From file 31 AMENDED DRAFT.

DISCUSSION DRAFT

15/11/82.

Memorandum to:
J.A. Rose, Esq., Clerk of the Committee

MANAGING PUBLIC INVESTMENT IN HIGH-RISK PROJECTS:

SIX LESSONS FROM THE DE LOREAN AFFAIR

COMMITTEE OF PUBLIC ACCOUNTS

McKinsey & Company was professionally involved in the public investment in the De Lorean Motor Company (DMC) from the project's inception. In July 1978, we undertook a very brief effort for DOC to identify the risks involved in the project. Almost 2 years later, in May 1980, we were asked to review our earlier assessment; and at ~~roughly~~ 2 to 3-monthly intervals thereafter until January 1982 we were asked to spend a short time (usually about 1 week) examining questions of particular concern to the officials of the Northern Ireland Development Agency (NIDA), who were responsible for monitoring the public investment in the company.

Whether or not government should ever be involved in risk investments in companies not in public ownership is, of course, a matter of political judgement. However, in view of the international competition for inward investment, it seems likely that governments of all persuasions will, from time to time, be faced with providing assistance to companies (e.g., Nissan) contemplating manufacturing operations in Britain that involve certain costs but uncertain benefits - in the shape of additional economically viable jobs. In view of this likelihood, we thought that it might be helpful to the Committee if we summarized the lessons that we believe can be learned from the De Lorean affair - some we pointed out at the time, others have come into sharper focus with hindsight.

There are six main requirements that will need to be met if any public investment in a high-risk project is to stand a reasonable chance of success:

1. Avoid rush decisions

2. Assess the man as well as the project

3. Take the risks into account when evaluating the project and planning funding needs

4. Seek investments where a phased commitment is possible

5. Agree monitoring arrangements in advance

6. Cancel the project immediately if agreed performance targets are not met, unless ~~the ministers involved remain committed supporters of the project~~. there remain committed 'champions' of the project in Whitehall

This memorandum comments on each of these requirements in turn - none of which was met in the De Lorean case.

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AVOID RUSH DECISIONS

In the real world, decisions cannot be phased neatly to allow adequate time for reflection. Nonetheless, it is a well-established tenet of sound negotiation that each principal should be prepared to walk away if mutually agreeable arrangements cannot be reached. And the dangers of 'deciding in haste and repenting at leisure' in circumstances where one party is determined to conclude a deal are clear.

since government was under severe time pressure from the outset

The original De Lorean negotiation is a classic case in point. We first heard of the project on the afternoon of Friday, July 7, 1978. Since we were serving the Department of Commerce at the time, we agreed on a 'best efforts' basis to analyse the risks involved in time for a meeting on July 18 - 6 working days later (of which 1 was a Bank Holiday in Northern Ireland). We first saw the De Lorean Corporate Plan on Wednesday, July 12.

not long after the discussions between DOC and Mr De Lorean were initiated

Notwithstanding the fact that our assessment of the risks turned out to be remarkably accurate, 6 days is clearly inadequate for a serious evaluation of a major investment. Even in the private sector, our clients contemplating an acquisition of this magnitude would typically devote some 4 to 6 man-months to a detailed investigation of the commercial prospects and management of the company in question.

ASSESS THE MAN AS WELL AS THE PROJECT

In our experience, effective leadership is just as relevant in commercial affairs as it is in other spheres. Indeed, one of the risks identified in our original report was that the project was unduly dependent on one man.

Clearly, any investor must gauge the background, competence, experience and leadership capability of the entrepreneur in whom the management responsibility will be placed. The investor must question the competence of his team, its experience and background. The difficulties are greater where public investment is concerned. In this instance, government must carefully weigh up the personality and the likely reactions of the entrepreneur to the inevitable constraints of public accountability. A government can retain outside advisers (such as our Firm in this instance) to review the risks, audit the numbers, structure the project and legal agreements; but the investment will always be precarious if there is a sense that the entrepreneur will 'put one over on you'. Given the pressure of day-to-day operating decisions in a project, government must feel absolutely confident that the top man will be working with, and not against, them and will not be taking advantage of his relationship as the project unfolds.

