Corporate venture capital in the computer industry

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INTRODUCTION

Venture capital as practiced by industrial firms differs from conventional venture investing in that motivations beyond strictly financial reward are usually present. Typically, a corporate venture capitalist will be seeking to gain exposure to new markets/technologies, generate new products, develop acquisition candidates, and/or assist a supplier/customer. Corporations also may utilize venture capital concepts in spinning off businesses which are not appropriately kept inside, or in initiating new ventures internally.

While the role of venture capital in the development of the computer industry has been profound from its very inception, in recent years corporations have been playing an increasingly more active role in the financing of new computer-related enterprises. This paper will provide an overall review of the participation of venture capitalists in the computer industry, combined with a description of Xerox' ongoing involvement as a corporate venture capitalist.

HISTORIC REVIEW OF VENTURE CAPITAL

It is not possible to determine exactly the inception of the organized venture capital industry in the U.S. In fact, groups of domestic and European investors in the late nineteenth and early twentieth centuries were responsible for financing development of several new industries including railroads, steel, petroleum and glass. However, a landmark date for the computer industry was 1911, when a group of wealthy individuals financed and merged three weak companies, International Time Recording Company, Tabulating Machine Company and Computing Scale Company, into a single entity to manufacture and market office equipment. They were wise enough to recruit Thomas Watson as its president in 1914. In 1924 the firm's name was changed to International Business Machines.

In the late 1950's and early 1960's a number of successful organizations were formed by large groups leaving the major data processing companies. Examples are: Control Data, founded in 1958 by a group from Univac; Memorex, founded in 1961 by people from Ampex; Scientific Data Systems (later acquired by Xerox), founded in 1964 by Packard-Bell personnel; and Mohawk Data Sciences founded in 1975 by a Univac spin-out. Two successes of this period can be traced to the concept of gathering a number of smaller technological firms under a single corporate wing. Litton Industries, founded in 1952, and Teledyne, founded in 1961, were created in this manner. Other venture capital backed success
stories, such as Digital Equipment and Raychem spun out of non-profit organizations to commercialize new products. Drawn by these large gains, many new groups entered the venture capital field in the 1960’s and 1970’s.

- Small Business Investment Companies (SBIC’s) were authorized by the Small Business Investment Act of 1958. They are corporations, licensed by the Small Business Administration (SBA), an independent government agency, that are provided with tax incentives and government loans of as much as $35 million (up to four times the invested capital) to make equity-type investments in small businesses. While 722 SBIC’s were licensed, and more than 50 raised public funds, few could be considered unqualified successes, and the number of active SBIC’s sank as low as 272 in 1976 before strongly rebounding in recent years.

- A number of new closed-end public venture funds were formed in the late 1960’s and early 1970’s, among them Inventure Capital, Fund of Letters, Value Line Development Capital, Diebold Venture Capital, Price Capital and Source Capital. Most have since left the business. Insurance companies, banks, mutual funds, university endowment funds, and new private pools, some of them using money from foreign investors (including the Rothschilds), became involved in venture capital. Investment bankers also gathered pools of capital for this purpose. From 1969 to 1972 approximately forty venture capital groups with committed assets of almost $500 million announced their formation. In the past eighteen months over $300 million of new monies have been committed to venturing.

- Corporations became active venture capitalists in the 1960’s. However, the decline of the market in 1970 brought about the exit of many corporate venture capitalists, including such major names as: Du Pont, Ford, Alcoa, Union Carbide, Northrop, Scott Paper and Singer, as well as some newer venturers such as Membrex, California Computer, Data Products, Boothe, Electronic Memories, Mohawk Data and Applied Magnetics.

Nevertheless, the survivors of start-up during that period include many familiar names, including several minicomputer companies (such as Data General, General Automation, Microdata and Computer Automation), a few peripheral equipment companies (including Storage Technology, Pertec and Centronics), several timesharing companies (such as Tymshare, Comshare and Rapidata) and a considerable number of semiconductor start-ups (such as Intel, Mostek, American Micro-Systems, Intersil and Advanced Micro Devices).

Some corporate-backed computer industry ventures of this era include: Corning in Four-Phase; TRW in Datapoint; Burroughs in Decision Data; Fujitsu and Nixdorf in Amdahl; American Research and Development (Textron) in Documentation; and Computer Machinery in Digital Computer Controls (now respectively part of Pertec and Data General).

