

Promoting and Investing in the Channel Tunnel, 1957-75: a case study in
International Investment

Terry Gourvish

London School of Economics

Introduction: the Promotion of a Mega International Project

The promotion of and investment in the Channel Tunnel was a challenging, multinational affair, drawing in institutions from several countries. This paper, which concentrates its attention on the promotion of the abortive tunnel project of 1957-75, focuses upon players in Britain, France and the United States.

The entrepreneurial and project management functions in major infrastructure projects - 'mega projects' - are key areas of investment. These functions are required when projects require large capital expenditures, have long-lived and (often) non-transferable assets, and require long periods to amortise investment costs.¹ Many banks apply the term to any large contract, while others are more precise, linking credit support with both the sponsors and beneficiaries of a given project. In Britain the merchant banks, the major clearing banks and specialist investment banks all became involved in the process as the traditional demarcations in the City began to break down in the 1970s. The services provided by financial institutions in the new environment were many and varied, ranging from advice and consultancy to placing and underwriting, and direct investment.² At the same time, the larger construction and engineering companies began to offer project finance as an adjunct to their basic service as contractors. In much of this activity American institutions led the way.³

Large projects, and especially infrastructure projects, involve many actors, and historical analysis requires one to move across many corporate boundaries. With international projects such as the large European tunnels and the Channel Tunnel, there are other players too, including more than one government. Finance lies at the

¹ Estache, Antonio and Strong, John (2000), 'The Rise, the Fall, and ... the Emerging Recovery of Project Finance in Transport', IBRD Report No.433/2385, p.3.

² Kynaston, David (2001), *The City of London. Vol.IV: A Club No More, 1945-2000*, London: Chatto & Windus, pp.340-3, 563-7, 601-3.

root of such activities. Investment and underwriting require specialist knowledge, risk-taking and an innovative approach. Where several players are involved - investors, financial institutions, corporate enterprises, governments – the management and sharing of risk becomes of paramount concern in the negotiation of contracts and the management of the project itself. In this paper we exploit the archives of Technical Studies Inc. and Rio Tinto plc to illustrate the opportunities and difficulties encountered. Both Technical Studies and Rio Tinto-Zinc (RTZ) were actively involved in the first serious attempt to build the Channel Tunnel from the late 1950s, which ended with the British Government's decision to abandon the scheme in January 1975. Particular attention will be directed towards: the nature of entrepreneurial intervention in Mega projects; the challenge of the public-private interface; and the 'Large Infrastructure Project Circle'.

Project finance: archival opportunities and challenges

Entrepreneurship in the form of risk-taking, investment and innovation may not always be easy to capture given the nature of the surviving archival records, and the problem is multiplied the nearer to the present one gets, with crucial decisions being hatched by telephone, fax, and latterly e-mail. The history of the Channel Tunnel, which has had a very long gestation period with several abortive efforts, is affected by the difficulty in tracking the origins and nature of enterprise in relation to investment and project management. Financial bodies such as banks often changed ownership several times; while abandoned projects are quickly forgotten, and rarely escape the processes of records management. Even where a project is organised and financed within the public sector, private sector agents may be involved as contractors or financiers, and a full account will depend upon the success in obtaining access to corporate archives. Access to *private* archives is by no means assured, of course. The fact that a firm has commissioned a history provides no guarantee that the files cited will survive or be accessible over the longer term.⁴ But however generous the access,

³ Prominent here was the Project Finance Group of First Boston. Cf. Jeffrey Brown, 'Project Finance', n.d., AN191/134, The National Archives [TNA].

⁴ Burk, Kathleen (1989), *Morgan Grenfell 1838-1988. The biography of a Merchant Bank*, Oxford: Oxford University Press, reveals that Lord Harcourt (Chairman of Morgan Grenfell, 1968-73) was a key player in the Channel Tunnel Study Group (see below). The author refers to specific Channel Tunnel files, but applications to the company and its new owners, Deutsche Morgan Grenfell, to see these have so far proved unsuccessful.

it is very unlikely that papers will survive which deal with the creation of a financial consortium and the development of its strategy under competitive conditions. As anecdotal evidence for the British brewing industry reveals, such activities were deliberately shrouded in secrecy, with the use of code words and meetings held on remote moors or in small hotels.⁵ In the Channel Tunnel's long history, the surprise appearance of James Sherwood, President and CEO of Sea Containers, as a candidate in the competition to win the concession to build a Cross-Channel Link, is testimony to the tactical value of confidentiality. His Channel Expressway scheme shook many, for before the bid was revealed in October 1985, the Governments' deadline for receipt of proposals, this entrepreneurial American had been a stalwart supporter of Flexilink, the anti-Tunnel lobbying organisation.⁶ Once a scheme is started, a complex web of contracts and transactions is erected. Not only are these relationships difficult to chart, but some of the key elements may be difficult to establish after the event, given the commercially sensitive environment in which such activities are conducted.

Project management, a specialist element in corporate activity, is a comparatively neglected area in business history. Where a large infrastructure investment is involved, this function, which may be defined as the process of combining resources in planning mechanisms designed to build an end-product,⁷ is clearly a vital one. But while historians have devoted considerable attention to one of the major examples since the Industrial Revolution, the building of the railways, there has been less interest in examining the dynamics of more recent schemes, for example, tunnel building, nuclear power installations, and the larger airport complexes. However, no one doubts the importance of project management in bringing such projects to fruition, and there is an extensive literature dealing with methodologies and systems designed to optimise contemporary activities (e.g. PERT, RAMP, BOO, BOO[T], BLT, etc.).⁸ Here, some lessons are immediately apparent.

⁵ Hawkins, K.H. (1978), *A History of Bass Charrington*, Oxford: Oxford University Press, pp.130-1, 139-59; Gourvish, T.R. and Wilson, R.G. (1994), *The British Brewing Industry 1830-1980*, Cambridge: Cambridge University Press, pp.449-50, 459-80; interview with John Noulton (Eurotunnel), 2003.

⁶ *Financial Times*, 1 November 1985, p.1; *Times*, 2 November 1985, p.2; Fetherston, Drew (1997), *The Chunnel: The Amazing Story of the Undersea Crossing of the English Channel*, New York: Times Books, p.105.

⁷ Chong, Yen Yee and Brown, Evelyn May (2000), *Managing Project Risk: Business risk management for project leaders*, Harlow: Prentice Hall, p.73. The Channel Tunnel is included as a case example, pp.83-4.

⁸ PERT = Program Evaluation Review Technique; RAMP = Risk Assessment and Management of Projects; BOO = Build-Own-Operate, BOO[T] = Build-Own-Operate-Transfer; BLT = Build-Lease-Transfer. Morris, Peter W.G. (1994), *The Management of Projects*, London: Thomas Telford, pp.27-31,

As Morris and Hough have observed, one of the fundamental weaknesses of the first Channel Tunnel project in the 1970s was ‘the absence of a clear owner and owner organization’ and consequently the lack of an overall ‘supremo’ able to ‘champion’ the project, a problem repeated with the second, and more successful, project a decade later.⁹ But in the 1970s much of the difficulty arose from the decision to appoint two sets of project managers, one British and one French, in a structure where there were two corporate entities, one British and one French. Complexity and an encouragement to divided decision-making were the inevitable result (see below and cf. Figure 1).