Thus, at the evaluation stage government should test for evidence of credibility:

¶ What is his background? How closely has his past performance been evaluated? How do his former colleagues view him? What supporting recommendations does he have? Who gave these, and why?

¶ What other commitments does he have? Is his time and attention in fact going to be spread across more projects than the present one? What financial interests does he have elsewhere? Are his personal finances linked to the success of the project?

¶ Is he willing to accept, <u>in advance</u>, the rights and needs of the government department and the constraints thus imposed on his management role? Anyone familiar with the past relationships between Detroit and Washington might well have wondered how Mr. De Lorean would react to oversight by British Government officials.

In this instance, we do not know whether these assessments were carried out or not. No members of our Firm met Mr. De Lorean ~~until mid-1980 (after the die was cast)~~ during the initial discussions before the agreement was reached; neither were we involved in the detailed negotiations.

TAKE RISKS INTO ACCOUNT

Funding new business ventures is a risky undertaking at the best of times. The failure rate is invariably high. If the venture survives, more money is needed to fund growth. And even if the venture prospers, it takes time for the investor to 'earn out' his return.

For a private investor, investment in a new business often involves more trouble than expected, more time than expected and more money. This should not deter (and has not deterred) investors from finding entrepreneurs and projects and backing them. It just places great emphasis on identifying, assessing and managing the risks involved. This task is more complex when public funds are invested, since government must weigh the commercial value of its investment against the policy objectives it seeks to satisfy, and the need to survive the scrutiny of the media and Parliament should the project fail.

Too often, however, high hopes end in disappointment and recriminations between entrepreneurs and government agencies; and the earlier assessments of the potential payoffs in a project are exposed in the glare of perfect hindsight.

In our view, one major reason for the subsequent difficulties of the De Lorean project was that the risks involved were not adequately taken into account in the evaluation of the project or the funding arrangements. The risks inherent in the venture were, as it happened, identified rather precisely <u>before</u> any agreement was signed. To quote from our July 18, 1978 report, "There are four main business risks involved in the De Lorean proposal:

1. The ambitious sales and market share projections may prove unattainable.

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2. The technical difficulties may not be resolved in time, resulting in a sharp increase in capital expenditure requirements.

3. The timetable for moving from development to production has no margin for slippage; and the financial and operating projections ... may not be realistic."

4) The project depends very largely on one man – John De Lorean himself and

And we concluded (page 8) that "common prudence suggests that the department should base its decision on an outcome that assumes: (1) a gradual and controlled buildup of volume to a peak of 15,000 units in 1984; (2) labour productivity half the planned level; (3) 6 months' delay in start-up of production; (4) warranty costs of $300 a car; and (5) operating efficiencies comparable with Porsche on inventory levels and General Motors on receivables". The exhibit shows the projections involved: under the

its viability would be in doubt if anything happened to him.

EXHIBIT

DE LOREAN MOTOR COMPANY OF NORTHERN IRELAND

POSSIBLE FINANCIAL RESULTS
($million)

	PROFIT BEFORE INTEREST AND TAX*					CASH FLOW**					EQUITY***				
	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984	1980	1981	1982	1983	1984
BASE CASE† ▶	0.2	11.5	24.9	36.4	40.8	(9.5)	13.7	29.4	35.0	22.2	52.9	60.8	82.1	115.1	135.1
POSSIBLE ALTERNATIVES															
A1 - Sales volumes peak at 15,000/year	(12.5)	(8.6)	(1.3)	7.5	7.7	(13.9)	(5.1)	2.3	4.4	5.6	40.1	27.6	22.0	25.2	28.6
A2 - Production start-up delayed 6 months	(34.3)	11.5	20.9	31.8	39.2	(35.2)	0.9	23.5	26.7	20.0	17.1	22.3	36.9	62.4	80.2
A3 - Labour productivity at 50% of plan	(13.4)	(2.1)	11.3	22.8	27.2	(23.5)	(1.1)	14.6	20.0	14.3	38.9	32.0	38.5	56.5	68.6
A4 - Warranty costs higher by $200/unit (at 3.5% of sales)	(4.0)	6.5	18.9	30.4	34.8	(13.7)	8.7	23.4	29.0	19.3	48.7	51.6	66.9	93.9	111.0
A5 - Reduced efficiency of working capital management	0.2	11.5	24.9	36.4	40.8	(27.2)	8.3	19.7	32.8	21.2	51.9	57.8	77.1	107.9	126.9
A6 - Combination of A1-A5	(23.3)	(18.4)	(11.8)	(3.7)	(3.5)	(28.4)	(23.4)	(14.9)	(15.9)	(15.3)	28.4	2.7	(19.1)	(34.8)	(52.3)
B - Inflation at - 5% annually for prices - 10% annually for costs	0.2	4.1	6.1	5.7	(3.6)	(9.5)	5.3	9.4	2.9	(6.2)	52.9	53.4	55.9	58.0	50.8

