companies, if you have a strategic decision, you discuss it with the person who is in charge of making the decision. But when you are bringing together an organization like ours with all of the various parties that must work together, the person or persons responsible for a decision may be located within multiple organizations. The situation was easier when we were first getting started, since there were only two major shareholders and one key strategic partner and all three were involved in most of the key decisions required to get the NJM off the ground. But as we get bigger and take on new shareholders, the complexity increases.

Even as NJI and its partners struggled to build the organization and market in the face of rapid change, they also needed to deal with blending very different business cultures. Stein explained that everyone had consciously focused attention on "working within the cultural grain":

The key to our success to date is that we have worked very hard to build the NJM so that it provides an innovative solution to improve capital formation, yet it does so by working

EXHIBIT 9 Nasdaq Japan Organization Chart, June 2001



Senior Management Bios

Ted Saeki, President & CEO: Tatsuyuki Saeki became President and CEO of Nasdaq Japan Inc., in January 2000, after a long and distinguished career at International Business Machines (IBM) Japan. As President and CEO, Mr. Saeki will lead the effort to develop and launch Nasdaq Japan Inc., a new electronic stock market for the globalization of the Japanese economy. Joining IBM in 1964 as a marketing representative, Mr. Saeki worked in various positions from Manager of the Sales/Finance Department, to Director of the Systems Products Business Unit to Managing Director of Marketing Operations, to Senior Managing Director of Operations with countrywide responsibility of marketing and product services. In 1995 he was named General Manager, IBM, Personal Computer Company, Asia Pacific North. His responsibilities included overseeing Japan, Greater China, and Korea. With the merger of the Asia Pacific North and Asia Pacific South regions in 1998, he was appointed General Manager, IBM Personal Systems Group, Asia Pacific and served in this capacity until December 1999. Mr. Saeki graduated from Keio University, Department of Law.

Yoshiro Katsuya, Executive Vice President, Chief Market Operations Officer: Yoshiro Katsuya joined Nasdaq Japan in June 2000 after a 26-year career in equity sales and market operations, both in Japan and internationally, with Nikko Securities Co., Ltd. Tokyo, Japan. As the Chief Market Operations Officer, Mr. Katsuya will play a key role in overseeing Nasdaq Japan's sales and market operations. Joining Nikko Securities in 1974, Mr. Katsuya spent his career at Nikko in various executive positions in domestic and foreign equity sales from New York, to London, to Tokyo. Based in Hong Kong between 1996 and 1998, Mr. Katsuya held a number of key executive positions while overseeing Asian and Japanese equity sales and trading operations. Prior to joining Nasdaq Japan, Mr. Katsuya was Executive Director and Head of Institutional Sales at Nikko Asset Management in Tokyo. Mr. Katsuya is a graduate of Keio University with a degree in Economics.

John DeSaix, Executive Vice President, Chief Market Strategic Planning Officer: John DeSaix is on assignment from Nasdaq and takes a leadership role for Nasdaq Japan's strategic business planning, both in country and in global matters. Mr. DeSaix has over 20 years experience with the NASD in managing systems development and strategic planning, and is knowledgeable in regulatory and market domains. His most recent assignment at the NASD was to direct the development of a strategic pricing plan for Nasdaq. Mr. DeSaix received his MBA from George Mason University.

Rich Bartolotta, Executive Vice President, Chief Financial Officer: Rich Bartolotta is on assignment from the Nasdaq and is responsible for the oversight of all financial operations, administrative, human resource, and general affairs for Nasdaq Japan. He joined NASD in March 2000. Prior to joining NASD, Mr. Bartolotta was the senior financial executive of IBM's personal computer business in Asia Pacific since 1998. During his 17 years at IBM, Mr. Bartolotta managed domestic and international financial operations in IBM's semiconductor and personal computer businesses. Mr. Bartolotta earned his B.S. in Finance and Accounting at Syracuse University and is a Certified Management Accountant.

Mark Mincin, Senior Vice President, Chief Information Officer: Mark Mincin, on assignment from Nasdaq, oversees all aspects of information technology. At Nasdaq, Mr. Mincin most recently headed the Program Management for Technology Integration of the Nasdaq Stock Market and the American Stock Exchange. Mr. Mincin joined Nasdaq in 1996 as Director of Data and Architecture and held several positions within the organization. Prior to this, Mr. Mincin was a Program Manager with Universal Systems, Inc. from 1991-1996, and was a Consulting Manager at Price Waterhouse from 1987-1991. He majored in Marketing and Management at Virginia Polytechnic Institute and State University.

