THE MANAGEMENT OF INTERNATIONAL VENTURE CAPITAL

Adapted from a presentation by

Louis L. Davis

Chairman, Churchill International, San Francisco
to the National Association of Pension Funds in England
during February, 1984.

This presentation covers a number of aspects of the venture capital industry: Trends it is taking, new roles it should play, and some concerns about the industry, all of which have international implications. There are four primary subjects:

— Trends in Venture Capital in the United States
— Technology without Nationality
— New Opportunities for Venture Capital
— Concerns about the Industry

TRENDS IN VENTURE CAPITAL IN THE UNITED STATES

The venture capital industry in the US is alive and well. Professional venture capital organizations are currently investing in new businesses at a rate of $1.8 billion per year, and one-third of these dollars are going into infant companies. This $1.8 billion represents a 30 per cent increase over the investment rate in 1982.

To sustain this rate of investment, in the first nine months of 1983 US venture capitalists raised $2.5 billion — more than three times the amount raised in all of 1980, just four years ago. About 15 per cent of this capital happens to be coming from Europe.

Dollars invested by venture capitalists are very helpful to the economy and employment. The General Accounting Office in the United States did a study of 72 companies which obtained some $209 million in venture money during the last decade. They found that this money directly generated 130,000 jobs. That is a $1607 one-time investment to create one job. At the same ratio of dollars to jobs, over one million jobs per year will be created at today's level of venture capital investment in the US.

Accompanying this unprecedented growth are three trends which are going to be mirrored on the world scene.

First, the traditional areas of new technology growth in the United States are expanding geographically. Silicon Valley in California is now labelled as "mature", due to crowding and a growing lack of industrial space for small companies. On the other hand, Route 128 outside Boston is experiencing a resurgence of growth and developing centres of technology can be found in the East from Florida to southern New Hampshire. In the West, Southern California and Arizona are rapidly developing a technology character. In Texas, the Houston-San Antonio-Dallas crescent is becoming a major focus for new technology companies, although growth there will take some time, because there is not yet a sufficient base of university graduates.

Each major technology area has a character all its own, and offers a variety of investment possibilities. Silicon Valley is well-known for its development of basic, building-block electronics and computer technology. It is here that semi-conductor and computer investments are made. Route 128 is focusing on software to integrate off-the-shelf electronic components and computer technology, and offers investments in artificial intelligence and systems using microprocessors. Texas entrepreneurs are concentrating on applications of computers and software in telecommunications and medical instrumentation, and are developing silicon wafer foundries.

It is no surprise that venture capital companies are concentrated in these technology areas. In 1982, half of the top 100 most active venture capital investors were about equally divided between Silicon Valley and the New England area. For venture capital firms investing in small to medium-size new-technology companies, it is highly desirable to have investment offices where the action is. In the case of Churchill International, we now have investment offices in Menlo Park, California, and Weston (Boston), Massachusetts, and will open an office in Austin, Texas during 1984. This places us near

the types of technology in which we want to invest, and permits us to practice the all essential "hands-on" management of our portfolio companies.

A second trend in the US is that academics are now permitted to become involved in new-technology companies so long as they are not a part of operating management. The Massachusetts Institute of Technology has long embraced this policy, and has spun off more than 700 new-technology companies over the years. In a major change of policy, Harvard University recently has approved such activity by its scientists.

This means that selected research projects can be moved out of the university laboratories and into development for industrial and commercial purposes, which is happening. Last year, an entrepreneurial manager in Massachusetts took advantage of MIT and Harvard policy, and created a company with world-class scientists in artificial intelligence.

Churchill International invested in this company, Thinking Machines Corporation, which we hope will be a model for bringing critical research from the laboratory into industrial and commercial development stages. In the model, the venture capitalist can act as the catalyst to help create "critical mass", i.e., bring sufficient resources of technology, management and money together to develop a viable product from a research area. The academics remain on their university faculties, but they own a portion of the company created and work exclusively for that company. Professional management is utilized to guide the business.

In the case of our firm's involvement, we also will provide connections with off-shore companies for joint venture projects which Thinking Machines Corporation will require as it grows. This model has significant international application potential, particularly in the English speaking world, where there have been substantial research achievements.

