



Market Profile- SAMPLE

Understanding the dynamics of a foreign market is critical to successful entry into that country. Kanabo Consulting has extensive experience working for US and Japanese companies during the research and due diligence phase of strategic Pacific expansion. Our clients' needs vary, so when we produce a "market profile" report, our main objective is provide only the information strategic to the operation at hand. Below you'll find some **sample sections from an actual client project**. For questions about this sample or to inquiry about our market profile service, please feel free to contact us at info@kanaboconsulting.com

Project Summary	
Country	Japan
Client	Major US Semiconductor Company
Project Objective	Overall Assessment of Market
Topics Covered	<ul style="list-style-type: none">• Private Equity Markets• Tax and Legal Environment• Key Players and Market• Human Resource Issues

Private Equity Markets

In Japan, the largest sources of venture capital are corporations (46%), banks (30%), and insurance companies (10%). Japanese venture capital firms allocate a much smaller share of funds to technology companies (35%) than do U.S. venture capitalists (70%). Most Japanese venture capital firms are subsidiaries of large corporations. For example, in 1996, Toyota Motor Corporation created one of Japan's largest venture capital funds (nearly \$400 million) to finance companies inside and outside the Toyota keiretsu. Like most Japanese corporations, Toyota's primary goal for its venture capital unit is not capital gains, but rather the development of new technologies. In 1996, Nippon Telephone and Telegraph, Nippon Life Insurance, Sanyo, and several other large corporations created Nippon Venture Capital Company; to date, it has invested \$64 million in 122 companies inside and outside of Japan. Several other Japanese corporations recently established venture capital arms, including Mitsui and Mitsubishi. Japan's largest venture capital firm is the Japan Associated Finance Company (JAFCO), a publicly traded company founded in 1973 and associated with the Nomura Securities house.

Japan's Ministry of Finance maintains tight regulation of financial markets limiting the ability of Japanese entrepreneurs to obtain capital. Japanese banks are also often reluctant to lend to new businesses since bank lending is often contingent on ownership of land as collateral and few entrepreneurs can afford Japan's high-priced real estate.



Tax and Legal Environment

While Japanese entrepreneurs confront a high tax rate that can take 50% of taxable income, the Japanese government has begun to take steps to increase support for Japanese entrepreneurs. In 1991, Japan established JASDAQ, a stock market designed for start-up firms that is modeled on NASDAQ. In 1995, Japan approved the use of stock options and, in 1997, amended tax laws to make options more attractive to employees at Japanese start-ups.

MITI has created a program that provides grants of up to \$500,000 to start-ups and another program that provides loan guarantees. In the last several years, most other Japanese government ministries, as well as local and regional governments, have also adopted programs to encourage Japanese entrepreneurs, including setting up venture business incubator programs (based on the U.S. model) that bring capital, facilities, and entrepreneurs together. MITI has also rescinded the law prohibiting Japanese venture capitalists from serving on and appointing others to the boards of their portfolio companies. MITI and the Finance Ministry also are drafting a limited liability law (similar to that which exists in the United States) that would enable pension funds and other institutional investors to invest in venture capital funds by providing some protection from poor investments.

It should be noted that the cost of doing business in Japan is considered to be higher than for other parts of the Asia Pacific region. As well while there are no import duties on semiconductors per se, depending on the product electronics specification standards and/or packaging requirements may be viewed as non-tariff barriers. For example, Japan's Electronic Industries Association of Japan (EIAJ) standards occasionally vary from international standards, and Japanese end users prefer that products generally meet EIAJ standards. Thus independent design houses will need to work in close partnerships to ensure compliance with either EIAJ standards, customers' specific needs, or both.

Key Players and Market

The important markets for the semiconductor design industry in Japan are: computer/PC peripherals, interactive multimedia systems, digital portable communication systems, digital consumer electronics, and automotive systems. The communications market in particular is especially important due to the phenomenal success of data services such as the i-Mode phones that provide mobile Internet access. Most of the major Japanese silicon vendors are designing new "application processors" which leverage deep-submicron design rules to deliver small devices able to handle MPEG-4, audio, data and other services in phones. Major cellular phone vendors in Japan on the wideband CDMA are developing their own ASICs. Semiconductor companies aim to capitalize on Japan's wireless communications market with companies such as NTT Docomo Inc., Japan's top wireless provider, preparing to roll out 3G services based on wideband CDMA in 2001.