Public interest in the market recovered in 1971 and 1972, as shown in Table I, before almost collapsing entirely in 1974 and 1975, driving others from the business. The availability of venture capital funds from Small Business Investment Companies showed a like decline, and surveys of the non-SBIC portion of the venture capital industry, while less complete, indicate a similar pattern of severe cutbacks in 1974 and 1975.

PRESENT STATUS OF THE VENTURE CAPITAL INDUSTRY

In recent years investments by venture funds have expanded substantially from an estimated $300 million in 1976, to $395 million in 1977 and $500 million during 1978 (according to Stan Pratt, publisher of Venture Capital). Furthermore, there has been a strong influx of additional capital into the hands of new and established venture capital pools, encouraged by recent charges in capital gains rates, Rule 144, ERISA and SBIC rules. It is estimated that the industry now commands about $3.5 billion, divided:

- Private pools—$1.3 billion
- SBIC's—$1.2 billion
- Financial corporations—$0.5 billion
- Industrial corporations—$0.5 billion

The figure for industrial corporations includes funds only under direct control. There has also been a growing tendency for corporations to invest in venture pools managed by others.

Corporations increase their direct role

In the last few years a resurgence of interest in corporate venture capital, fueled by excess corporate liquidity and a relentless toughening of anti-trust oversight, is evident. In addition, the entry of foreign corporations into the field has become a major new factor. Although financial rewards are usually secondary, cor-

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<th>Year</th>
<th>Number of Companies</th>
<th>Total Raised (Millions)</th>
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<td>1968</td>
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porate venture capital funds that have been run by professionals strictly for maximum return, have generally shown 15-20 percent compounded annual returns. However, corporate venture capital can best be considered as another tool to be used for corporate development and should be coordinated with the acquisition, joint venture and licensing activities of the firm. In addition, some elements of public relations and good corporate citizenship may be present in some corporate venture capital programs, particularly those involved with MESBIC (Minority Enterprise Small Business Investment Company) financing.

On the other hand, many corporations have failed as venturers. A recent survey of corporate venture capital organizations made by Tektronix stated that only 7 percent of corporate venture capital organizations regard themselves as being very successful, with over half not even rating themselves as marginal successes. The success rate could be greatly improved if entrants exercised the same degree of planning as they do in their regular business. The difficulties experienced by a corporation seeking to become a venture capitalist usually arise from one of these sources:

**Lack of appropriately skilled people**

A venture capitalist must be entrepreneurially motivated, patient, realistically optimistic, good at negotiation, persuasive and able to evaluate people as well as businesses. Also, he must be more than merely familiar with accounting principles, tax regulations, corporate finance structures, securities analysis, and securities law. Good internal people are generally unwilling to leave a company’s mainstream activities even if possessing the appropriate skills. Experienced people from the outside are difficult to attract without special compensation packages.

**Contradictory rationales**

A corporate venture capital program may find it difficult to act in the best interests of both the investee company and the parent. For example: if the goal of the venture group is to acquire, then equity financing by others is undesirable; if the rationale is an exclusive marketing arrangement or a preferred supplier role, then the investee’s operations may be unduly limited. A desire to have continuous profit increases by the parent is also incompatible with the normal activities of a venture operation.

The entire problem can be exacerbated by an improper reporting structure. For example, having the venture group report to the Vice President of Finance is likely to shift focus to profitability; to the Vice President of R&D to technology; to the Vice President of Corporate Planning to market information, etc.

**Legal problems**

A corporate venturer must be extremely careful to organize his activities so that they will not run afoul of conflict of interest problems, including “fiduciary responsibility” and “corporate opportunity” doctrines. However, several corporations have left the field incorrectly believing that they could not get the strategic benefits they wanted out of a venture activity.

**Inadequate time horizon**

A venture activity usually shows its losses and problems early, with the successes taking more time to develop than anticipated. Unless a commitment is made for at least five to ten years, a corporate venture fund generally gets terminated in its early years.

