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Roy/S&T

cc Ch. Scientist, CO

10 DOWNING STREET

THE PRIME MINISTER

17 September 1983

Dear Viscount Caldecote,

Thank you again for your first-rate contribution to the Seminar on Science, Technology and Industry at Lancaster House on Monday.

Your paper was not only valuable in itself but also for the way it stimulated other contributions from the floor. Many thanks for all the work you put into it.

I thought the day a success and I shall be giving thought to how we can follow it up in a suitable way. If you have any views on the follow up, I would be delighted to hear them.

Yours sincerely

Margaret Thatcher

The Viscount Caldecote of Bristol, D.S.C.

BP

R20

c D/Nicholson

(4)

Prime Minister

Decline X?

(You have invited Lord Caldecote here for a drink on October 18).

Investors in Industry

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Chairman

16th September 1983 MCS 20/9

The Rt. Hon. Margaret Thatcher, MP,
Prime Minister,
10 Downing Street,
London SW1.

MT

Dear Prime Minister

Thank you very much for inviting me to take part in the seminar on Science, Technology and Industry last Monday, which I thought was a great success. Many important points were made and it is most encouraging to know that you and your colleagues take such a close interest in this important subject. I do feel very confident that there is now no shortage of funds to support viable businesses. The problem is to encourage enough people to come forward to combine good ideas with competent management.

As regards co-operation with universities, as I indicated in my paper, we are giving a lot of attention to this and we are considering sponsoring a conference early next year to discuss the opportunities and problems in exploiting the fruits of academic and laboratory research, and the financial constraints that hamper such exploitation. We will keep your office informed of the progress we make on this.

X Finally, may I say how delighted we would be if you were able to find time in your busy life to come and have lunch with us here. We would so much welcome the opportunity to discuss over lunch some of the points that arose in the seminar.

With renewed thanks for a most stimulating day,

yours sincerely

Robin Caldecote

FINANCING OF INNOVATION

by Lord Caldecote,

Chairman, Investors in Industry Group plc.

There are basically three stages in the financing of innovation. First comes the invention, research, conceptual stage; next, the high risk and usually expensive development stage, which includes market research, leads to a clear specification and marketable product or service; finally, the exploitation stage of marketing, production, distribution and after-sales support.

From the standpoint of a financial institution, each stage is characterised by different levels of risk, of cash requirement, and of potential reward. It is perhaps in the assessment of the potential reward that the greatest difficulty lies, and it is, of course, the key question, since it determines the risk that can be taken and, therefore, the type of support, both financial and non-financial, that the institution can provide. But the potential reward is a function of many things: the market opportunity, in size and in time, the ability of management to seize the opportunity effectively; the competitive reaction; and the prospects for upgraded or new products to continue the profitable development of the business. The uncertainties particularly in the earlier stages are daunting; even the most refined analysis cannot hope to predict actual performance more than a few months ahead, and

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the best prepared plans are more statements of intent than firm forecasts. The ability to react intelligently, while never losing sight of the medium-term objectives, is the key to that most difficult of arts, the successful management of innovation.

Some types of innovation are simply not suitable for exploitation by new, small companies, usually for marketing reasons. But even in those areas where small companies can, in principle, grow into big ones, their first product must be so successfully exploited that it does much more than just pay for itself; profits from it must in large part pay for the development of further new products or services which will be needed to maintain the growth of the company. Nobody believes more strongly than we do in the 3i group in the vital role that small companies play in bringing new, innovative products and services to the market, but it is an inescapable fact that, of the hundreds of companies that are formed every year, only a handful stand a real chance of successfully growing into major forces in world markets. It is not just a question of good or bad management, or whether financial backing of the right kind is available; in the majority of cases the realities of the market-place simply will not allow it.

Those companies for which such an innovative opportunity exists need all the help they can get. The managers face a very difficult task and, however good they are, few teams are so well-balanced and experienced in world markets that they are fully self- sufficient. Even in those cases when they are exceptionally competent, it is, we believe, necessary for success that those members of our staff who are responsible for our investment should be fully capable of forming a view on every aspect of the company's prospects and operations. Opportunities and setbacks always occur; we must fully understand them if we are to play an effective role in backing the company, and achieve the right balance overall between risk and reward.

It is for this reason, to support such companies as well as we possibly can, that we have assembled, in our Ventures Division, a team of first-class managers, with recent and wide-ranging experience of specific technologies and of world markets, and supported them with equally experienced financial executives. It is also partly for this reason that we are making a number of investments abroad, to give us direct experience of the turbulent markets, which are so significant to the development of UK companies.

The staffing costs are, of course, very high by conventional standards. They can only be justified if the rewards for success are commensurate. For failures are inevitable; sometimes the failure takes the form of what American venture capitalists describe as the living dead: a company that survives without achieving the high, very profitable growth that is absolutely essential for commercial and financial success. To give you an idea of the sort of investment performance that is needed to make a viable on-going business out of this high-risk, high-cost approach, we would need to believe that it was possible for us to obtain a return of up to 70% compound before entering into what amounts to a partnership with the founders. It is encouraging that we have already had some major successes of this kind in the Ventures portfolio.