Chip set makers such as Analog Devices Inc. aim to increase their presence in Japan. ADI, which has also sold baseband chip sets to companies like Kyocera, Toshiba and Mitsubishi, expects to add at least 15 new designers and field engineers to its wireless design center, taking its wireless engineering head count to 75 people. As well, it was reported in July 200 that LSI Logic, Lucent Technologies, Motorola and Texas Instruments increased employment in their Japanese in wireless design centers in anticipation of the move to third-generation cellular services. Intel and Philips were reported to be leveraging partnerships to produce 3G chip sets.



Top Companies:

The top companies in Japan include all the major electronics companies such as Hitachi, NEC, Toshiba, Canon, Fujitsu, Mitsubishi, Matsushita, Seiko-Epson, and Oki Electric. This section discusses a few of the partnerships and initiatives of such companies.

In 1999, Sharp agreed with Conexant Systems to expand their collaborative efforts in developing next-generation 0.15 μ m process technologies for next-generation digital multi-media appliances (LCD digital TVs, electronic books, "silicon movies," home servers, cellular phones with videophone functions, wearable personal computers, etc.). Meanwhile the Lucent Technologies Microelectronics Group (formerly AT&T Microelectronics), which had two major base offices in Asia has now consolidated the functions of the two offices and established its regional headquarters in Tokyo. Lucent's customers design products for focused market niches, such as cellular and wireless communications, netcomm (Network telecommunications products), PC, multimedia and consumer products and its field application engineers support design activity in these areas. IBM Japan has expanded its semiconductor division to around 100 design engineers. It is reported to be moving slowly in the area of integration, preferring to develop discrete devices before integrating them onto one chip.

Zuken Inc., which is one of Japan's major pc-board CAD suppliers teamed with U.S.-based startup LightSpeed Semiconductor in a December 1998 distribution deal to give Japanese ASIC designers access to LightSpeed's fast-turnaround gate-array architecture. Zuken also took an equity stake in LightSpeed for an undisclosed amount and acquired the exclusive distribution rights to LightSpeed's products in Japan. In recent years Zuken has been expanding into ASIC design though it has been distributing Aptix emulation tools and providing FPGA design services since 1992. Zuken also hopes to leverage LightSpeed as a vehicle to gain access to U.S.-based IP suppliers as part of a plan to establish a SOC design center. Zuken plans to spend \$10 million over the next five years on the venture.

An important distributor in the Japanese market is Macnica Inc., which was founded in 1972 and is one of the leading independent distributors and representatives in Japan.

Macnica is a key distributor for Altera and Lexra. A subsidiary of Paltek Corporation, Spinnaker Systems Inc. has an SOC Design Center to aid customers with design services and turn-key-solutions while maintaining partnerships with foundries to supply CoT chips and ASSP chips to its clients. As of September 1, 2000, Spinnaker had 39 employees with plans to expand to 50 employees by late 2000. Some major U.S. semiconductor equipment suppliers in Japan include Applied Materials, Watkins-Johnson, Varian, KLA Instruments, Kulicke & Soffa, Novellus, and Lam Research.

Human Resource Issues

In summer 2000, the U.K. government's Department of Trade and Industry (DTI) led a mission to Japan which concluded that there is a serious shortage of engineers capable of SOC design, a fact that is aggravated by an almost total absence of independent local design houses. The mission was organized by the Semiconductor Business Association and included specialists from ARM Holdings, Innotec, NEuW, Plextek and the University of Sheffield. Discussions were held with firms such as Fujitsu, Hitachi, Mitsubishi, Rohm, Sony and Toshiba. The mission could well result in increased SoC collaboration between Japan and the UK, leading to joint product development work in areas such as Bluetooth devices and systems and mobile handsets. The mission members concluded that Japan offers good opportunities for UK design houses since there are few small design start-ups there. Also embedded software and system applications are not particularly well covered.