** - Annual PBIT stated after royalty payments to NIDA*
*** - Annual cash generated internally, before adjusting financing structure*
**** - Year-end position*
† - Base case projections include contingency amounts of $5.0 million for 1980 and 1981

recommended assumptions, there would be a cumulative cash gap of $52 million by end 1981 compared with De Lorean's projected cumulative positive cash position of $4.2 million.

These risks were (or should have been) clearly appreciated at the outset. Unfortunately, once the decision to fund the project had been taken, government appeared to act as though the risks did not exist. This inevitably sets up a vicious circle:

¶ Government is taken aback when the risks that it always recognized eventually materialize, and believes that the entrepreneur has failed to meet reasonable expectations.

¶ To obtain further government assistance, the entrepreneur has to make promises that cannot be met - or see the project fail.

¶ The inevitable happens: the entrepreneur's promises are not kept and mutual suspicions increase.

We believe that funding for high-risk commercial projects should have been based on reasonable worst case assumptions - rather than as if government were funding a construction project or military procurement programme where there are no significant commercial risks, although there may well be technical and managerial ones. If the project cannot stand up under such a worst case commercial scenario, then it should ~~be cancelled~~. not be funded by Government.

i.e. 8,000 to 10,000 units a year in 1982 and in 1984 to 15,000 in the De Lorean volume

Government, as the investor, has the greater responsibility for developing this worst case assessment. The entrepreneur is usually wholly committed to the project or product, and may be reluctant to recast his often optimistic view of its potential. The investor can add value and begin to develop his role in a future relationship with the entrepreneur by reworking projections, by changing assumptions to test for the worst case, and by convincing the entrepreneur to incorporate these in the funding proposals. Willingness to recognize the worst case as a possibility and to plan against it will clearly help to build confidence in the relationship.

SEEK INVESTMENTS WHERE PHASED COMMITMENTS ARE POSSIBLE

If government is committed to a risk investment, it is clearly better to seek opportunities where funding can be phased - with the investor able to assess progress at each stage before committing further funds. At minimum, government should ensure that the funds required at each of the following stages are clearly identified and that the overlap between stages is minimized:

1. Concept design and product definition. At this stage in some startup projects there is only an embryo organization and management group. No business has been established and often no organized reporting system. Yet it is often at this stage that large sums of investment money are committed in R&D and product development.

2. Engineering development. The management role involves ensuring the availability of final drawings and understanding the cost (in funds and time) of engineering changes. By now the organization should be in place.

3. Production development. At this stage, facilities are being completed, negotiations with suppliers should be well advanced, tooling should be substantially complete and plans in hand to train the work force. Clear marketing plans should have been drawn up.

4. Production startup. Pilot production should have identified the gremlins in the system and management should focus on bringing forward work force recruitment and training, building up the production rate and improving labour efficiency. Marketing plans should have been reviewed and agreed, and initial promotional and roll-out campaigns ready.

5. Market release. By now the management role has shifted to ensuring smooth production of quality product, monitoring order takeup and inventory buildup, and measuring performance against the competition. Even at this early stage, management should have clear plans for product developments. Already, the product launch must be seen as only part of a medium-term strategy to ensure future viability of the business.