Mega project: the Channel Tunnel, 1957-75

Insights into the entrepreneurial approach of the project financier are provided by the archive deposited by Frank Davidson of Technical Studies Inc. at Harvard Business School.¹⁰ Far from maintaining an aura of secrecy, Frank Davidson has done much to encourage the publicising of his efforts, by depositing archives, assisting the author of a major book on the Channel Tunnel, and writing a book on Macro Projects.¹¹ On project management, the role played by Rio Tinto Zinc (now Rio Tinto plc), and its subsidiary, RTZ Development Enterprises (RTZ-DE), in developing the 1974-5 tunnel works emerges from the Rio Tinto archives. These also shed light on the entrepreneurial and financing activities of the leading players, notably Sir Val Duncan, Sir Mark Turner, Alistair Frame, and also Duncan Dewdney and Lord Shackleton of RTZ-DE.¹²

However, before we examine the extent of this entrepreneurial activity, we need to establish some basic facts relating to the promotion of the first tunnel enterprise over the period 1957-75. Here there is no shortage of secondary works, though few of them have dealt with the project financing and project management aspects at any length.¹³ The first serious proposal to drive a tunnel under the Channel

171ff; Chong and Brown, *Managing Project Risk*, p.68; Estache and Strong, ‘Project Finance in Transport’, pp.2-3.

⁹ Morris, Peter W.G. and Hough, George H. (1987), *The Anatomy of Major Projects. A Study of the Reality of Project Management*, Chichester: Wiley, pp.37-8, 195, 252.

¹⁰ Technical Studies Inc. [TSI] Archive, Harvard Business School [HBS].

¹¹ Fetherston, *Chunnel*; Davidson, Frank (1986), *Macro: Big is Beautiful*, London, Blond.

¹² Rio Tinto plc [RT] archive, London.

¹³ E.g. Bonavia, Michael R (1987), *The Channel Tunnel Story* (Newton Abbot: David & Charles; Hunt, Donald (1994), *The Tunnel: The Story of the Channel Tunnel 1802-1994* (Upton-on-Severn:

came in the mid-1950s, and much of the entrepreneurial and to a lesser extent financial, impetus came from the United States. An energetic and imaginative New York lawyer, Frank P. Davidson, and his French wife, Izaline, suffered a stormy channel crossing in 1956. After this adventure Davidson got together with a number of influential Americans to 'do something' about a tunnel. This eclectic group included Frank's brothers, Alfred and John; his brother-in-law, Arnaud de Vitry, a senior oil executive; Professor Cyril J. Means, former arbitration director of the New York Stock Exchange; William Buchan, a well-connected British public relations consultant; and Claude Arnal, an engineer.¹⁴ Then, in December Davidson wrote to the old British and French tunnel companies offering them the prospect of 'dollar funds'.¹⁵ Professor Means was dispatched to Europe to make contact with these companies and with the Suez Company, which having lost the canal was looking for new investment opportunities. Lobbying also extended to the British Foreign Office, the British Embassy in Paris and the French Ministry of Public Works.¹⁶ The outcome was that Technical Studies Inc. was formed in 1957 as a vehicle to provide American finance for a full technical investigation into the prospects for a tunnel. Financial support was provided by Dillon Read, J.P. Morgan and Morgan Stanley.¹⁷

In July 1957 a more substantial Channel Tunnel Study Group [CTSG] was created. Operating as an international financial syndicate, the Group had four stakeholders: the existing British and French tunnel companies, which had 19th century origins; the Suez company; and Technical Studies. Two distinguished figures were installed as co-chairmen: René Massigli, the former French Ambassador in London, and Sir Ivone Kirkpatrick, former Permanent Under-Secretary at the Foreign Office.¹⁸ The CTSG lost no time in commissioning a major feasibility study. A preliminary report from the engineering consultants Brian Colquhoun & Partners was followed by detailed work undertaken by a large group of leading contracting, engineering and financial institutions, embracing geological surveying, civil

Images; Fetherston, *Chunnel*; and Bonnaud, Laurent (2001), 'The Channel tunnel, 1955-75: When the Sleeping Beauty woke again', *The Journal of Transport History*, 3rd ser. 22, March, 6-22.

¹⁴ See Fetherston, *Chunnel*, pp.55-6; Davidson, *Macro*, pp.39-40; Frank P. Davidson, communication with author, 15 November 2001.

¹⁵ Frank P. Davidson-Channel Tunnel Co., 14 December 1956, Davidson-Société concessionaire, 17 December 1956, TSI Archive, Vol.1, HBS.

¹⁶ See correspondence in TSI Archive, Vol.1-3, HBS.

¹⁷ Davidson, *Macro*, p.96.

¹⁸ Channel Tunnel Study Group [CTSG] Supervisory Board Minutes, 26 July 1957, 4 February 1958, TSI Archive, Vol.62, HBS.

engineering, traffic forecasting, finance and legal requirements. In all, over £500,000 was spent in preparing what was in effect a preliminary prospectus. In March 1960 the CTSG was able to present both governments with a report offering to construct, own and operate the Tunnel [BOO]. In July a more considered statement of the anticipated economic benefits was added.¹⁹

Before a decision was made to proceed with the project a great deal more work was carried out, including a joint Anglo-French evaluation by civil servants in 1963 and a full geological survey in 1964-5. Successive governments examined the idea of granting the CTSG a concession, sometimes encouraging it, at other times asking for more study. However, finance proved the stumbling block, and specifically the Group's contention that private capital could not be raised without major concessions: tax exemptions; government guarantee of the bond-issues; protection against cost over-runs; and other assurances. From the Davidsons' perspective part of the problem lay in European suspicions about the involvement of American finance, and the nature of the risk-reward bargain, i.e. the extent of the rewards to be gained by entrepreneurs in return for their risk-taking. Thus, while there were those who, like Lord Harcourt of Morgan Grenfell, welcomed the prospect of American finance, there were others who wished to confine the project to European funding, especially if, as seemed likely in some periods, public sector financing was the obvious route. Thus, there was considerable alarm when Alfred Davidson reported in 1959 that about half the capital might come from the Americans, a concern compounded by the difficulties the French had at the time in participating in the scheme financially.²⁰ Indeed, scepticism and enthusiasm existed in almost equal measure inside Whitehall and the Quai d'Orsay. Equally, the American bankers were suspicious of European motives and made it clear that they too required a range of government guarantees if investment on this scale was to be made. At times they too nursed doubts about how serious the Europeans really were about the Tunnel.²¹

In spite of these obstacles and the tortuous political negotiations that accompanied them, the Davidson group continued to maintain an interest. They were not actively involved in the negotiations with the two governments, which were left to

¹⁹ CTSG, *Report 28th March 1960*, and *The Economic Benefits of a Channel Tunnel* (25 July 1960); Fetherston, *Chunnel*, pp.55-74.