**A most active list**

Many corporations have made a single venture capital investment, entered into a “new style joint venture” to obtain access to a unique technology, spun-off a single new entity, or found themselves unwittingly with stock in a customer who was unable to pay his bills. The following list, however, describes those industrial companies which seem to be most active in directly providing venture capital to the computer industry, in addition to Xerox.

 Exxon is actively investing in order to provide acquisition candidates in the information processing industry (with additional involvements in materials and energy investments).

 Textron (American Research & Development) continues to be a major participant in the financing of venture situations.

 Continental Telephone has initiated a major new investment program in computers and communications.

 General Electric has invested for financial purposes and also has had the most active spin-out program. Spin-outs are made only when it has been decided not to keep an activity going, and the only alternative is liquidation.

 Technological spin-outs have also been made by Battelle, Bolt Beranek and Newman and Arthur D. Little.

 Fairchild Camera and CTS have invested in customers, and Control Data, Burroughs, NCR and Motorola have invested in suppliers. Teledyne, ATO and Telesciences are recent entrants into venture capital.

 Active foreign companies investing for technological reasons include: Northern Telecom, Siemens, Nippon Electric, Cable & Wireless, Konishoroku, BASF, and Fujitsu. Other recent foreign investors in semiconductor companies include: Robert Bosch, Lucas Ind., Jaeger and VDO.

 Some of the more recent beneficiaries of this upsurge of corporate investments have included:

 - **Computers** - Cray, Tandem, Modular Computer, Apple, Qantel, Magnuson;
- **Data Communications** - Paradyne, Computer Communications, Tran;
- **Telecommunications** - MCI, Valtec, Danray, Digital Telephone;
- **Peripherals** - Data Royal, Silonics, Qume;

From the collection of the Computer History Museum (www.computerhistory.org)
Corporations should be preferred investors

Corporate venture capitalists believe they should be preferred investors. In addition to the usual financial and strategic assistance given by conventional venture capitalists, corporations also can offer:

- Assistance in almost all facets of corporate endeavor, e.g., setting up financial systems, qualifying suppliers, meeting government regulations;
- Credibility with customers, banks and other investors both from a technical and financial standpoint;
- Relief, if desired, from the full range of corporate activities, e.g., the corporate investor may take on marketing responsibilities or may license the product;
- Immediate income from an R&D or consulting contract if appropriate;
- Customer interface with an interested party;
- An investor with an infinite lifetime, though his time horizon for profitability will be shorter;
- Additional capital where warranted;
- A merger partner, if and when appropriate;
- A more flexible financing package since return on investment may not be the only criterion.

Selecting a specific partner

There are several points to consider in selecting a corporate venture capitalist to work with.

Compatibility of goals

Corporations make venture capital investments for diverse reasons including: assisting potential suppliers or customers, gaining exposure to new technologies/markets, growing possible acquisitions, and obtaining a financial return. The business interests of both parties can either reinforce the possibility of success or may lead to future conflicts.

Longevity

Many corporate venture groups have been shut down due to lack of success or even shifts in strategy. A failure of continuing support will probably arise at a poor time in the economy for raising funds from others.

People

If the corporate group is not managed by experienced venturers unnecessary conflicts may develop. Also, there may be a desire for the staff to return to a career path inside the corporation, thereby requiring continual efforts at education.

Flexibility

The route necessary for decision-making may be short or tortuous. It is essential for the investee corporation to ensure that crises can be met quickly.

Interference

Unless the relationship is well-structured, the corporation may attempt to require conventional reporting and staff policies which are inappropriate for a venture situation. Curiosity visits may also be a problem.

Time horizon

Not all corporate venture capitalists realize the length of time that may be necessary to bring a new business to profitability. If your investors do not react rationally to unforeseen slippage, then the venture will be in substantial difficulty.

Style

Corporate venture groups, like noncorporate ones, differ in attitudes, approaches and interests. A feeling of sympatico, which should have developed before the investment, is generally extremely helpful to a successful relationship.

VENTURE INVESTING BY XEROX

The approach taken by the Xerox Corporation is one of providing a supplement to ongoing corporate activities and as a way of understanding new areas of interest. In our “venturing” we seek out and endeavor to work with those entrepreneurs forging ahead in the new, the advancing areas, of technology that will or could impact the business environment in which Xerox is or will be functioning.

