Massachusetts Technology Development Corporation

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The Massachusetts Technology Development Corporation (MTDC), a state-sponsored venture capital company, is one of several quasi-public agencies responsible for administering the state’s technology development programs. Established by the Massachusetts Legislature in 1978, MTDC has a longer track record than most state venture capital corporations. Since 1988, MTDC has been entirely self-supporting.

Background

The MTDC was created to address the capital gap for start-up companies and to encourage the growth of early-stage technology firms. MTDC was one of a number of programs put in place in Massachusetts in the late 1970’s in response to a major economic recession that occurred during the 1974 – 1976 time period. Recognizing that Massachusetts would not be in a position to compete for manufacturing jobs on the basis of lower costs, the state decided to pursue an economic development strategy that sought to grow innovative companies, companies that require access to early stage, start-up capital. Although Massachusetts today is a major center of venture capital activity, there was very little venture capital available nationally in the late 1970s. It was only after a number of policy changes at the federal level, which included reducing the capital gains tax and modifying ERISA, that venture capital became more widely available. Today, the venture capital market has grown so large that the increase in the size of venture funds has led firms to make ever-larger investments. As a result, it remains difficult to obtain small amounts of early-stage capital. The problem is compounded for start-up technology companies whose founders may have little experience in running businesses. It is this capital gap that MTDC addresses.
Throughout its existence, MTDC has pursued four basic objectives:

- to help create jobs in technology-based industries in Massachusetts;
- to attract and leverage private investment in Massachusetts companies;
- to foster the application of technological innovations where Massachusetts companies are, or can be, leaders; and
- to nurture entrepreneurship among Massachusetts citizens.

Initial funding for MTDC came from a $2 million grant awarded by the Economic Development Administration, U.S. Department of Commerce, in 1979. These funds were used to establish a revolving loan fund for Massachusetts companies with operations involving a significant amount of technology. These companies also were required to be located in an EDA eligible area. In 1981, EDA awarded an additional $1 million for a second revolving loan fund to assist in the creation and development of small, innovative, high-technology companies in Massachusetts. The Commonwealth of Massachusetts provided $1 million in matching funds. Each year from 1982 to 1988, the Commonwealth appropriated additional funds for a total of $4.2 million.

**Program Description**

MTDC operates two investment programs, its Traditional Fund and the Commonwealth Fund Investment Program. Through its Traditional Fund, the Corporation makes investments only in companies that meet the following criteria: 1) the company must be located in, or agree to locate in, Massachusetts, 2) the company’s business must be technology-based and sufficiently innovative to provide a competitive advantage, 3) the investment must result in significant employment growth, 4) the company must demonstrate that it is having difficulty obtaining private capital, or securing investments on terms that would make the company successful, (for example, while a company may be able to secure funds from private investors, it may be necessary to involve an institutional investor in order to ensure that follow-on capital will be available when it is needed) and, 5) the company must be able to demonstrate the potential for a high return on investment. The same criteria apply to the Commonwealth Fund, with the exception that there need be no difficulty in raising other capital.

**MTDC’s Traditional Investment Fund**

MTDC focuses on companies seeking small amounts of venture capital, in the range of $1 - 3 million. Private venture capital funds, because of the size of their total fund, which can range from $200 to $800 million, usually are not interested in making such small investments. MTDC also differs from private venture capital firms in that they are more willing to invest in an entrepreneur who has yet to establish a proven track record. Approximately 80 percent of MTDC’s investments are made in start-up companies.
MTDC seeks to make all of its investments on a co-venture basis with private sector investors, including venture capital firms, banks, limited partnerships, and individual and corporate investors. Investments can range up to $500,000, but typically, MTDC provides $300,000 - $500,000 of a $1 million - $3 million investment. Private co-investors provide the balance. Investments are made as equity, debt, or a combination of both. MTDC’s staff negotiates the exact terms of the investment with each company.

MTDC invests in companies with proprietary technology-based products. MTDC’s current portfolio of companies includes firms in the following industries: computer software and services, computer equipment and peripherals, industrial automation systems and equipment, biomedical instruments and devices, telecommunications and data communications, material science and environmental management, and Internet related businesses. MTDC does not invest in biotechnology companies because the total fund is not large enough to meet the significant capital needs of biotechnology firms.

Only one company in which MTDC invested has moved out of state. At the time of the move, the company went public, repaid its debt, and MTDC cashed out its equity in the firm. Out-of-state firms have acquired a few MTDC companies, but in each of these cases, MTDC received either cash or stock in return for its investment.