²⁰ Sir Roger Makins (Treasury), conversation with Alfred Davidson, 26 November 1959, T224/228, TNA.

²¹ Cf. CTSG Supervisory Board Minutes, 21 June 1960, TSI Archive, Vol.64, HBS.

Harcourt and Kirkpatrick and their French counterparts, but they maintained a watching brief and occasionally became involved directly. They were particularly worried by the fact that the leaders of the Group, whose mastery of technical and financial details was limited, sometimes gave Ministers a bad impression.²² Although an agreement to proceed with a rail tunnel was announced by the respective transport ministers, Ernest Marples and Marc Jacquet, in February 1964,²³ much remained to be done, and both governments displayed considerable caution. The CTSG was contracted to conduct a more thorough geological survey, but by the time this was completed, a Labour Government had replaced a Conservative administration and the thinking had changed. In 1966, following a second Anglo-French report and a further affirmation of government intentions, this time by Barbara Castle and Edgard Pisani, it was clear that the model was a new one. It was now intended that the *private* sector would construct the Tunnel, but the *public* sector would operate it. Nevertheless, this change did little to accelerate decision-making, and there were sceptics inside the British Government who were arguing that the model was flawed. The Castle-Pisani statement ushered in two years of protracted negotiations with both the French Government and the private sector, which ultimately did little to advance the project.

By May 1967 three financial consortia had emerged, and these were invited to submit more detailed proposals. In addition to the CTSG, there was an Anglo-French-American group headed by Warburgs and the Banque de Paris et des Pays-Bas, and an Anglo-French-American-Italian group, led by Hill Samuel and Banque Louis-Dreyfus. Discussions with the parties went on into 1968, and the process of selection proved a headache. None of the consortia stood head and shoulders above the others, and while government officials were minded to encourage some merging of the parties it was clear that CTSG, for so long a front runner, now no longer enjoyed that position. It had shaped a proposal which with its greater involvement of French financial interests, found favour with the French rather than the British. It was also offering to put up the highest amount of equity, although at £5 million this was not a large sum. However, British officials were concerned that the Group had shown little evidence of being able to act as a coherent team and felt that new blood was required on the British side. By April 1968 the consortium led by Hill Samuel appeared to be

²² Cf. a meeting of Ernest Marples with American interests in January 1960: R. Gordon Wasson (Vice-President, Morgan Guaranty Trust)-Harcourt, 19 January 1960, TSI Archive, Vol.97, HBS.

²³ Marples, *Parl. Deb. (Commons)*, 6 February 1964.

in the lead from the British perspective. With the French inclined to choose CTSG, the negotiations stalled.²⁴

After a Cabinet reshuffle, it fell to Castle's successor, Richard Marsh, to find a way out of the labyrinth. The result was an unsatisfactory compromise. It was stated that none of the financing proposals was compliant, and the three consortia were invited to respond to a second round, with more specific guidelines. The intention was to complete this process by October 1968 but on this occasion political unrest in France put paid to the timetable, and a revised deadline of January 1969 was belatedly announced.²⁵ By this time, the CTSG was becoming both disheartened and marginalised. The Davidsons, after over a decade of involvement via Technical Studies, were exasperated with European procrastination, and their efforts within CTSG were more and more focussed on obtaining adequate compensation for their investment since 1957. Indeed, the Government would only allow a response from CTSG in the second round if the compensation claim it had lodged in 1967 were settled.²⁶ The founding promoters could not have been happy to see that the revised guidelines bound the successful consortium to a further study period, a further appraisal of viability, and more geological work, in addition to the submission of detailed engineering drawings and tender documents. And, of course, the two governments reserved the right to abandon the project 'for any reason'.²⁷

In November 1969 CTSG's claim for compensation was finally resolved, the government agreeing to pay £3 million,²⁸ and the Group entered into negotiations with Hill Samuel about the prospects for producing a joint proposal. These discussions were still proceeding when the Conservatives were returned to office in June 1970. It fell to John Peyton, of all the British transport ministers the most enthusiastic about the Tunnel, to negotiate with the consortia. In fact, although CTSG's prospects seemed more remote, in the end only Technical Studies disappeared. The successful consortium, led on the British side by Harcourt and Jock Colville of Hill, Samuel, was made up of the core elements of the previous three

²⁴ John Barber (British Ministry of Transport)-Roger Macé (French Ministry of Transport), 18 April 1968, MT144/95, TNA.

²⁵ Marsh, *Parl. Deb. (Commons)*, 23 October 1968.

²⁶ MT, Notes for the Guidance of Private Groups, October 1968, MT144/73, TNA.

²⁷ *Ibid.*

²⁸ Alfred Davidson, memo. 2 April 1969, TSI Archive, carton #13, f64, HBS; Alfred Davidson-Frank Davidson, 16 September 1969, *ibid.* f.63.

bidders, in fact. Hill Samuel and CTSG merged their interests and were strengthened with the addition of Warburgs and White, Weld (see Table 1).

It was the consortium of July 1970 that took the project forward. There was a long period of protracted negotiation before heads of terms for the preliminary agreement were signed in both countries in September 1971. Interim studies of the financial and economic prospects were completed in July 1972, then in October the preliminary agreement itself – ‘Agreement No.1’, was signed. This provided for

Table 1. The Channel Tunnel Consortium, July 1970

<i>British Sub-Group</i>	<i>French Sub-Group</i>
The Channel Tunnel Co.	Compagnie Financière de Suez
Morgan Grenfell & Co.	Compagnie du Nord
Robert Fleming & Co.	Banque Louis-Dreyfus et Cie
Hill, Samuel & Co.	Banque de Paris et des Pays-Bas
Kleinwort, Benson	Société Nationale des Chemins de Fer Français
S.G. Warburg & Co.	Banque Nationale de Paris
White, Weld & Co. (USA)	Crédit Commercial de France
The First Boston Corporation (USA)	Crédit Lyonnais
[later joined by:	Société Générale
Morgan Stanley (USA)	Banque de l’Union Européenne
Rio Tinto-Zinc	
British Railways Board]	

Phase I, a final study period, which was to be completed by July 1973. ‘Agreement No.2’, together with an Anglo-French Treaty, were signed in November 1973, providing for Phase II, a period of trial construction, which was to be completed by July 1975. Phase III would see the construction and opening of the Tunnel. Two companies, the British Channel Tunnel Co. [BCTC] and the Société Française du Tunnel sous la Manche [SFTM] were established, and two project managers were appointed, on the British side RTZ-DE and on the French, SITUMER (later strengthened by the addition of CGE-Développement). However, the Treaty was never ratified, since the Channel Tunnel Bill had not passed through all of its parliamentary stages, when the project was abandoned in January 1975. Concern expressed by the incoming Labour administration about the escalating cost of a rail link from London to the Tunnel was instrumental in the decision of Anthony Crosland, the British Secretary of State for the Environment, to pull the project. Abandonment was a severe blow, casting a shadow over Anglo-French relations for

some time. For the Davidsons there was immense disappointment. Technical Studies failed to obtain any competition for its involvement, while the other partners in CTSG were compensated under the terms of Agreement No.2.²⁹