To understand the Xerox philosophy of venturing one should read the words quoted by Joseph C. Wilson, the Chief Executive Officer of Xerox when it grew from a $15 million company to one doing over $1 billion in revenues, at a John Diebold Lecture at the Harvard Business School in 1969:

“Entrepreneurship, by its nature abhors channels ... it has tended to be individualistic, innovative, venturesome.”

and the entrepreneur is the

“... one who assumes both the risk and the management of an enterprise, and who hires managers, provides guidelines for their functions, and performs within the organization.
"He is a man who has ideas—basic, germinal ideas, not vagrant thoughts—and who has the daring and the confidence to use them. He is the manager who steps out beyond the confines of a specific area of corporate responsibility. He creates, he pioneers, not just to be different, but simply because this sort of activity expresses his whole being.

"Ideas alone are not enough. Those who have them must know what to do with them, and how to translate them into reality."

No one enterprise can claim all the bright thoughts and entrepreneurial talent in existence. By venture investing Xerox expects to keep in contact with this talent elsewhere and thus stay abreast of others' perception of the newest aspects of their technology and thereby gain an understanding of how technology is evolving in selected business areas.

Xerox has had a series of experiences with venture investing. The Corporation has participated in this industry either on a part-time basis or with a combination of internal personnel and outside consultants who jointly located, negotiated, and followed the investments made. Those historic investments were generally related, directly or indirectly, to some of the business areas in which the Corporation was engaged. In one case in particular the investee company proved quite successful. In other situations the association was not as rewarding. Near the end of 1975 the conclusion was reached to reformulate the venture investment activity and place it in closer proximity to the long range corporate development function. Collectively, these operations became the Xerox Development Corporation ("XDC"), a wholly-owned subsidiary of the Xerox Corporation.

XDC is charged with the responsibility for identifying opportunities and growth areas for Xerox beyond its present business thrust. Since its founding it has been engaged in acquisitions, venture investments, divestitures, licensing of technologies, and helping to shape this strategic direction the company intends to take in the future. XDC was instrumental in establishing XTEN, a plan now before the Federal Communications Commission which, if approved, would set aside a band of radio frequencies for document distribution, data transmission and teleconferencing.

The early months of XDC were spent gathering its full-time professional staff. Those professionals engaged in venture investments have come from the venture capital community. They are experienced in understanding and relating to entrepreneurs and the early cycles of a new enterprise. The close working proximity to the other members of the XDC group, some of whom are drawn from internal sources, provides a ready means of identifying and gaining access to corporate resources and quicker acceptance of the function and its goals.

XDC is organized in the style of a partnership. Rather than call the members "Partner" they are referred to as "Principal" to reflect that the organization is the wholly-owned subsidiary of its parent the Xerox Corporation.

The individuals engaged in venture investing are themselves organized as a "little" partnership. New opportunities are regularly discussed as are the analyses of investment candidates, and the progress of the enterprises already invested in. This group review is the first point in the investment process. This little partnership is also the staff responsible for aiding the health of the investee companies and guiding the relationships that may develop with the Corporation.

Should an investment opportunity appear promising, other elements of the "larger" partnership are brought in to assist in the further study of the enterprise. Collectively the various aspects and interrelationships of a potential investment are threshed out and understood from the alternative viewpoints. With that expanded understanding a decision is reached by the venture investment group to proceed or not, and if so on what terms and conditions. Should the decision to proceed be made and satisfactory terms negotiated then final approval, on all except the largest of investments, is made within XDC by the concurrence of the venture investment group and the Chairman of XDC. Large investments are approved, in addition, by the Chairman and Chief Executive Officer of Xerox.

The principal criteria against which a new investment opportunity is measured at Xerox are: (1) the entrepreneurial quality of the management, (2) the nature and relevance of the enterprise to the current or prospective business environment of the parent Corporation, and (3) the potential for building a significant business.

Most industrial venture groups espouse similar measures. What often tends to happen is that the second criterion mentioned—relevance of technology to the parent entity—drives out or reduces consideration of the other points. It is here that the professional staffing and the mind set and instincts of that staff become increasingly significant.

