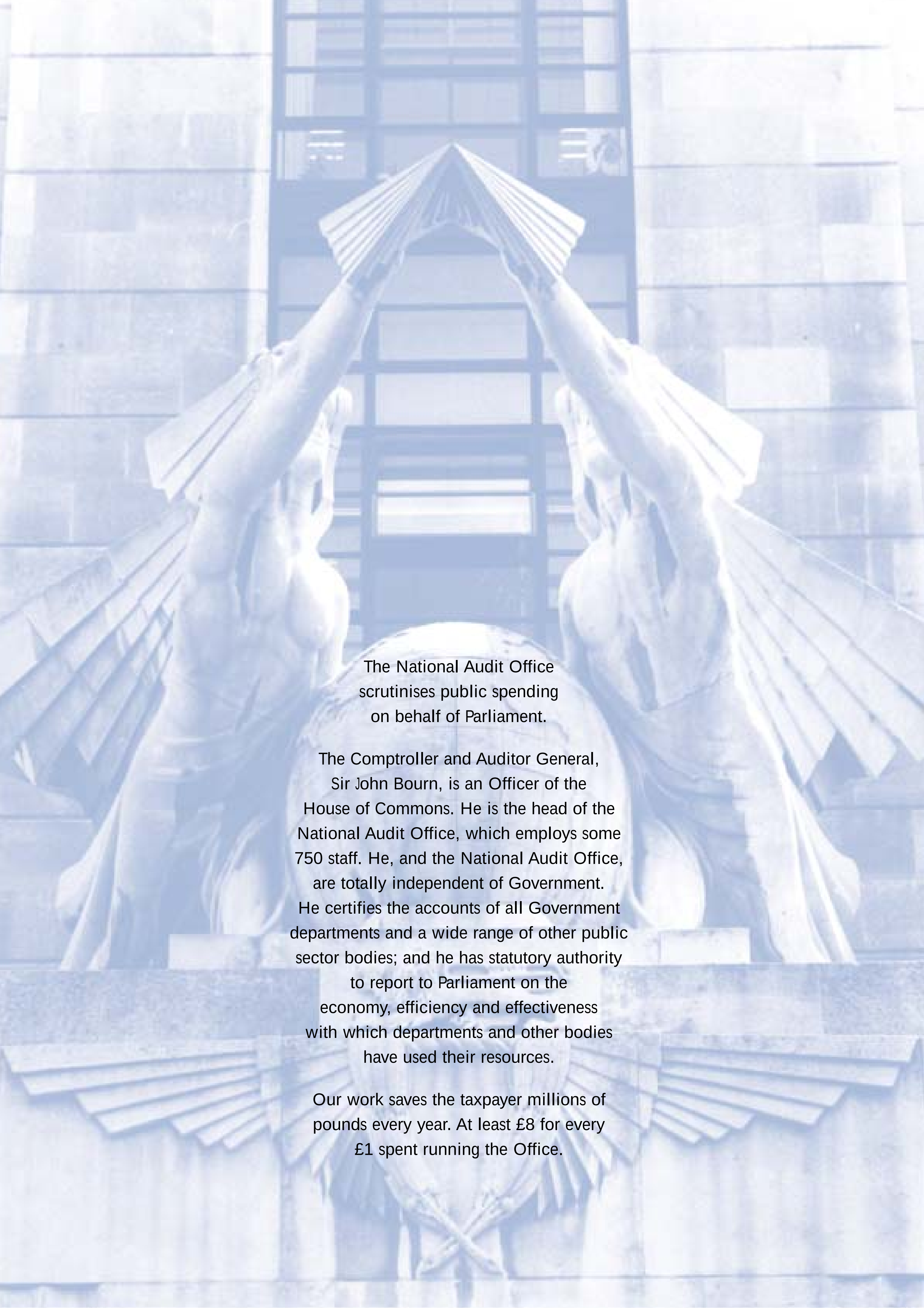
The Public Private Partnership for National Air Traffic Services Ltd

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 1096 Session 2001-2002: 24 July 2002



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The Public Private Partnership for National Air Traffic Services Ltd

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John Bourn **National Audit Office**
Comptroller and Auditor General **19 July 2002**