* * *

From the phasing standpoint, the De Lorean project could hardly have been less attractive. Despite the market, technical and managerial risks that were all clearly recognized at the outset, virtually all the public funds had to be committed at the front end. And once locked in to the project, it was always going to be difficult for government to withhold any additional funds necessary to bring the product to market - when the alternative was to write off the whole investment and realize virtually no benefits from the substantial effort that had been involved. With the benefit of hindsight it might have been better if the project had been replaced, so that the results of the engineering work were available before funds had to be committed for the Dunmurry plant.

AGREE MONITORING
ARRANGEMENTS
IN ADVANCE

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Government must tread a difficult path between interference with management, of a company in which it has a stake, through overzealous concern for detailed control and overreliance on management's capabilities. However unless both parties are accustomed to dealing in 'honest' numbers (i.e., in realistic expectations of probable outcomes), their relationship is bound to deteriorate. ~~In the case of De Lorean~~, ~~as~~ and we commented ~~last~~ in November 1981 "throughout 1981, DMC produced a succession of earnings, balance sheet and cash flow projections that proved overoptimistic - perhaps inevitably, given the need to maintain management morale and commitment, and to secure continued financial support from HMG".

Thus, in addition to effective auditing arrangements, it will be necessary for government to agree in advance the details of how the project is to be monitored in practice. Otherwise, legitimate but unanticipated requests for information will themselves become bones of contention and a source of confusing signals about government's views and intentions towards the project. Specifically, the partners should agree on:

1. The routine management information to be provided by the company.

- There should be concise reports of key information appropriate to the needs of the particular phase of the project. For example, in an engineering development phase, control and monitoring

As you know we were asked at intervals of 2 to 3 months from June 198 to the end of 1981 to evaluate the various technical, management and finally market risks that the project faced. Our Status Reports document the problems that we saw at the time as needing to be addressed both by De Lorean Management and NIDA. Too often these problems were not resolved.

of the status and time to completion of final drawings is critical. The control reports for these should be agreed in advance.

- The timing and flow of information should be changed to reflect the requirements of the production and market introduction phases.

- Government, as investor, can play a constructive role by insisting, well in advance, on information that encourages longer-term thinking: for example, preparing new product plans, developing medium-term strategies under best/worst case outcomes; preparing realistic options for funding.

As our successive reports in 1980 and 1981 made clear, there was no agreement on a basic operating plan against which De Lorean's performance could be monitored. It was not until November 1981 that the content of the monthly operating reports was agreed.

2. Regular reviews by an Audit Committee. Agreeing in advance a relevant set of reporting requirements does not itself ensure honesty or due diligence in their completion. Often the information required by a government department can appear excessive and irksome to harassed managers. As we suggested in our May 1981 report, one approach to resolving these concerns is to set up an Audit Committee comprising outside experts (typically, public accountants and businessmen) nominated by government and by the management. The Audit Committee is charged with responsibility to ensure that the agreed management information is accurately compiled, clearly presented and reported on time, with discretion to carry out random audits.

- From the government perspective, the Committee acts as an impartial watchdog to add, where necessary, professional business weight to support government's need to know and a further reassurance that the management of public funds is being responsibly conducted and reported.

- To management, it can provide a knowledgeable group of experts to reassure government and possibly to restrict its desire for excessive data.

Unfortunately, so far as we are aware, such a committee was never established in the De Lorean case.

3. Regular informal reviews. Officials need to keep in close touch with developments without appearing to the management to be auditors or police. It is important that officials have opportunities for regularly reviewing progress with management:

- Management should report on progress, air worries and ask advice. While officials, in addition to keeping up to date, should help management focus on important prospective decisions for the business, for example

  . Advance preparation for new products

  . Need to change management skills from a startup state operation

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. Need to anticipate competitor reactions in the marketplace).

- It may be helpful to agree the frequency of meetings (e.g., a brief meeting once a week on Monday morning), and the participants at the meetings (with the CEO or CEO and Chief Accountant, thus requiring the CEO to make time to keep officials informed personally).