This attempt to build a tunnel produced many lessons about the organisation of large and complex international infrastructure projects. Here we focus on the project management elements and more specifically the appointment of RTZ-DE as British project managers. Rio Tinto first became involved in the project in 1969-70 when Sir Val Duncan, the company's Chairman and Chief Executive, was approached by a promoter of a bridge-tunnel-bridge scheme for the channel, based on the Chesapeake Bay bridge-tunnel project in Virginia, completed in 1964. Rio Tinto responded by examining the broader possibilities under the codename 'Rollercoaster'.³⁰ In October 1969 Alistair Frame, its leading engineer, rejected the idea of a Chesapeake-type scheme, but instead expressed enthusiasm for a rail tunnel, and contacts were made with the consortium led by Lord Harcourt.³¹ Links already existed, since Sir Mark Turner, the Deputy Chairman of consortium member Kleinwort Benson, also sat on the board of Rio Tinto. Duncan and Turner had not only rescued Rio Tinto in the 1950s; they proved to be dynamic players in the diversification-fuelled acquisitions of the 1960s and early 1970s, which had seen the creation of Rio Tinto (in 1962) and its expansion into large-scale, capital-intensive natural resource projects.³²

Turner was well aware that the banks could not build a tunnel without professional assistance, and he recognised that effective management of the engineering side would be a critical element. Duncan had told Harcourt at an early stage: 'we are naturally interested if the set-up is right'.³³ From the perspective of the governments and the promoters, good project management was a necessary skill if the project were to be progressed satisfactorily, i.e. close to time and budget. Rio Tinto

²⁹ The agreement to pay CTSG, transferred to the BCTC, was held to be null and void when the project was abandoned in 1975. See Slaughter & May-William Merton (Channel Tunnel Investments), 13 February 1975, TSI Archive carton #14 f11; Alfred Davidson, Note, 15 October 1975, Frank Davidson-Roger Smith (Peat Marwick Mitchell), 17 December 1990, carton #13 f7, 63.

³⁰ Sir Val Duncan-Lord Gladwyn, 15 August 1969, BOW756 (80/1.25.5), RT. On Chesapeake Bay see TSI Archive, Vol.85, HBS.

³¹ Alistair Frame-Duncan Dewdney, 9 and 17 October 1969, BOW756 (80/1.25.5), RT.

³² Jehanne Wake (1997), *Kleinwort Benson: the history of two families in banking*, Oxford: Oxford University Press, pp.367, 390; Gourvish, Terry (1996), "'Beyond the merger mania": merger and de-merger activity', in Coopey, Richard and Woodward, Nicholas Woodward (eds), *Britain in the 1970s: The Troubled Economy*, London: UCL Press, pp.236-40; Harvey, Charles (1981), *The Rio Tinto Company. An Economic History of a Leading International Mining Concern 1873-1954*, Penzance: Alison Hodge, pp.305-10.

³³ Duncan-Harcourt, 13 October 1969, BOW756 (80/1.25.5), RT; Fetherston, *Chunnel*, pp.75-6.

could lay claim to extensive experience in the field, and the company enjoyed a good reputation in Whitehall. It had impressed civil servants with a presentation at a project seminar held at Peterhouse, Cambridge on the part it had played in the large hydro-electric scheme at Churchill Falls, Canada, opened in 1971.³⁴ In August 1970 Duncan met Harcourt to discuss the potential for Rio Tinto's involvement in the Tunnel as project managers on the British side. It was to prove an episode with wider ramifications.³⁵ Shortly after the meeting Rio Tinto set up a subsidiary company, RTZ-DE, to provide 'large-scale project management capability'. Led initially by Duncan Dewdney as Chairman (he was an executive director of Rio Tinto, 1968-72) and then by Lord Shackleton, Labour's leader in the Lords (1968-74), the subsidiary was to handle the management and supervision of building and construction for Rio Tinto activities where expertise was lacking. The Tunnel, retaining the codename 'Rollercoaster', was one of its first concerns.³⁶ By September, discussions between the British Sub-Group and Rio Tinto had reached the stage where it was thought appropriate to involve the Minister of Transport, John Peyton, and after a series of exploratory discussions between the parties, including the French, Peyton met Harcourt and Duncan for serious talks on 16 October 1970.³⁷

Negotiations between the parties proved difficult, however, illustrating the gulf in the respective approaches of bankers and project managers. Thus, from the project managers' perspective, there was disquiet about the initial shaping of the scheme, with Rio Tinto expressing strong criticism of what was felt to be a typical bankers' deal. They disliked the fact that the proposed 'equity' was essentially equivalent to preference shares with limited participation, and the remuneration formula was criticised for giving too much to the public operating authority. The banks had accepted this arrangement, thought Rio Tinto, because they favoured a risk-averse, low-return strategy and expected to derive the main benefits from financing and debt management activities. Rio Tinto much preferred a high-risk, high-return strategy, wishing to take a large equity stake in partnership with the governments.³⁸ By this time, of course, the 'heads of terms' had been submitted, and Harcourt was at pains to point out that the document, unsatisfactory as it might appear to a private sector

³⁴ 'Record of a meeting held at RTZ on 19 August 1970', BOW756 (80/1.25.5), RT.

³⁵ Ibid.

³⁶ RTZ-DE Board Minutes, 5 October 1970, 20 April 1971, RTZ-DE Report & Accounts, 1970-1, in SRR925, RT; *Daily Telegraph*, 6 October 1970, *Times*, 18 February 1971.

³⁷ Note of meeting held on 16 October 1970, MT144/161, TNA.

outsider, was the product of months, if not years, of negotiation with the two governments and their officials.³⁹ Consequently, Rio Tinto, like its predecessors, was forced to compromise. At the meeting with Peyton, the company argued that it believed a greater expenditure would be required in the study periods, and it also reaffirmed its desire to participate in the equity, suggesting a stake of some £5-10 million. More significantly, it argued strongly that a unitary management structure was required for the several stages of the project. The news that the French were contemplating construction by two separate and autonomous national teams was regarded with dismay. This approach, thought Rio Tinto, would hamper technical and cost control, and encourage significant cost overruns. Duncan went further than this. He argued that it would be preferable if a single organisation (50% public, 50% private) handled both construction and *operation*. However, British officials from the Department of the Environment pointed out that given the tortuous negotiations required to get this far, 'it would not be timely' to raise such a major modification at this stage. Rio Tinto was therefore encouraged to consider its fallback position, a willingness to work within the existing framework for an adequate return on an equity stake.⁴⁰ Nevertheless, the company's fears were well-founded, as subsequent events revealed. Criticised in some Whitehall circles for their somewhat abrasive style, Rio Tinto brought a fresh attitude to the proceedings as novices. One of their first reactions was, revealingly: 'if 18 banks, 2 governments, and 2 railways are involved, to say nothing of 2 construction companies, then the pace of progress will be very slow, and may stop altogether'.⁴¹ The French, while not opposed to the involvement of Rio Tinto, were clearly wary about any new ideas being presented outside the current framework. They had approached project management in a quite different way, arranging for an engineering consortium – 'Sofremanche', subsequently SITUMER - to work on a strictly fee-only basis. The possibility that Rio Tinto's requirements might upset the delicate balance of British and French participation - referred to as the 'moitié-moitié principle' - was an obvious concern.⁴² Eventually, Rio Tinto, together with the American Bank, Morgan Stanley, and the British

³⁸ Rio Tinto, 'Rollercoaster: the Presentation [sic] Situation', 14 July 1970, BOW756 (80/1.25.5), RT.