Applicants for funding must submit a comprehensive business plan that includes information on the company’s products and services, present and future markets for the products and services, and a strategy for achieving and maintaining significant market share. The applicant must provide financial records and background information describing the experience and financial commitments of principals and key managers. Last, the applicant must state the projected growth in employment and other positive economic impacts that would result from an MTDC investment. MTDC staff review the plan, and if it appears to be a potential candidate for an MTDC investment, staff meet with the management and prepare a recommendation for the MTDC Board. The MTDC Board of Directors must approve all investments. MTDC receives about 250 business plans a year, approximately half of which survive the initial screening process. MTDC staff conduct more detailed reviews of approximately 40 plans, ultimately choosing 6 - 8 to recommend for investment.

Commonwealth Fund Investment Program

In 1995, MTDC initiated the Commonwealth Fund Investment Program with a $5 million investment pool. The impetus behind creating the new program was two-fold. First, under the Traditional Investment Fund, MTDC can provide follow-on funding to a company only to protect an earlier investment. The ability to make follow-on investments, which the new fund permits, allows MTDC to maximize its gains on successful investments. Second, MTDC felt the need to raise money
from other sources in order to meet its clients' needs for all stages of financing. As the investments made by private venture capital firms continue to increase in size, start-up companies may need several rounds of financing at varying levels of investment before they are ready to enter the private venture capital market.

The Commonwealth Fund Investment Program, which was authorized by legislation passed in 1993, was capitalized with $3 million from MTDC, and $1 million each from the state’s largest banks, BankBoston and Fleet Bank of Massachusetts. While there was some reluctance on the part of banks to become involved in the program, largely because of the small size of the investment fund, the participating banks have reaped benefits in terms of demonstrating compliance with CRA and have used the program to identify companies that might be good candidates for downstream investments.

This fund makes investments of $200,000 - $300,000 in follow-on financing for early stage companies. Applicants for funding go through the same process as those for the Traditional Investment Fund. The major difference between this fund and the Traditional Fund is that the new program does not require the Board to find that a company is unable to obtain private capital in order to be eligible for an MTDC investment. Each deal, however, must include co-investors.

In FY99, the Corporation made Commonwealth Fund investments totaling $1.144 million in eight companies. Since the fund was initiated, MTDC has invested $4.2 million in 13 companies. MTDC expects to use the Commonwealth Fund Investment Program to raise an additional $10 - $15 million in 2000.

Management Assistance Program

In addition to its investment program, MTDC also provide management assistance to entrepreneurs. Through this program, MTDC staff review an entrepreneur’s business plan, advise the client as to the most feasible options for raising capital from both public and private sources, and help the company locate sources of financing. MTDC provides management assistance services to approximately 40 – 60 companies annually. Assistance is not limited to companies in which MTDC invests; however, the management assistance program is used to identify potential MTDC clients.

Organizational Structure and Staffing

An eleven member Board of Directors, eight of whom are appointed by the Governor and must come from the private sector, governs MTDC. Three public officials, the Secretary of Administration and Finance, the President of the University of Massachusetts, and the Director of the Department of Economic Development, round out the board’s composition. The public members serve as

full voting members and may send a designee to vote on their behalf. The private members are not permitted to send a designee.

MTDC’s management credits its status as a quasi-public organization with enabling MTDC to maintain its focus on seed and early-stage companies and having the ability to attract exceptionally qualified volunteer private sector Board members. Another advantage of being a quasi-public is that MTDC’s investments are exempt from federal and state taxes, allowing the Corporation to invest all gains in companies. However, a disadvantage of being a quasi-public organization is that MTDC is unable to provide the type of compensation to employees that would be provided by a private venture capital firm. As a result, retaining qualified staff has been a challenge.

MTDC currently has a ten member staff, which includes a president, an executive vice-president, one senior investment associate, two investment associates, and five finance and administrative staff, all of whom have backgrounds in commercial banking and business start-up and development. MTDC plans to hire two additional associates in 2000. The staff is responsible for opportunity assessment, corporate analysis and due diligence, and portfolio management. In addition, the staff provides managerial advice and assistance to MTDC client companies. MTDC staff generally do not sit on the boards of client companies but they do attend board meetings for the first three to four years and, in some cases, MTDC may have the right to appoint board members. Staff spend a substantial amount of time, an average of one to one-and-one-half days per week during the first few years, working with each of their portfolio companies.

MTDC has two regional representatives responsible for generating deals originating in Central/Western Massachusetts and Southeastern Massachusetts, areas of the Commonwealth that traditionally have not had as many companies receiving MTDC investments.

**Accomplishments**

From FY 80 through FY 99, MTDC invested $38 million in 90 companies. Of its original investments, MTDC has exited or begun to exit 61 companies. The Corporation’s cumulative rate of return since its beginning is about 17% a year.