Yukimasa Sanada, Senior Vice President, Chief Marketing Communications Officer: Yukimasa Sanada is responsible for all marketing and communications activities. Mr. Sanada has extensive experience in marketing at McCann-Erickson in Japan and was previously an executive vice president, director of media marketing center. Mr. Sanada joined McCann-Erickson Hakuodo in 1962 in Account Service. Leaving the firm in 1971 to run a sport promotion company, Mr. Sanada again returned to McCann-Erickson Hakuodo in 1984 as the general manager of its Osaka Branch. Mr. Sanada was then appointed to various positions throughout his career at McCann-Erickson—from Vice President in 1988, Senior Vice President in 1991, Director of Media in 1995, to a member of the Board of Directors in 1996. Mr. Sanada is a graduate of Waseda University.

within the “cultural grain,” not against it. By that I mean that we have taken time to try and understand every aspect of the Japanese securities market—how it operates, how it is regulated, the psychology behind it—and we have spent a significant amount of time viewing the Nasdaq U.S. approach through this lens. But we can’t achieve this understanding by just talking about it, and we can’t do it alone. We can only achieve this deep level of understanding as we work together to implement the market. At each step, we run into new laws and practices that mean that we need to rethink the market model and the organization. This process of [“learning by doing”] is necessary whenever you build a new company or implement a new business model. The need—and the challenge—is magnified when you are building a new company or implementing a new business model in an international context. There is just so much you don’t know—you don’t know the history of why things work as they do, you don’t know the business and regulatory environment, you don’t know the language so you have trouble communicating, you don’t know the culture and have trouble interpreting what is being said. In the end, it takes lots of time to develop strong relationships based on trust.

Developing a culture of understanding, respect, and trust required close contact between all the various stakeholders that needed to come together to create the new market model. It was also facilitated by hiring Japanese executives who were familiar with the Japanese financial services markets. As the organization grew, the NJI “extended organization” would need to increase its ability to integrate and leverage the expertise and cultural perspectives from multiple firms.

Building a Global Market

Nasdaq Japan, Europe, and the United States each planned to launch hybrid market structures. This set the stage for linking the three markets in Europe, Asia, and the United States. Congdon

explained: “Developing a truly global securities exchange is the key to achieving our vision and our value proposition.” But success in accomplishing this vision also presented its own risks. Ketchum explained:

By its very nature, technology disrupts the status quo. It encourages competition and presents competitors with alternative choices. If someone is able to provide a solution so superior to those available elsewhere—this is often called a “killer app”—technology can encourage market consolidation. But at other times, technology encourages market fragmentation. For example, as we have seen with the evolution of the Nasdaq U.S. market, technology has enabled the growth of multiple networks of market making activity. As transparency increases and spreads decrease, competition intensifies. The new hybrid market will increase the ease with which competitive and highly specialized markets can be created. In fact, in the future, a large, high-growth company such as Microsoft could trade its own stock and, in effect, set up its own market. We believe that in the end, the value of connecting these “pools of liquidity” will overshadow the benefits of being on your own. So while we want to encourage competition and innovation, we also want to ensure that we don’t create “islands” of knowledge, information, and trading activity and ultimately end up fragmenting the market.

A *Red Herring* reporter echoed Ketchum’s concerns as he compared the evolution of business markets to the evolution of biological systems.³¹

Markets usually evolve in the way that I always envisioned complex molecular compounds forming: lots of seething, whizzing protons and neutrons bang into each other and ultimately a few large nuclei form (the market leaders), with much smaller electrons zipping around outside them.

³¹Fitzgerald, “Postcard from the Future: Consolidation or Dissolution?” *Red Herring* (www.redherring.com), July 26, 2001.

[Some markets, however,] form a different sort of compound . . . They become badly splintered . . .

As the birthday celebration wound to a close,⁴ NJI executives and their partners gathered together to celebrate the accomplishments of the past two years even as they looked ahead to the challenges they would face in the years ahead. Saeki summarized both the challenges and the opportunity:

Whenever I talk with business executives, I stress how important Nasdaq Japan is to this country. We need to change the country’s financial infrastructure and open it to the

world. We need to begin by creating more liquidity in our market than the Tokyo Stock Exchange. Our market must be viewed as more active, more transparent, and more fair than any other market. Once we have created liquidity inside Japan, we need to change how we interface with the rest of the world. We need to make Japan a leader in the world financial community—without losing what is important to Japan. This is my desire—my challenge. And this is why I jumped into this company when Son-San started knocking on my door. “Ted, we’ve got to change this country,” he said. “This is our opportunity.” He touched my heart and he touched my soul. I think we are going to get there.