³⁹ Rio Tinto, 'Rollercoaster, Record of a meeting ...', 19 August 1970, cit.

⁴⁰ 'Final draft memorandum to the Minister of Transport from Rio Tinto-Zinc Ltd., 16th October, 1970', n.d., MT144/161, TNA.

⁴¹ Allen Sykes (RTZ-DE)-Dewdney, 5 September 1970, BOW756 (80/1.25.5), RT.

⁴² Cf. Morris and Hough, *Anatomy of Major Projects*, p.25.

Railways Board, agreed to join the British sub-group of the consortium. Rio Tinto obtained an option to take 20 per cent of the founders' capital of £1 million.⁴³

While discussions took place which led to the signature of the 'heads of terms' in September 1971, Rio Tinto made it clear that it was intent on increasing the private sector element in the project. And it achieved a measure of success in that the British and French companies agreed to increase the founders' capital to £2 million when the preliminary agreement (No.1) was signed, and in the subsequent construction period to raise a minimum of 10 per cent as risk capital. But problems surfaced in relation to the studies, where there were squabbles between the British and French parties, in the plans for private financing, and in meeting the insistence that rewards for work done, including management fees should be adequate. Work on the studies of technical feasibility, construction costs and traffic forecasts began in April 1971 and was completed in July 1972. The most worrying aspect of the exercise was the divergence between Rio Tinto, working with Coopers Brothers (subsequently Coopers & Lybrand), and SITUMER, working with SETEC-Economie, over assumptions and methodology. An early meeting of the working group was informed that the French and British documents appeared to differ on 'every meaningful point'. These differences were most pronounced in the approach to the traffic and revenue studies. 'High' and 'low' toll scenarios were constructed, the former, favoured by SETEC, adopting charges based on the sea ferries' current rates (in real terms), the latter, advanced by Rio Tinto/Cooper Brothers, envisaging that competition would force prices down. British officials thought that neither option could be said to represent the likely state of affairs if the Tunnel were built. They regarded the high toll option as unrealistic since the current high tolls were the product of a car-ferry cartel which was already under investigation by the Department of Trade and Industry (and was subsequently referred to the Monopolies Commission in September 1972).⁴⁴ On the other hand, further work was required on the competitive reaction of operators in order to validate the low toll model. Traffic assumptions also varied, the British consultants being more sceptical about the extent of holiday traffic. There was an

⁴³ Sykes and John Stanley (RTZ-DE)-Turner, 3 June 1971, BOW756 (80/1.25.5), RT. The participation of the other newcomers was more modest.

⁴⁴ Working Group on the 1972 Studies Report Minutes, 1 May and 6 June 1972, MT144/438; Cabinet EPC Minutes, 17 and 27 July 1972, CAB134/3487, TNA; Monopolies Commission, *Cross-Channel Car Ferry Services: a Report on the supply of certain Cross-Channel Car Ferry Services*, 15 October 1973, published on 10 April 1974, P.P.1974, viii.

unusually large amount of Anglo-French fencing, fuelled by suspicions in Paris about the project being 'RTZ-led'.

What did and did not constitute private capital in Britain and France was another frequently discussed matter, as was the differing nature of the capital markets in the two countries, and these continued to give rise to significant differences of position within the British and French Sub-Groups. While the British financiers, encouraged by RTZ-DE, favoured 'true' equity, the French were happy with the existing concept of 'participating preference' shares with a guaranteed return.⁴⁵ The two sides also differed in their ideas for the phasing of the risk capital. In 1972 the initial financing plans contemplated expenditure of about £25 million to 1975, with £4 million in the form of founders' shares to be made available in the period May 1972-June 1973. The British, who had to go to the market for their funds, lacked the resources to provide their portion of the founders' shares immediately. This compromised the intentions of the French, who with access to 'in-house' resources via their nationalised banks were prepared to put up the founders' capital immediately. However, they were unwilling to commit themselves to the rest before agreement with the governments in 1973, which prejudiced the chances of the British raising money on the London market. As Dewdney observed with characteristic understatement, these plans were 'mutually inconvenient'.⁴⁶ Another bone of contention, at least on the British side, was the governments' insistence on operation by a public authority, which, Rio Tinto claimed, would make the task of raising capital much harder.⁴⁷ From the perspective of the British Government, there was some anxiety that since Rio Tinto was both project manager and consortium member, the British Sub-Group would be in possession of useful 'signals' from the studies before the Government knew the contents. Although this position of information asymmetry did not in fact arise, the study findings remained a critical component in the bargaining between the governments and the promoters. It was thus no surprise when Harcourt's response to Peyton included the observation that the results had made it essential for the British banks to re-examine the financing plan for the project. While the Anglo-French Group was prepared to put up 50 per cent or £2.5 million for Phase I, it could commit no more than 10 per cent or £2 million for Phase II.

⁴⁵ 'Note of Meeting held on 8 December 1971', MT144/178, TNA.

⁴⁶ Dewdney, File Note, 31 January 1972, MT144/228, TNA.

⁴⁷ Rio Tinto, 2nd draft annual conference paper, 4 January 1972, BOW 757 (80/1.25.5), RT.