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Summary

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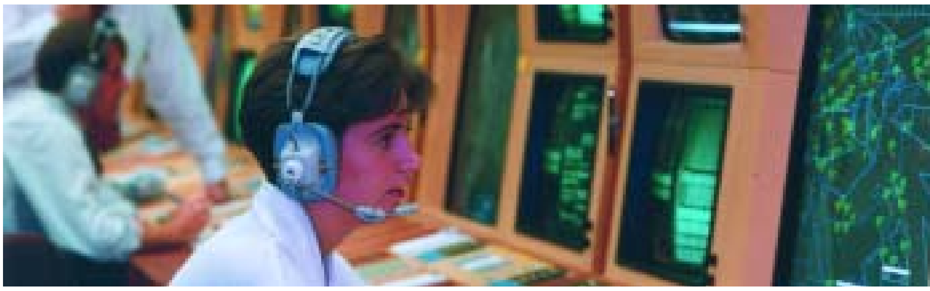
1 National Air Traffic Services Ltd (NATS) is the company which holds a monopoly of air traffic control for aircraft flying over the United Kingdom and, with its Irish counterpart, the North East Atlantic. It also provides air traffic control at most of the large airports around the country. The costs of its services are met by charges to users, mainly airlines. Until the Public Private Partnership (PPP) it was owned by the Civil Aviation Authority (CAA), which remains its regulator. Civil Aviation policy is the responsibility of the Department for Transport (the Department).



2 In 1997 NATS estimated that it required some £100 million of further capital investment every year for the next decade to increase air traffic control capacity to meet future traffic growth. But NATS could not be sure of getting this money: it competed with the rest of the public sector for finance and the Department had concerns over whether NATS could manage such a large investment programme efficiently. The Department and the Treasury concluded that the solution to this problem was to adopt a PPP for NATS which provided:

- above all, for standards of safety and national security to be at least maintained, in particular by separating service provision from safety regulation;
- an injection of private sector money and improved project management skills:
- for NATS to benefit from greater freedom to invest and to improve its services free of public sector constraints; and
- that in achieving these prime objectives the interests of the taxpayer should be safeguarded.

3 Accordingly in July 2001 the Government concluded a PPP with the Airline Group, a consortium of seven UK-based airlines, which was given operational control and a 46 per cent share of NATS, for nearly £800 million. This report examines the choice of the Airline Group and the extent to which the PPP promotes the achievement of the Government's objectives for NATS.

4 The selection of the Airline Group was based on the issues listed in paragraph 2 above, in particular the risks to standards of safety and national security, the raising of immediate sale proceeds for the taxpayer and the maintenance of effective accountability to Government. But the key challenge of the PPP is to provide a framework that enables NATS to secure the necessary investment for its business, while at the same time putting downward pressure on the prices paid by its customers. And there are risks to NATS' ability to secure the £700 million of external finance it needs to deliver the new capacity it considers necessary to meet traffic growth over the next ten years.

Selecting a strategic partner for NATS

5 The PPP was established following a highly competitive process. The Department sought to enhance competition by not barring companies in related businesses, but by allowing them to explain how they would deal with potential conflicts of interest. Seven bidders were able to respond to such a specialised requirement, but four of these dropped out before the later stages, one deterred by concerns over regulation of NATS' prices. The Department placed the third place bidder in reserve, but the remaining two bidders, Nimbus, led by the facilities management group Serco, and the Airline Group, competed strongly. Both had clear strategic reasons, based on NATS' fit with their existing businesses, to want control of the Company.

6 Overall there was little to choose between the Nimbus and Airline Group bids, though the Government's view, based on an objective valuation of both bids was that there was sufficient difference to make the Airline Group the right choice. Both met the required criteria for safety and national security. The Airline Group bid gave NATS a financial structure that the Department and their advisers considered acceptable, if not as robust as Nimbus' bid. Conversely, Nimbus accepted fewer of the Department's contractual terms than the Airline Group and sale proceeds would be slightly lower than for the Airline Group. Awarding the contract to the Airline Group also brought greater support for the PPP from other airlines, and from NATS' employees, who thought that their jobs and conditions would be more secure with the Airline Group. The popularity of the deal was not, however, among the evaluation criteria.