Three years ago I was asked by Sir Keith Joseph, the then Secretary of State for Industry, to do a brief survey of research and development technology in the UK. That survey found three problems needing solution:

First, the survey showed that researchers in university, independent and industrial laboratories are all working toward different objectives. One must "publish or perish," another is doing research for the sake of doing research, and the last must produce a product for the company. These different objectives each led to excellent products which, inevitably, were too late for the marketplace.

Second, there was a great reluctance by professors to leave their academic environment to face the risks of failure in an entrepreneurial venture, especially since it was difficult to return to the university.

Finally, there was really no "exit mechanism" for any risk capital which might find its way to supporting a new technology company.

Today, one of those UK problems has been solved through the Unlisted Securities Market (USM), which provides an exit mechanism for risk capital. There remain the problems of moving new ideas out of the laboratories and into the marketplace in a timely fashion, and removing some of the risk for academics who would be entrepreneurs. Churchill International would submit that the suggested model would at least facilitate the solution to the problem of bringing university research into the marketplace in a timely way.

The third trend in US venture capital companies is that we are hiring fewer new MBAs and financial graduates, and are looking for people with operating and technology experience to manage our investment pools. Our own company has learned that selecting investments and writing cheques is the easier part of the venture capitalist's job. The difficult part is influencing the success of an investee company operationally and strategically, what we call practising "hands-on" management. It amounts to much more than just holding a seat on the Board of Directors. On the other hand, we are careful to permit operating flexibility to operating management and get involved in day-to-day operations only when absolutely necessary. Our philosophy, and that of a growing number of venture capital firms, is that you can't help the small company if you haven't been there yourself.

An interesting example of this trend may be found in two US venture capital firms, the Encore Group and Portola Venture Funds. These firms were started by former high-level executives from big business who had made their marks and money and now invest in small companies which also get the benefit of their years of experience. While I applaud the change, I must say that I remain sceptical about the approach.

It should be emphasised that small business management is not just big business management scaled down in size. The skills needed to run a big business are quite different from those needed to manage an entrepreneurial venture. The difference is that the professional manager is skilled at protecting resources while the entrepreneurial manager is skilled at creating them. The entrepreneur is at his best when

he can still control all aspects of his company. That is why so many entrepreneurs have been removed from the top spot when their companies grew too large for their talents. There is an interesting analogy in the Apollo space program in the sixties. At Rockwell International, builder of the command module and other parts of the Apollo "stack", there was a different program manager for each major phase of the program — concept, design and production. Each program manager was ideally suited for the phase of the program he led, but not the others. This suiting of phase to manager extended into the engineering and manufacturing functions as well.

The venture capitalist who practices "hands-on" management must understand this. The venture capitalist must know when to remove incompetent management in order to protect his investment. This, incidentally, makes the venture capital community a very good source of management positions in the US.

TECHNOLOGY WITHOUT NATIONALITY

The development and spread of new technology in the United States is part of a world-wide phenomenon. It can be said that new technology does not have a nationality. The venture capital community is becoming aware of this. For example, as part of our annual planning for 1984, we selected the technology area of advanced materials to examine for potential investment and, as is our practice, assigned our research staff to study the market, not just in the US, but world-wide. The results of the study were interesting from two standpoints. First, advanced materials technologies are relatively few, and second, the area of ceramics is by far the most advanced in development. In pursuing this revelation, we found that West Germany and Japan are considerably ahead in the development of ceramic materials for new industrial uses. As a result, we are seeking investments in companies in West Germany and Japan.

The same can be said of a variety of new technologies which are arising in the UK, West Germany, France, Sweden, and any number of other free world countries. We recently invested in a company in the US, called Maxitron, which is producing programmable controllers for factory automation developed at a cost of $50 million by Telemechanique Electrique in France using technology originated in Santa Clara, California.

Of course, the reason that technology is without nationality is that the market for new technology is world-wide. The purely national market in smaller countries is not sufficient to support new technology companies for very long. Today's entrepreneur and today's new technology companies must look to the world market-place if they are to reach their full potential and prosper. This is as true for the US entrepreneur as it is for one in the UK or West Germany or Japan.

This means that the venture capitalist must be internationally oriented. To develop this orientation, the venture capitalist must have nationally based "exit mechanisms," a means to get his money out. The Over-the-Counter (OTC) market in the US serves this purpose admirably, as does the Unlisted Securities Market (USM) in the UK. Other countries are beginning to follow suit in developing OTC/USM-type exit mechanisms. West Germany, France and Japan already have infant OTC/USM-type markets. To exploit this potential, our firm has recently formed a partnership with a major West German industrial company to invest in Europe, Japan and the United States.