If the long-standing orientation of the people making the investment decision is to relate to entrepreneurs and to build a profitable business the analytical approach and the attractiveness of situations will not easily or naturally be directed toward technical interest as a basis of advancing funds. Certainly that orientation must be modified (hence the value of relating to others in corporate long-range planning and mergers and acquisitions), but it should not be so changed as to lose sight of the fundamental nature of business—to serve the needs of the marketplace. The ultimate reasons for venturing by an industrial entity—to open alternative channels in order to accomplish a given task; to relate to those aspects of its environment which the parent lacks the resources (men, material, motivation, time, or money) to accomplish itself or within its own structure; and to be open to new ideas from others—mandate commercial success. It is only appropriate therefore that the probability of commercial success be a significant criterion. Such probability is derived from an analysis of the proposed business plan.

The definition of what falls within the area of relevance to the parent Corporation is a subjective judgment. For our own part we have attempted to understand the businesses the Corporation is in, best summarized as information handling systems, and project the changes that will or could occur. Further, we have endeavored to identify the subsystems that are the building blocks of those larger systems and the impact they have on the total configuration. The sum of this body of knowledge lets one see how various suggestions
relate, or could relate, to the overall businesses of Xerox. Specifically what this means is that oil wells and real estate are out of consideration; and memory devices, electronic components, and communications equipment are in for consideration.

What is often confused with criteria—the specific information that should be provided or will be requested in evaluating a given situation—should not be overlooked. There is no absolutely correct way to prepare a business plan. Several excellent discussions on the preparation of a business plan are available in most libraries. What the plan and the general information made available will do is provide a means of measuring management and evaluating their skills and strategies. The plan will show: (1) the depth of understanding of the particular business; (2) a sense of organization and direction; (3) a perception of the marketplace, its needs, and means and timetable for meeting those needs; (4) the risks and problems in reaching the market with a product successfully.

Accordingly the following should be provided, described or otherwise explained:

- a market definition and survey—what are the users' needs, what are their reactions to the product, who are the competitors and what are their capabilities, and estimated share potential for the enterprise;
- the product—what are its qualities, its life expectancy, how does it meet user needs, and how does it compare to competitive offerings;
- the operating plan—including timetable, achievement milestones, and manning requirements;
- the financial plan—how are the financial needs of the enterprise to be met;
- management—background, reputation, past performance.

Personal contact in conjunction with the plan will answer some of the following issues regarding management: (1) the level of drive/motivation to achieve; (2) resourcefulness in meeting and dealing with the unexpected; (3) credibility as a leader; (4) judgment—the ability to identify significant milestones in measuring the company's progress and act according to achievement against those milestones.

Being the venture investing affiliate of an industrial organization brings its own special sensitivities which must be kept in mind in relating with other businesses as a minority owner. These areas of concern are associated with the pragmatic means of building a rapport and the mechanics of the formal investment. In structuring a relationship there is no such thing as a typical investment for us at Xerox. Each opportunity is studied on its own merits. Each negotiation is tailored to the facts of the particular situation. Each investment is followed with a recognition of, or attempt to recognize, the individual characteristics of the industry, the people involved, and the inherent "ups and downs" of any new enterprise.

For our own part Xerox does not seek a venture investment situation wherein it will play the dominant role or attempt to control the course and direction of the enterprise. This is not to say we will not give advice or assistance. It does say we believe strongly in the entrepreneur. That the entrepreneurial spirit is essential to innovation and the resourcefulness to deal quickly and successfully with the unexpected. To take control and eliminate the incentives for success would greatly suppress that spirit and defeat the initial purpose of the investment.

We do not take seats on the Board of Directors of investee companies. We do negotiate the right to visit at reasonable times and to attend Board meetings. A provision of the agreement will provide for regular financial reporting.

The investment is not a prelude to acquisition by Xerox. This may ultimately come about; to date it hasn't. If such a turn of events materializes it will because the entrepreneurial management wants such a merger, not because it has been mandated with the original funding.

The Xerox approach to venture investing is the development of a mutually rewarding relationship. This has meant for us carrying on our activities in the professional manner of the traditional venture capitalist while building channels of understanding between the Corporation and the investee company. It is working well for us. It is predicated on finding the entrepreneur working in an interesting area and supporting his activities. From that, if more is to develop, the parties are mutually free to chart their directions.