However, if circumstances allowed, it would use its 'best endeavours' to raise finance up to the figure of 30 per cent (£6 million).⁴⁸

The intention was that before Agreement No.1 was signed, the significant question of the project managers' agreements would also be resolved. These were not to be included in Agreement No.1, but the Anglo-French Group wished to sign them contemporaneously, and the British government took a close interest in the negotiations between RTZ-DE, SITUMER and the British and French tunnel companies. For civil servants the scale of the fees was the central area of concern. Here the key element was that the thinking of RTZ-DE changed substantially between the time of its first involvement in 1970 and the summer of 1972. At first, the company felt that £25,000 a month for 100 months might be appropriate as a fee. This amounted to £5 million for the British and French managers, or 1.4 per cent of capital cost. Later on, it insisted that the investment opportunity was now 'much less rosy'. The company had given up all hopes of a genuine equity investment, while the likely return on its so-called 'equity' was unlikely to be attractive.⁴⁹ Consequently, Duncan encouraged Frame to increase the level of management fees, and in July a draft management agreement with the British Channel Tunnel Co. was sent to the Department of the Environment which proposed a much higher remuneration for RTZ-DE. There was to be a two-tier structure comprising a fixed element of £5 million, and a variable, performance-related, element, dependent on the difference between out-turn and forecast costs. If the actual cost of the Tunnel matched the forecast, the payment would be £7.5 million. Assuming that the French project managers were rewarded on the same basis, the fees would amount to £10 million fixed (2.7 per cent) and £15 million variable (4.1 per cent).⁵⁰ This demand not only provoked Peyton, who warned Duncan that he would have to defend the fees in Parliament, but also upset the French, who felt fees should be lower.⁵¹ In September 1972, only days before Agreement No.1 was due to be signed, a substantially revised proposal was put to the DOE, and it was followed by a formal letter from Harcourt to Peyton asking that the sums to be paid to RTZ-DE be agreed before signature. This envisaged a fixed element of £3.8 million (£38,000 a month for 100 months), and a

⁴⁸ Harcourt-Peyton, 3 May 1972, MT144/236, TNA.

⁴⁹ Frame, Note for File, 29 March 1972, BOW 1010 (80/1.25.10); Duncan-Harcourt, 17 August 1972 [two letters], BOW 757 (80/1.25.5), RT.

⁵⁰ Draft Project Management Agreement, 17 July 1972, MT144/482, TNA; Dewdney-Duncan, 21 September 1972, BOW 1010 (80/1.25.10), RT.

variable element, to be shared with the French, of £5.5 million, if the forecast cost was attained. If the French were paid the same fixed fee, the total would be £13.1 million or 3.6 per cent. In addition, Mott, Hay & Anderson and SITUMER would be paid £4 million in engineering fees. The grand total of £17.1 million or 4.7 per cent was defended by RTZ-DE as lying within the 4-6 per cent range deemed appropriate for major projects of this type.⁵² British civil servants continued to express some unease, and precedents were traded. But because there was no time to give the proposal the necessary detailed study, and the French had their own ideas about fees, the Department suggested that in order to allow Agreement No.1 to be signed the general framework would be accepted as the basis for further negotiations. There were fears that Rio Tinto might withdraw if not accommodated, and Peyton even wrote to Robert Galley, the French Minister of Transport, on Duncan's prompting to make an appeal for 'unified project management'.⁵³ Nevertheless, the British government insisted that the timetable be followed. RTZ-DE submitted yet another schedule of fees in mid-October, asking BCTC for £3.8 million as a fixed amount, plus £2.75 million as a variable, performance-related element. The French managers, SITUMER, were expected to receive £1.74 and £2.75 million, all in 1972 prices.⁵⁴ But Agreement No.1 was signed in October 1972 without project management contracts being actually in place.⁵⁵ Government officials were still unhappy with the remuneration proposed, but the rather exceptional circumstances made it hard for them to assess what a 'fair' fee should be.⁵⁶ After intensive negotiations in December 1972 the basis for an agreement was reached early in the following month. RTZ-DE accepted a reduction in the fixed fee – to £3 million – and payment of a higher, performance-related element of £3.25 million (if there was no over-run in construction costs), but in BCTC equity instead of cash.⁵⁷ There was little satisfaction about the outcome. The Treasury, which had expressed considerable doubts about the

⁵¹ Dewdney-Duncan, 19 and 21 September 1972, BOW 1010 (80/1.25.10), RT.

⁵² Frame-Sir Eugene Melville (DOE), 25 September 1972, Harcourt-Peyton, 26 September 1972, MT144/482, TNA. Payments to RTZ-DE during Phase I were to be at the lower rate of £25,000 a month.

⁵³ Dewdney-Duncan, 4 October 1972, RTZ-DE, Note on 'Channel Tunnel - Project Management Fee', 6 October 1972, Peyton-Galley, 6 October 1972, BOW 1010 (80/1.25.10), RT; Melville-Pugh, 5 October 1972, MT144/482, TNA.

⁵⁴ Harcourt-Peyton, 26 October 1972 (draft sent to DOE, 11 October), MT144/482, TNA.

⁵⁵ Dewdney-Melville, 11 October 1972, MT144/482, TNA.

⁵⁶ Melville-Sir Idwal Pugh (DOE), 5 December 1972, MT144/483, TNA.

⁵⁷ Frame-Melville, 8 January 1973, MT144/484, TNA. SITUMER was to receive £1.44m. fixed and up to £3.25m. variable.

deal, only gave it its blessing when Peyton said that otherwise the project would be compromised.⁵⁸ Further complications emerged over the course of 1973. The undertaking to adjust the payments for post-1972 inflation produced a considerable amount of squabbling over the methods of calculation, much of it directed at the variable fee, which was to be paid in shares. The project managers also demanded insulation from circumstances beyond their control. But the main difficulty was caused by the discovery that the proposed indexation would conflict with the government's counter-inflation legislation, to be applied in November.⁵⁹ In these circumstances it was scarcely surprising that the British Government was unable to endorse a draft agreement until 17 November, the day on which the main documentation was signed. This circumvented the Counter-Inflation Act by forecasting future inflation rates and referring only to cash sums.⁶⁰ Even then, this was not the end of the story, which proved once again that the devil was in the detail. All along, there had been problems in obtaining the agreement of the French to the proposed arrangement with RTZ-DE. Successive transport ministers expressed concerns. Galley wanted a greater proportion of the payment to be performance-related, and foresaw difficulties in paying the variable element in shares to SITUMER, which was expected to wind itself up after the construction period.⁶¹ Galley's successor, Pierre Billecocq, was also unhappy with the disparity in the fee structure, a departure from the 'moitié-moitié' principle. At the eleventh hour he rocked the boat by revealing that the French side proposed to strengthen its project management team by hiring Compagnie Générale d'Électricité, indicating that this would lead to a demand for equality of fee payments. It was not until 1 February 1974 that he was able to express consent to the British contract, which was signed on the 5th.⁶² The lengthy wrangling over fees illustrates the gulf in approach between private sector managers and civil servants to issues surrounding risk and reward.

Much of 1973 was also spent by the promoters and the respective governments in haggling over the risk-reward bargain for the Tunnel investment. Numerous

⁵⁸ Patrick Jenkin (Financial Secretary, Treasury)-Peyton, 25 January 1973, MT144/483, TNA.

⁵⁹ Cf. Frame-Melville, 10 August and 1 November 1973, MT144/484-5, TNA.

⁶⁰ Melville-Harcourt, 17 November 1973, MT144/485, TNA.

⁶¹ Cf. 'Project Management Fee: Minister's meeting with Sir Mark Turner – 11 December 1972', n.d., MT144/483, and CTSU, 'Summary Note of Meeting on 4 January 1973', 5 January 1973, MT144/484, TNA.