7 The Department signed a commercial agreement with the Airline Group in March 2001, subject to the fulfilment of conditions relating to financing and European Community merger approval. At this time the Airline Group bid was worth £95 million more in sale proceeds than Nimbus's. A major factor in this calculation was that the Airline Group had assumed a higher rate of growth in NATS' traffic and income than had Nimbus. This assumption had not changed in response to growing indications, from the end of 2000, that air traffic growth might be declining. In May 2001 the Airline Group told the Department that due to reductions in air traffic growth and to costs they had overlooked within NATS' they could not afford the price they had bid. The deal signed in July 2001 reduced initial proceeds to Government by some £87m to £758m, still £8m more than Nimbus. In addition, the Government was entitled to receive £35m in deferred proceeds at later dates. The Government's advisers estimated that these deferred proceeds would be worth around £21m in 2001 terms.

8 Costs to the bidders were in the region of £30 million. The Department's costs were £44 million, some £17 million more than they had estimated. This was mainly due to the PPP process being more complex and taking longer than the Department had expected, leading to higher fees to advisers. For example, the passage of the Transport Act took longer than expected, and the advisers to NATS and the Department did more work than planned to evaluate and manage risks to NATS' business, such as litigation with suppliers. The Department appointed their lead advisers, investment bankers Credit Suisse First Boston, (CSFB), on the basis of a fixed monthly retainer of £222,000 for 18 months, regardless of how much effort was required to fulfil the work specified in their brief. The Department accepted CSFB's position that it was not their practice to provide records to enable payment on the basis of actual time spent. The project timetable was extended and CSFB received the agreed monthly fee for some 33 months.

Achieving the objectives of the PPP

Safety and national security

9 The PPP provides for continuing high standards of safety, and for national security. A strong framework for managing risks to safety has continued in place, and has been supplemented with additional measures. NATS and the Ministry of Defence are continuing their joint civil and military management of airspace under the oversight and approval of the Civil Aviation Authority.

Accountability

10 Though the PPP cedes operational control to the private sector, it provides for public accountability. The three government-appointed Partnership Directors on NATS' Board have put in much more time than anticipated when appointed, because of cash flow problems affecting the company. The shareholders and the executive management consider that they have been effective as non-executive directors and have helped communications between the different parties at an important time. The legal agreements with the Airline Group and NATS' licence to operate air traffic control give the Government ultimate powers to intervene if there is a serious threat to the public interest.

Investment

11 Since the Airline Group assumed control, NATS has produced a business plan which proposes additional capacity over the next ten years to meet a high rate of traffic growth, and thereby limit flight delays. These proposals for expansion have withstood the scrutiny of airspace users within and outside the Airline Group, and of the Regulator. There are risks to the achievement of this plan, particularly in procurement of high technology systems, but NATS has strengthened its management team in important areas to help it deliver projects.

Finance

12 As a public body, NATS could pass all its costs to its customers. NATS is now in the private sector and has new freedoms, but is exposed for the first time to business risks arising from being unable to raise its prices in response to downturns in traffic. These affect NATS' ability to develop its business and finance its investment programme. Events following 11th September have highlighted these risks.

13 Any business, including NATS, can look to internally generated and external sources of finance. Internally generated finance is the surplus, if any, of revenues after meeting the costs of running the business, including paying interest on debt and any dividends to shareholders. External finance comprises borrowing from banks and other lenders and equity capital raised from existing or new shareholders. In the case of NATS there are particular constraints on all of these sources of funds.

NATS' sources and uses of funds

		Year to March 2002 £ million[1]	Year to March 2001 £ million
Turnover		**553**	595
Less costs:	**Wages and Salaries**	**(281)**	(260)
	Other net cash costs[2]	**(164)**	(224)
Net cash inflow from activities		**108**	111
Net interest on debt finance		**(36)**	*(31)*
Capital Expenditure		**(64)**	*(79)*
Corporate Taxation		**(6)**	*(2)*
Net cash inflow/(ouflow) before financing		**2**	*(1)*
Financing: Net new loans		**23**	-
Increase/decrease in cash		**25**	*(1)*

NOTES

1. Includes four months when NATS was in public ownership. September 11th occurred nearly half way through NATS' financial year.
2. Includes adjustment of all non-cash items.