4. Ministerial briefings by management. In view of the sensitive nature of high-risk projects, it will be essential that ministers have the opportunity to judge the situation at first hand, and that they are kept fully abreast of developments. Ideally, management should brief the ministers involved direct, since there are obvious risks in dealing only through officials. (At no stage in our involvement with this project were our consultants enabled to discuss the situation with ministers direct).

The advantages of agreeing detailed monitoring arrangements in advance are obvious: there can be no implication that the reasons for the monitoring effort is that Government distrusts the company, still less that it is not fully committed to the project; and realistic expectations can be established from the outset.

CANCEL THE PROJECT IF IT LACKS A ~~MINISTERIAL~~ CHAMPION

Committees rarely father successful commercial developments. Our research into excellent companies suggests that all new products and projects require a powerful 'champion', committed to seeing it through successfully.

Such a champion is perhaps even more necessary where public funds are involved. Specifically, without the strong and steady support ~~from at least one Cabinet minister~~ in Parliament, the prospects for the success of any risky (and thus inevitably controversial) project are remote.

¶ Without such support, the potential benefits of the project will not be 'sold' to a sceptical public.

¶ Parliamentary and media criticism will then become commercially damaging, as the positive aspects of the situation go unnoticed.

¶ ~~Junior ministers will, naturally, seek reasons to 'blow the whistle' on the project and thus save public funds and simultaneously enhance their political reputations.~~

¶ Ministers and officials will become more nervous and (even more) risk averse in dealing with a project that is inherently risky.

Such was the position of the De Lorean project in mid-1980. The new Conservative Administration was widely recognized to be unenthusiastic about the project; ~~officials in all the departments concerned were well aware of the Prime Minister's views on the merits of the original deal with Mr. De Lorean. And ministers were evidently uneasy defending their decision to continue to support the project.~~ In such circumstances, it was perhaps inevitable that more attention was focused on the problems and risks involved than on the achievements of Mr. De Lorean and his team. In fact, the latter were not inconsiderable. After all, to have sold 7,000 to 8,000 units a year (as was being achieved towards the end of 1981~~)~~, and would have been in line with reasonable "worst case" projections) would have placed De Lorean well inside the top 50 U.K. exporters from a standing start in just under 3 years - and ahead of Jaguar's current position, which has excited so much recent press admiration; a strong dealer network was in place; and the dealers themselves were enthusiastic about the quality of the car, the support they were receiving from the manufacturer and the immediate sales prospects.

However, none of this came across in Parliament or to a wider public. Indeed, it was unrealistic to expect it to have done so in the absence of a committed champion in ~~the Cabinet~~ whatsoever. With the benefit of hindsight the outcome was inevitable. As the risks that had long been recognized came into sharper focus, ministers and officials became progressively disenchanted with the project; the company was seen as perpetually failing to meet its performance targets and looking for more government 'handouts'; and relationships between the two erstwhile partners deteriorated irretrievably.

Under these circumstances, there was no realistic prospect that the project could ~~succeed~~. ~~And~~ it would clearly have been better if the present government had not provided further financial support to the project in 1980 and 1981, once it had become clear that the original performance targets agreed with the previous Administration could not be met.

* * *

Of the six requirements identified above, the last is perhaps the most important. With a strong champion for the project ~~in Parliament~~, it is possible that a viable enterprise could have been created in a province desperately in need of worthwhile employment, and, at a minimum, the DMC-12 would have had the chance to prove itself in the marketplace and demonstrate that N.I. can indeed "make it". On the other hand, if the present Administration had had the courage of its convictions, substantial sums of public money could have been diverted to other, perhaps more productive ends. The eventual result has been that the British taxpayer has got the worst of all worlds: almost all the investment, with very few of the potential returns.

November 15, 1982

survive i.e. any unexpected blows such as occurred in early 1982 when simultaneously and without warning the Bank of America and associated banks reduced their line of credit from an anticipated $57M to $24M and the United States suffered some of the worst winter storms for many years. Since the unexpected is always likely (by definition in a risky project)

– in the sense of a company earning profits and building a market position, even if there remained longer-term doubts over its ability to survive as an independent unit

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