As of December 1998, the 55 companies in which MTDC had invested reported that they employed more than 10,000 people and generated an annual payroll of more than $505 million and state tax revenue of more than $24.8 million.

MTDC’s investments also have helped leverage additional private capital. As of June 1999, MTDC’s investment of $38.1 million had initially leveraged $221
million. These same firms raised an additional $266 million in subsequent rounds of investment where MTDC did not participate.

Lessons Learned

MTDC has a 20-year track record and has demonstrated success in investing in and helping to grow new technology-based companies. Lessons learned from MTDC’s experience include:

1. *Develop and concentrate on a core competency.* MTDC developed a core competency in working with start-up, technology-based companies and has continued to focus on this market niche. As the President of MTDC stated: “We know what it takes to start new technology companies with inexperienced entrepreneurs.” By focusing exclusively on high technology start-ups, MTDC has developed an in-depth understanding of the risks involved and has developed tactics to deal with them.

2. *Patience and adaptability are key requirements for success.* MTDC makes long-term, patient investments, often staying with a company for as much as seven to ten years. In some cases, companies have had to change their focus entirely, identify different market niches, or make complete changes in leadership. MTDC is able to work with its portfolio companies to make such changes when they are required.

3. *A fund must have a way of maintaining sufficient deal flow.* MTDC has sustained its deal flow by partnering with other organizations and conducting outreach to the entrepreneurial community. In addition to operating its management assistance program, MTDC co-sponsors venture forums and capital networks. The corporation also is well known to the venture capital and banking community, which refer clients to them.

4. *A rigorous investment decision process is required.* MTDC uses a rigorous, time-tested process to make investment decisions. Its investment associates prepare a standardized investment report, the company is invited to visit with the MTDC staff, an MTDC Board member visits the company, and then the company is invited to meet with the MTDC Board, which has already received and reviewed the investment report. All investments require six positive votes from the Board of Directors.

5. *Increasingly, the ability to provide follow-on funding is critical.* In order to capitalize fully on investments in start-up companies, the
fund must have a mechanism that allows for follow-on investments. The original design of MTDC did not recognize this need. The establishment of the Commonwealth Investment Fund, however, has enabled MTDC to provide follow-on funding.

**Challenges**

One of the key challenges for MTDC, and for any publicly supported venture fund, is staff retention. MTDC often hires and trains investment associates only to have them recruited by private venture firms that can offer significantly greater compensation. In an effort to address this issue, MTDC introduced a bonus and gain sharing compensation plan in 1998 that allows staff to receive additional compensation based on overall performance. Under this plan, up to 20 percent of the net gains in a given year can be put into a gain share pool. The pool is distributed to staff members based on their level of responsibility and a number of additional factors.

Another challenge is that as venture funds have increased in size, fewer private funds are interested in co-investing in small rounds of financing. As a result, MTDC and similar publicly supported funds find that they are working more with private investors. Working with private investors and angel investment networks introduces a new dimension into the investment process.

**Future Plans**

MTDC, which is in the process of raising an additional $10 – 15 million under its Commonwealth Fund Investment Program, plans to continue to invest in technology-based start-up companies. Legislation has been introduced to address a number of technical corrections in MTDC’s enabling legislation. These changes, which include having six members of the eleven member Board of Directors elected by the Board rather than appointed by the Governor and allowing MTDC to create limited liability partnerships, are designed to empower MTDC to access more private capital. Another change is that the size of an initial investment allowed under MTDC’s Traditional program would be increased from $500,000 to $1 million, with a total allowable MTDC investment of $2 million.

**Success Stories**

MTDC has invested in a wide range of successful companies. A recent success story is Andover.Net. This company began in 1992 as a software
publisher; licensing, developing, marketing and distributing packaged software. In 1996, the company refocused its business to develop opportunities in online publishing, licensing and commerce. Today, Andover.Net is the leading Linux/OpenSource destination on the Internet. MTDC invested in the company as a re-start and provided follow-up financing in 1997. In December 1999, the company issued an initial public offering. MTDC’s total investment of $600,000 is currently worth over $20 million. As of January 1999, Andover.Net had 66 employees.

Another MTDC success story is Concord Communications. Headquartered in Marlboro, MA., Concord Communications has provided network management systems for health care providers since 1991. In October 1997, Concord Communications went public. MTDC’s $500,000 investment resulted in a gain of $5 million.

While both Andover.Net and Concord Communications resulted in a significant return over a period of five to six years, other client companies remain in MTDC’s portfolio for longer time periods. Powersoft, which was subsequently acquired by Sybase Inc. (one of the ten largest global independent software companies), remained in MTDC’s portfolio for ten years. MTDC realized a $7 million gain on its $250,000 investment.

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