⁶² Billecocq-Peyton, correspondence, 21 December-4 February 1974, Susan Fogarty (DOE)-Harcourt, 4 February 1974, MT144/486-7, TNA; Agreement, 5 February 1974, CAR 646 (B1/R9/S10), RT.

formulae were advanced, and an impasse was evident in the summer, with the companies expressing the view that they would not be able to raise any equity on the terms suggested. The remuneration formula was to be based on a share in gross receipts ('x') and a share in net receipts ('y'). In addition, private money raised in Phase II was to be rewarded with a multiplier element ('n'). In earlier talks precision had been avoided, but now the companies were armed with the study results, though there was some suspicion within government circles that this information, and in particular, estimates of revenue growth, might be manipulated to the private sector's advantage.⁶³ Advice given to the British Government by Hambros Bank that a fair return should be 14 per cent pre-tax indicated values for 'x' and 'y' of 10 and 5 per cent respectively. The tunnel companies opened the negotiations with values of 32 and 10 for 'x' and 'y', and a suggested multiplier of 1.8. They added that if they were successful in raising more risk capital, then the value of 'y' should be increased on a straight-line basis, reaching 90 if the risk capital amounted to 30 per cent.⁶⁴ The Government, taking further advice, felt that this formula would produce an unacceptable return of 34 per cent. In the lengthy period of negotiation that followed, it was clear that this was not merely a battle between private sector 'greed' and government 'prudence'. In exchanges between Peyton and Billecocq, it emerged that the French were more interested in setting values of 'x' and 'y' which would encourage capital to be raised, rather than haggle, as the British were prepared to do, over the profit-sharing arrangements between the public and the private sectors. A figure of 32 for 'x' was acceptable to the French but, of course, they could afford to take such a stance, since a substantial part of the 'private' group in France was made up of nationalised bodies.⁶⁵ The British, on the other hand, continued to resist, seeking formula values which would satisfy all requirements: enable the companies to raise equity; enable the governments to receive a share in the profits from the beginning; and prevent the companies from making excess profits in later years. However, the Government's counter-offer of 'x' = 8, 'y' = 2.6 and 'n' = 1.2 was quickly rejected by the companies. The Rio Tinto project management team became unsettled by the failure to agree terms, and the French Minister warned that unless an agreement was

⁶³ Cf. Fogarty, reported in DOE Channel Tunnel Agreement No.2 Working Party [CTAWP] Minutes, 17 May 1973, MT144/268, TNA.

⁶⁴ Hambros, discussion paper, May 1973, MT144/268; Frame-Peyton, 7 June 1973, MT144/272, TNA.

⁶⁵ Rowe & Pitman, Note, 11 June 1973, MT144/268, Peyton-Billecocq, 20 June and reply, 22 June 1973, MT144/272, TNA.

reached his Government might seek to carry forward the project 'by other means'.⁶⁶ The deadlock was eventually broken by an ingenious adjustment to the formula, adding a fixed element ('f'). In September 1973 values of 'f', 'x' and 'y' of 11.0, 8.7 and 3.0 were agreed, providing an initial net return of 16 per cent. The multiplier was to be set between 1.4 and 1.2. Using the more pessimistic estimate of revenue, the Government could expect 19 per cent of the profits in the first year, rising to 75 per cent by 1990.⁶⁷

In spite of this wrangling, the involvement of Rio Tinto in the Channel Tunnel was clearly positive. For example, Phase I of the project, providing for the completion of the studies, was completed under budget, a fact noted by a British Government White Paper.⁶⁸ After the tunnel companies had placed the equity capital for Phase II in February 1974, operations began in earnest. Contractors began work at Sangatte, near Calais, and at Shakespeare Cliff, near Dover, and RTZ-DE increased its responsibilities by taking on the project management functions of the British tunnel company in March. Notwithstanding the further complication of the entry of CGE-Développement [CGE-DE] as lead manager on the French side, relations between the two sets of managers improved over the course of 1974, due largely to the good relations established by Alistair Frame and Jean Gabriel of SFTM.⁶⁹ Abandonment was as much a disappointment to RTZ-DE as it was to other players in the game. If the tunnel companies nursed concerns about higher risks, and were anxious at the end to protect their right to compensation, there is no evidence to suggest that the project managers were anxious to abandon the scheme. As investors in BCTC, Rio Tinto received its share of compensation payments to BCTC totalling £8.5 million. It also helped to run the project down in an orderly fashion, leaving a portion of bored service tunnel on the British side which was eventually incorporated into the service tunnel of the successful scheme opened in 1994. But this was clearly a case of 'once bitten, twice shy'. Almost immediately after the tunnel works were sealed off, the project managers were approached by enthusiasts, including the Davidson Brothers, who tried to revive the idea around a cheaper 'mousehole' single-bore. However, RTZ-DE was firmly in favour of a twin-bore tunnel, and was not inclined to invest so

⁶⁶ Meeting at Lancaster House, 31 July 1973, MT144/256, TNA.

⁶⁷ Geoffrey Rippon (SoS for Environment), Memo. 4 September 1973, CAB130/702; Melville-Peyton, 5 September 1973, MT144/274, TNA.

⁶⁸ DOE, *The Channel Tunnel*, Cmnd.5430, September 1973, para.1.4. The cost was £5.1m., cf. the budgeted £5.4m. RTZ-DE Minutes, 3 December 1973, CA 128 (B1), RT.

much management effort again so soon after its disappointment.⁷⁰ The Davidsons stayed in the game, though their role became increasingly a marginal one, and they went on to examine a tunnel construction system based on submerged caissons.⁷¹ RTZ-DE agreed to work with CGE-DE in evaluating the single-bore idea in the period 1975-7, but they eventually made it clear that their interest had faded.⁷²

Issues and lessons

i) The nature of entrepreneurial intervention

The TSI and Rio Tinto archives, together with Britain's public records, give a valuable insight into how a financial consortium is put together, and they also provide abundant evidence of the limits to the 'entrepreneurial spirit' within a promoting group. The CTSG pressed hard for the Tunnel and provided enthusiasm and determination whenever civil service caution and the nervousness of ministers threatened to bring proceedings to a halt. Not only that. The Group also undertook the pioneering work from which all else followed. The determination was by no means all American. The abiding memory among tunnel watchers in the 1950s and 1960s was of Leo d'Erlanger, banker and chairman of the Channel Tunnel Company, presiding optimistically over annual meetings, and of Lord Harcourt, with his impeccable governmental and banking pedigree, pursuing the cause in numerous meetings behind the scenes. But Alfred Davidson, Technical Studies's voice in Europe, was equal to them both, striding the boards in London and Paris and often exasperating the British and the French in equal measure, but above all, promising the kind of entrepreneurship which had financed the London Underground at the turn of the century, and, more recently, the Chesapeake Bay complex. However, the impression left by the case study is that there were distinct limits to the risk-taking which the private sector was prepared to bear. And the engineers and contractors, just as much as the banks, were anxious to limit the area of risk and increase the content of government guarantee. An international project also provided its political tensions. As the experience of Technical Studies shows, although the CTSG was important as a truly international joint venture, with significant French support from Suez, de

⁶⁹ Hunt, *Tunnel*, p.138.