Source: NATS - 2001/2 figures based on management accounts

Internally generated funds

14 NATS' revenues are the product of its air traffic volumes and prices, plus any non-air traffic income. In the short run NATS cannot increase its revenue: it has very limited control over volumes of traffic and its prices for en route services over the UK and oceanic services are regulated by the CAA. For technical reasons, moreover, NATS cannot normally raise its prices more frequently than once a year, even if the regulator agreed. NATS has adopted a cautious approach to the development of its non-regulated business due to the overriding need to conserve cash following the events of 11th September and to ensure that the core business is sustained.

15 NATS' major costs are largely fixed in the short term, comprising mainly staff wages, as well as repairs, maintenance and interest on capital in respect of its fixed assets.

Externally generated funds - Debt

16 NATS' initial financial structure saw NATS' debt rise from £330 million to £733 million to cover the sale proceeds paid to the Government. Despite warnings from both NATS itself and the CAA, that such a high level of debt would leave NATS vulnerable to adverse events, the Department concluded that the fears were misplaced. The Department's conclusion was based on modelling 19 adverse scenarios. The scenarios that were modelled all assumed consistent growth in air traffic, in our view an optimistic assumption compared with the experience of the past 30 years, which have seen three sudden and severe checks to growth in UK air traffic. CSFB emphasised to us that any reduction in the level of NATS' debt would have reduced sale proceeds, probably pound for pound.

17 NATS' ability to borrow has been constrained by the extent of its ability to service the debt. In addition to the provision of a £733 million facility to finance the acquisition of NATS, the Airline Group negotiated further bank facilities of £690 million to fund future capital expenditure, and a working capital facility of £30 million. The impact of the events of September 11th on NATS' revenue base were such that the company may have been construed as being in breach of certain of the provisions within its banking facilities. As a result, NATS agreed that it would not seek to make further drawings under the loan facilities over and above the £24 million already drawn and would fund capital expenditure from operating cash flow.

Externally generated funds - Equity

18 The only remaining source of finance for NATS is equity. In concluding that NATS' initial financial structure was adequate, despite the relatively high level of debt, CSFB considered that building up NATS' equity capital would be an inefficient way of protecting the company from the risk of financial stress, and that it would be better for the shareholders to respond to the company's needs if and when risks transpired.

19 But there are constraints on NATS' ability to look to its existing shareholders at times of stress. The Airline Group, as a consortium of airlines necessarily exposed to the risks of air traffic being lower than expected, is likely to be subject to financial stress at the same time as NATS. The other shareholder, the Government, is unlikely to be willing to put up extra equity capital without considerable investigation and debate.

20 That leaves new equity investors. It is a far from straightforward matter to find new equity investors for a business in financial difficulty, and once found, far from straightforward to negotiate the terms on which they will invest, as these will affect the interests of the existing shareholders as well as the company.

21 The constraints on NATS' ability to finance itself are illustrated by its response to the downturn in airline business since 11th September. NATS' en route revenue was around 14 per cent below forecast in the six months following the attacks. Costs are being cut but other expenditure has been postponed, for example a new control centre in Scotland, and redundancy packages for staff no longer required. Creditors are being paid more slowly.

22 In March 2002, the Government and NATS' lending banks made available a £60 million short term loan facility, to enable it to function effectively until September 2002. By this time NATS hopes to have obtained a new equity partner, putting its finances on a sounder footing. By careful management and rationing of its cash, NATS has not needed to draw on this facility to date. However there are continuing risks to NATS' finances. These risks are principally:

- **If NATS income does not recover.** There remains considerable uncertainty as to how quickly traffic, particularly more profitable North Atlantic flights, will recover. This is a normal business risk that cannot be removed.
- **If a new equity investor is not forthcoming, or if the Airline Group objects to a new shareholder.** Whilst declining to provide more equity, the Airline Group have undertaken to offer all reasonable co-operation in finding a new investor. The Department has said that it will act as a responsible shareholder and is willing in principle, to match an appropriate injection of new capital from the private sector.
- **If the Economic Regulator continues to be unconvinced by NATS' proposals for an increase in prices.** In May 2002 the Regulator, when replying to NATS' request made in February, stated that its final response will depend in part on users' views on a price increase and on financial strengthening of NATS. In practice strengthening will require more equity or an easing of debt repayment terms.
- **If the banks were to withdraw their support from NATS.** The Banks have an interest in avoiding the Company going into administration because this would place their existing loans at risk. They still retain rights to alter the structure, terms and pricing of their loans to NATS.
- **If the Government is obliged to apply for an administration order.** This is a last resort which the Government wishes to avoid. But it has said that it would take such action if necessary.