International orientation for the venture capitalist means more than just the availability of national exit mechanisms, however. Our company strongly believes that venture capital must help small companies with new technology become "transnational", that is, enter the international marketplace. To do this, the venture capital company must become a "transnational catalyst", promoting international joint ventures in new technology marketing and manufacturing. Being a transnational catalyst effectively becomes a way of doing business. Our firm, for example, pays careful attention to a company's technology, products, and management, plus its international potentials, prior to any investment.

When Churchill International was founded in 1978, we determined to be international in scope. We set out to build an international network of partners and associates. To our good fortune, we have been able to do just that with a major international pension fund being a cornerstone of our network, which now extends from the Middle East and West Germany to the Western Pacific Basin.

NEW OPPORTUNITIES FOR VENTURE CAPITAL

Even if venture capitalists open new investment offices and become internationally oriented, the industry itself remains relatively passive in character. Generally speaking, the entrepreneur looks for venture capital, not vice versa. We talk about "deal flow" because the deals come to us.

The development of technological innovation is almost accidental. The entrepreneur with a new idea

may or may not emerge to seek money. If he emerges, he may or may not find a backer. Churchill International turns down dozens of requests for capital for every company we consider seriously. And we invest in very few of the companies we consider seriously.

We can no longer afford to finance innovation by accident. It is time that the venture capitalist took very seriously his role as a catalyst, and became an active creator of technological development. That is, the venture capitalist should consider strategies to assist in the process of technological innovation or in the transfer of newly created technologies, either into the mature industries or into different parts of the globe.

The time is right because we are in the beginnings of a technogical revolution.. The cause of this revolution is the microprocessor. The microprocessor industry was developed as an advanced technology and has continued to develop more advanced technology and processes. The key, however, is in the application of advanced technology, and the applications have simply not caught up with the technology. This places the venture capitalist in the unique position to help create a structure for the emergence of microprocessor-based innovation.

With this in mind, three remarkable opportunities for the venture capitalist can be seen.

The first opportunity I have already mentioned — bringing university research into the development stage for commercial and industrial applications. With the possible exception of the field of biotechnology, the microprocessor probably lies behind or is closely allied to most of the potentially marketable research being done in university laboratories. The venture capitalist has the opportunity to create the "critical mass" structure to draw research out of the university laboratory and get it into the commercial/industrial marketplace. This must be done carefully and selectively, but it can be done. In fact, we are working now with a group of scientists from the University of California at Berkeley to establish just such a critical mass structure of technology, management and money for the area of advanced materials.

The second opportunity for venture capitalists is somewhat similar to the first. I believe that venture capital can help create critical mass to bring ideas from industrial research into the marketplace. Large companies with technology research organisations often choose not to bring resources to bear on ideas which are not tied to their main product stream, but which could be profitable if developed outside the corporate shell. This can be done by creating a new company or by acquiring part of an existing small company. We are currently working along these lines with a major United Kingdom electronics company.

The third opportunity for venture capitalists is perhaps the most exciting. Traditional wisdom says that venture capital must go into "sunrise" industries as opposed to the older so-called "sunset" industries. This leads to a seemingly infinite number of venture capitalists looking at a very finite number of "sunrise" companies to invest in.

I submit that we venture capitalists must look carefully at the aging, virtually obsolete industries where the microprocessor will create a renaissance. Companies in these older industries, particularly in the 10 to 60 million turnover range, are going to provide excellent venture opportunities as the microprocessor is put to work.

The pump industry is a prime example. A microprocessor vertically integrated into a pump transforms a mechanical device into a control system. It changes pump applications in both the consumer and industrial areas. We recently invested in Kronos, a new company in the venerable and technologically obsolete timekeeping industry. Kronos' use of the microprocessor in timekeeping equipment has changed the function from timekeeping to job and cost control, and will have a lasting effect on industrial timekeeping. Venture capital can help do a lot of revitalisation of "sunset" industries and realise significant returns for the effort.

CONCERNS ABOUT THE VENTURE CAPITAL INDUSTRY

Until recently, venture capitalists have been managing relatively small amounts of money. Today, however, investment pools can reach well into nine figures and there is reason to be concerned about the management of venture capital companies themselves. As portfolios grow and assets under management multiply and new offices are opened, intuitive or informal management systems don't suffice.