⁷⁰ RTZ-DE, 'Review of a Two-Tunnel system', August 1975, Frame-Frank Davidson, 20 August 1975, TSI archive carton #14 f11-12.

⁷¹ Davidson, *Macro*, pp.100-1.

Rothschild and the French railways [SNCF], the American component grated on the French in particular, at a time when Servan-Schreiber was warning Europe about the dangers of the *défi américain*.⁷³ Furthermore, because the Group's approach was so firmly identified with French ideas on the project, it helped to muddy the waters of Anglo-French relations while giving the French Government much too optimistic a picture of the prospects for private investment. The shortcomings of a rather ill-fitting amalgamation of speculators, financiers and mixed-economy companies were fully revealed during the consortia competition of 1967-70, especially when CTSG were unable to find its promised £5 million in equity.

ii) the public-private interface

The difficulty of reconciling public sector investment with private sector financing has been a substantial one in the British case. This can be seen in the flirtation with private sector involvement in public projects in the 1980s, constrained as it was by the restrictive conditions imposed by the Treasury in 1981 (known as the 'Ryrie Rules'), and, more recently, by the problems thrown up by the concept of the 'Private Finance Initiative' [PFI]. In the case we are examining here, the difficulties were compounded by the fact that in France the position was very different from that in Britain. Many of the financial partners were in fact public sector banks, and there was more experience of 'mixed-economy' companies – *sociétés d'économie mixte* - where shareholding was both private and public. Complicated as it was by Anglo-French participation, the Channel Tunnel project of 1957-75 illustrated all the difficulties of reconciling public and private perceptions of risk and reward. There were wide differences of opinion at all stages. For example, as one of the bankers involved in CTSG observed, 'Governments do not appear to be understand the absurdity of requiring that the more risky the project appears to be, the more equity capital should be raised'.⁷⁴ Over its two decades, the project had lurched from being a public sector investment to being a private sector investment with public sector operation at the end of it, though, ironically, it was the escalating cost of the putative *public* investment in a British rail link which contributed substantially to the abandonment. The difficulty of reaching

⁷² RTZ-DE Board Minutes, 4 August, 10 September and 17 December 1975, 11 June 1976, 11 July 1977, SRR0925, RT.

⁷³ Servan-Schreiber, Jean-Jacques (1967), *Le défi américain*, Paris: Denoël.

⁷⁴ Dallas Bernard (Morgan Grenfell), Note, 17 September 1969, Baring Partners files, No.207258, Baring Archives at ING Bank NV.

agreement at the various stages in 1970-5 exposed the sheer difficulty of negotiations between four parties with very different interests; the danger of judging and managing the project by reference to ‘financiability’ (whether the private capital could be raised) rather than viability; and the fundamental dilemma of control over a public/private enterprise.⁷⁵ It may be too much to assert with Michael Bonavia, that the Channel Tunnel was prejudiced from the moment in 1966 that it became a public-private partnership. But there was no escaping the fact that there were substantial problems with the ‘tartan quilt’ of ‘quadripartite negotiations’.⁷⁶ British civil servants were disappointed with the behaviour of the British private company in attempting to maximise profits while at the same time shifting most of the risk onto the taxpayer. The BCTC’s insistence that its return on investment should be based on pessimistic assumptions about traffic growth was particularly exasperating, and in meeting after meeting, Harcourt, Frame and Naylor whittled away at the risk element.⁷⁷

The private sector’s experience of Whitehall was equally frustrating. The difficulty in getting the two governments to pledge unequivocal support for the project tried the patience of businessmen used to a more straightforward environment. At times the civil servants made something of a meal of abstruse points of detail, their behaviour all the more galling to Rio Tinto and the merchant banks when negotiations were still necessarily at a provisional stage. Treasury officials were guilty of sophistry when they poured cold water on the prospects of an adequate return on the project, then complained about the prospect of the private sector earning ‘scandalously high profits’.⁷⁸ The private sector claimed that it required higher returns, first because it had borne substantial costs arising from the British government’s ‘on-off’, ‘stop-go’ attitude to the project since 1960, and second, because there was every reason to doubt the government’s ability to organise a commercial enterprise. Thus, the difficulty of progressing the project on terms acceptable to both the public and private sectors was a major lesson of the period 1970-4, and influenced government attitudes to the revival of the project in the mid-1980s.⁷⁹ RTZ-DE’s inquest on the 1974-5 project was that it should have been a public sector project from the outset with

⁷⁵ Cf. Treasury reactions in 1972, Treasury file 2PE 91/199/01 Pt.P.

⁷⁶ Bonavia, *Channel Tunnel Story*, p.86; Peter Kemp (DOE), interview with author, 2002.

⁷⁷ CTSU, Note of meeting on 29 August 1973, MT144/274, TNA.

⁷⁸ Leo Pliatsky (Treasury), note, 4 July 1973, Treasury file 2PE 91/199/01 Pt.AB.

⁷⁹ See Gourvish, Terry (2006), *Britain and the Channel Tunnel*, forthcoming.

private sector project management.⁸⁰ This is a valid point, but the patent fact was that the 1970s tunnel, with its high proportion of government-guaranteed bonds, was quasi-public anyhow and therefore vulnerable to the vicissitudes of public policy. Frame was adamant that his company had been ‘thwarted’ by government interference, and this certainly coloured Rio Tinto’s attitude to the revival of interest in the tunnel in the 1980s.⁸¹

iii) The ‘large infrastructure project circle’

Figure 2 serves as a conclusion by illustrating the frustrations and circularity in the development of a public-private project of this type. Thus, the long gestation period, asset specificity and high risk involved in ventures such as the Channel Tunnel of 1957-75 encouraged public sector investment. However, when Governments found it impossible to raise the money out of their own resources, they inevitably turned to the private sector for a solution. The reaction of private interests, whether banks or contractors, was to seek to maximise their advantage in risk-reward bargaining, particularly since profit forecasts were uncertain. Thus, demands were made to guarantee the companies against the risks of cancellation, to severely limit the extent of equity financing, and to secure government guarantee of the loan capital. The granting of guarantees, whether financial or political (i.e. compensation against cancellation) meant that Governments shared the project’s risks, and therefore it could not escape from the constraints of public sector funding.⁸² It was a testimony to the determination of the parties in the mid-1980s that this circularity was broken, although the decision to insist on private sector funding for the Tunnel, and the project’s continuing and deep-seated financial difficulties, drew the two governments into the arena, inviting further questions about the efficacy of public-private ventures.

⁸⁰ Frame-Tom Shearer (DOE), 22 May 1975, MT144/534, TNA.

⁸¹ Barron, Note on discussion with Frame, 13 August 1980, AN192/617, TNA.

⁸² On these issues see Allen Sykes (Willis Faber), ‘Reducing Neglected Risks on Giant Projects’, Arthur D. Little Symposium on ‘New Dimensions of Project Management’, Boston, April 1981.