Recommendations based on the experience of the NATS PPP

To departments establishing joint venture companies or undertaking trade sales

1 A key aspect of joint venture companies or partial trade sales is that the state retains a long-term interest in the business. There are potential tensions between levels of proceeds on one hand and capital structure and financial risks borne by the business on the other. Departments should evaluate carefully bidders' financing propositions against a full range of reasonable business sensitivities, and consider an appropriate balance between proceeds and capital structure having regard to these sensitivities. Where appropriate, they should think about building in, up-front, mechanisms for addressing financial stress. We consider that in this case there was significant risk of stress because the financial structure made only limited provision for traffic downturns.

2 The financial structure of a joint venture company or part trade sale should be consistent with the business risks to which it is exposed. Although unlimited access to risk capital is unrealistic, Departments should look to build in mechanisms to enable the business to access further capital if it is required. In this case, the structure enabled the Airline Group to secure a loan facility, but the subsequent drop in forecast revenues has made it difficult to fulfil the loan conditions.

3 In judging the risk capital needed for a PPP, departments should have regard to such historical evidence as may be available on the business risks. In this case the risk capital reflected the experience of aviation growth in the 1990s, but not the interruptions experienced in earlier decades.

4 Vendor departments should give particular consideration to the detailed conditions that banks apply to their loans to Public Private Partnerships and the extent to which access to finance has been ensured. It is reasonable that banks should hold rights to protect their loans in extreme conditions but departments should carefully analyse the terms of any financing agreement to ensure that access to finance cannot unreasonably be withheld. In this case the finance agreements contain drawdown conditions requiring projections of ability to repay the loan. There is a risk that the banks will withhold lending that NATS requires for working capital or investment if the Company's cash flow forecasts, inevitably based to a degree on subjective assumptions as are all forecasts, do not remain healthy.

5 It is right that bidders should be able to take different views on future prospects. But where the level of proceeds is highly dependent on bidders' differing forecasts of trends that cannot be controlled, such as traffic volumes in NATS' case, departments should ensure that they are comfortable with the lead bidder's forecasts. If Departments are not comfortable with forecasts they should inform their evaluation of the bids by testing each bid's financial strength against common assumptions. In this case the Department accepted the Airline Group's forecasts.

6 Companies with the relevant skills and assets that would make them good strategic partners for a state business will often have possible conflicts of interest. It is good practice when considering expressions of interest from such potential bidders not to exclude them from bidding but to invite and evaluate their proposals for dealing with conflicts of interest, as was done in this case.

7 It is important to resolve key uncertainties, such as the level of regulated prices, as early as possible in the Strategic Partner selection process, to avoid unnecessarily deterring potential bidders. In this case the regulatory uncertainty had not been resolved when potential bidders were invited to submit proposals.

8 The most important adviser in a PPP is the lead financial adviser. Investment banks often prefer to work for fixed monthly fees, irrespective of how much work they actually do, but departments should give very careful thought to the risks of such an arrangement and the scope for better incentives such as linking fees to the achievement of milestones, before appointing an adviser on that basis. In this case the Department considered a success fee, but concluded that this was inappropriate.

To the Department for Transport

9 NATS' new strategy for procurement of air traffic control systems emphasises co-operation with air traffic service providers in other countries. There are advantages to this strategy, but it brings its own risks. NATS can learn from the lessons identified in the reports of the Committee of Public Accounts and this Office on international collaborations on high technology systems, particularly in the defence sector, (see Appendix 6).