But, if we were to restrict ourselves solely to this activity, we would only back a handful of companies a year instead of over 300 start-ups last year; as I said earlier, the majority of new companies - and, for that matter, existing ones - simply do not have the opportunity to grow at astronomic rates. For them, the hothouse so called 'hands on' treatment is unnecessary, inappropriate and uneconomic. They are, in no sense, second class; they may take longer to achieve prosperity - not everybody can make £1m profit in their first full year of operation - and their financial backers may have to wait longer for their return, or take it in a different form than purely by way of profit on realisation. But they are sound businesses and good, profitable investments for us. ICFC has demonstrated over the years that the provision of long-term loans and equity capital to small companies, on commercial terms, can be profitable and provide invaluable support to growing, innovative companies. Venture capital has become a vogue term for a particular form of equity finance, characterised by active management support and, usually, no running yield. In fact, the appropriate financial package and the support required varies with each particular proposition.Although there are difficulties in doing so, our aim is to provide each company with what it wants and needs. But the industrial and commercial input is vital, particularly now when new technology is creating high rates of change and product life is relatively short.

Since it started nearly 40 years ago, ICFC has always had engineers and other commercially experienced people on its staff to help assess propositions and our response to problems. I think we probably have more technical, managerial and commercial expertise than any comparable financial institution. And we have it because we need it, expensive though it is. But such careful investigation does not eliminate risk, which we are in no way averse to taking; failures occur, usually due to over optimistic market assessment or poor financial control.

There is no shortage of money to invest, and in Investors in Industry we never have to restrict investment on this score. The real problem is to find people with ideas capable of translation into viable businesses. Such ideas may originate in a university environment or research establishment where those involved are unaware that the point has been reached when an invention has wider commercial application. Or the inventor could be working in a larger organisation which does not wish to exploit his ideas.

Even if you can find him, he may be reluctant to leave a salaried secure environment, however great the potential reward. There needs to be a clear incentive and willingness to accept risk if he is to be persuaded to leave the secure future provided by a pension. Or he may simply be an individual outside any organisation who has an idea to sell.

Wherever the innovation originates, it is at this initial research stage that it is most difficult to assess its potential to form a viable business.

Within Investors in Industry the staff of our Ventures Division have made positive efforts to establish working relationships with universities, working through the Industrial Liaison Officers, the Committee of Vice Chancellors and the Science and Engineering Research Council. They have shown it is possible to take an embryonic idea and, with added resources of experienced people and money, turn these into real businesses. This has been successfully achieved in four situations to date, at Hull, Imperial College, Sheffield and Warwick - with more to come.

Our particular expertise is to provide the appropriate management support together with a strong equity base to fund each phase in the most suitable way. Here I would like to emphasise how unwise it is for a new company to incur heavy borrowing and interest charges. At this early stage, before profits are being made, a substantial proportion of the capital required should be in some form of equity.

But there remains a real problem in the attitude of the entrepreneur to the sanctity of his share capital. There is a latent suspicion in the mind of the inventor that if he "gives up" any part of the ownership of his business he is selling his birthright cheap. Although there are signs that the outside shareholder is becoming more acceptable, this is inevitably a slow process.

However, we find that we are increasingly being welcomed as partners by companies because we can make a contribution at board level. There is growing recognition that outside shareholders are helpers more than custodians.

The principal purpose of the 3i group is to provide long term and permanent capital on a commercial basis and in so doing to play a significant part in the evolution of the industrial and commercial sectors of the British economy.

There is now growing and healthy competition in this field from a wide variety of financial institutions to provide finance which industry needs for innovation and growth. I believe the main problem is to make these sources of investment more widely known, and this we aim to do as far as our own group is concerned. But are there still gaps in the availability of money to finance innovation as is sometimes asserted?

Certainly there are innovations which will never form the basis of a viable profitable business; many of these will be turned down and inventors will loudly claim that the City's financial institutions are too reluctant to take risks in supporting them. No doubt we shall miss a few good ones, because the judgement of unproven management is very difficult, but with the advent of so many venture capital companies and the generous tax related business expansion scheme, I believe that in future very few deserving ideas will fail to find the money they need, provided that they are well thought out and presented.

There is one other area with its own problems. Those innovative projects, where large sums of money are required and the return is likely to be very long delayed but, with ultimately good potential. In this relatively small niche there is perhaps some requirement for government participation, so that in effect the long term risk and reward is shared by the nation as a whole. This is, I suggest, the principal role that BTG should assume, as the successor of NRDC.

I should like to leave you with this thought: there is no single route to success, since all businesses vary. Of our recent successes, one has taken less than three years to reach a significant position in international technical markets, another has taken no less than 23 years since we first financed it. What is needed is consistent, long-term, industrially-aware support, and I believe this is now available.

September 1983

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Chairman

P.M.
WR 22/8

19th August 1983

Timothy Flesher, Esq.,
Private Secretary to the Prime Minister,
10 Downing Street,
London SW1.

Dear Mr Flesher

Many thanks for your letter of 9th August. I am delighted to accept the Prime Minister's invitation to participate in the seminar on "Science, Technology and Industry" on September 12th and to speak in Session II on the Financing of Innovation. I am quite happy with that title.

Yours sincerely

Caldecote