Churchill International, for example, intends to have 50 small investee companies under management. Currently, we have 30. To help our managers manage those investee companies we must have management systems. But primarily we must have them to discharge our fiduciary responsibility for our partners' assets, which we have invested in risky ventures and manage for them.

This litany may have a familiar ring to institutional investors, but such complexity is relatively new to the venture capitalist.

To control this complexity, we have found that we must develop our own management systems for accounting and reporting and managing, and our own telecommunications systems for being sure that information, not just data, is communicated accurately and on time to the right people.

In Churchill, the time was when three or four of us could meet daily and calmly discuss this investment or that potential. Today we have over 25 employees and more computers than I care to count. Today, the computers talk calmly to each other.

There are four points which are most critical to venture capital internationally.

First, there are trends in the United States which may be mirrored in other countries. Traditional areas of technology are expanding geographically. Academics are coming out of their laboratories and into the product development world. Venture capitalists are turning more toward having operating experience in their pool managers.

Second, new technology is emerging in many countries. The venture capitalist must become the "transnational catalyst" to help technology transfer. But first, the venture capitalist must go international, and have a basic understanding of the culture of each geographic area.

Third, venture capitalists have at least three remarkable opportunities due to their unique position as investors and the scope of the microprocessor revolution. Venture capitalists can be the catalysts for creating critical mass to bring research out of the university and industrial laboratories and begin considering "sunset" industries for investment potential.

Finally, a new breed of venture capital managers is needed for the challenges that lie ahead, in both the national and international venture capital arenas. To support these managers, a different approach must be taken to the systems and management of the venture capital company itself.

LETTER TO THE EDITOR

MANAGING TECHNOLOGY INVESTMENTS

With respect to management and investment companies, in the April 1984 edition of JASSA you raise the prospect that traditional investment managers may not be competent to act within the MIC investment spectrum. The issue is perhaps not so much a question of the competency of the traditional investment managers but more one of understanding the nature of the businesses into which MIC investments are to be directed. Those businesses have two particular characteristics — first that the businesses are small businesses and secondly that they are growth businesses.

Typically a small business is unable to support, or does not have, the full range of functional specialisation in its management structure. Thus by the very nature of the size of the organisation there are inherent management issues which are not met in larger organisations.

The specific skills required to select, and manage to success, MIC investments include not only the expected one of finance but also, and more importantly, skills and experience in marketing and managing smaller businesses. A priori, we would question the success potential of any MIC which does not have as part of its management team people with practical small business experience.

If there is one thing above all else which we see as being critical to the success of MIC investments it is the active "hands-on" management of investments as opposed to the more traditional passive investment stance which is that taken typically by institutional investors.

It is the requirement for the devotion of significant time and resources to the management of individual investments which deterred a number of the large merchant banks from pursuing an MIC licence.

In addition many Australian financial institutions have reluctance to provide funds to third parties for investment on their behalf (and not unnaturally so, since investment is seen to be an area in which they have expertise). Overseas experience is showing that institutions are devoting a small percentage of their available funds for investment into small business/capital growth funds. We believe that this will happen in due course in Australia on a broad scale but probably not this year or next!

The second characteristic of MIC investments is that they should go into growth businesses. This is defined in the MIC Act as being sales growth 20 per cent or more p.a. compound. It should be noted that high growth does not necessarily mean high technology. In some commentaries it appears that the words "high technology" have replaced high growth — probably no doubt as a result of the MIC provisions arising out of the Espie Report. There is a significant difference between high growth and high technology and we believe it would be most unfortunate if the investment community became preoccupied with high technology investments as opposed to high growth investments. Our own research indicates that high growth businesses provide a much better risk: return ratio than high technology businesses.

In the meantime, a formula for a winning management and investment team will include an engineer with an MBA, an entrepreneur with "hands-on" experience in building businesses/advising others, a marketer and a financial adviser with of course a diploma from the Securities Institute!

Yours faithfully,

T.O. Lebbon, Leadenhall Securities Ltd.

EDITORIAL NOTE: The letter from Mr. Lebbon, and the contributions from Vapocure and Churchill International may stimulate discussion from traditional investment managers. Further letters on the subject are welcomed. NHC.