An Overview of the Business of NATS, (See also Appendix 2)

USERS

NATS serves many different users of airspace

Scheduled Airlines

Recreational fliers

Freight carriers

Military flights

Charter airlines

Business aircraft

North Sea helicopters

INPUTS and RESOURCES

- UK and Oceanic airspace
- Air Traffic Controllers
- Accommodation
- Engineering Support Staff
- Administrative Support staff
- Radio Frequencies
- R&D staff and facilities
- Training staff and facilities
- Communication equipment
- Radar/sensing equipment
- Traffic processing systems (manual and computerised)
- Income from users, via charging powers and mechanisms
- Borrowing for investment
- Highly specified operating standards
- NATS' high reputation, knowledge and expertise

PROCESSES

- Recruitment and Training of controllers and engineering staff
- Maintenance and operation of existing manual & IT systems
- R&D, introduction of new ATC systems
- Application of detailed ATC procedures
- Charging users
- Consultation with users over use of airspace, procedures, investment and costs
- Capital investment
- Providing expertise to other countries

MAIN OUTPUTS

- No. of en route and approach flights controlled
- No. of Take-offs / landings managed
- Number of safety incidents (i.e. where aircraft are too close)
- Delay per flight
- Round-the-clock availability of ATC systems for NATS and MoD controllers
- Provision of sufficient controllers to handle variable demand for flights
- Detection of unauthorised incursions to airspace
- Volume of business won in other countries

KEY EXTERNAL INFLUENCES

There are many factors that impact on NATS' achievement of its objectives

Other states' ATC performance

Extent of traffic growth & congestion

Performance of suppliers - IT

Global or local economy

UK policy for access to airspace

Meteorological conditions

Airlines' operational performance

Runway capacity

Economic/safety regulation

Availability of supplier products and solutions

UK and EU Legislation

Risk of industrial action

International obligations

Military conflict

SHORT-TERM OBJECTIVES (<1 year)

- Reduce charges to users (RPI-3%)
- Reduce costs
- Opened Swanwick ATC centre on schedule.
- Agree 10 year Business Plan with Government, and obtain approval of the regulator
- At least maintain low level of safety incidents
- Renegotiate service contract with MoD.

INTERMEDIATE OBJECTIVES (1-5 years)

- Reduce costs
- Reduce charges to users
- Reduce delays
- Increase capacity through re-sectorisation etc of airspace.
- Reduce number of safety incidents
- Minimise aircraft fuel consumption
- Create working environment and conditions to incentivise managers and staff.

LONG TERM OBJECTIVES (>5 years)

- Reduce costs
- Reduce charges
- Reduce delays
- Increase capacity through increased automation
- Increase co-operation with other ANSPs
- Reduce number and rate of safety incidents
- Minimise aircraft fuel consumption
- Expand unregulated business
- Reduce number of en route centres to 2 with opening of New Scottish Centre.

Part 1

The choice of a Public Private Partnership with the Airline Group

1.1 This part of the report examines the process through which the Department adopted a Public Private Partnership for NATS, and selected the Airline Group as its Strategic Partner. In Parts 2, 3 and 4 we examine the extent to which the PPP has promoted the achievement of the Government's objectives, and the arrangements that exist for managing the risks to those objectives. Our approach in undertaking this examination is described at Appendix 1.

NATS had faced problems in financing and implementing its investment programme

1.2 NATS holds a monopoly of all air traffic control for aircraft flying over the United Kingdom and, with its Irish counterpart, the North East Atlantic. It also provides air traffic control at most of the large airports around the country. Its costs are met by charges to customers, mainly scheduled and charter airlines and business aviation. A summary of its operations is at Appendix 2. Annual growth in air traffic of seven to eight per cent resulted in long delays for passengers at UK airports in the late 1980s. In the early 1990s, the Government approved a number of major capital projects to enable NATS to raise capacity to cope with further predicted annual increases of some five per cent. These capacity increases and the slackening of civil traffic growth in the early 1990s due to the Gulf War and economic factors helped NATS keep flight delays steady **(Figure 1 on page 12)** whilst maintaining high standards of safety. Delays in United Kingdom airspace due to air traffic control are broadly similar to those in France and Germany. **(Figure 2 on page 13)**

1.3 There has never been a fatal incident in UK airspace that was attributable to NATS (and only four in Europe in the last 25 years attributable to air traffic control), and trends in incidents have been positive, **(Figure 3 on page 14)**. The lack of standard performance criteria and differences in airspace make international comparisons of air traffic control safety difficult if not impossible. However more crude data, such as the number of accidents involving write-offs of aircraft, suggests that the UK's overall levels of air safety are comparable with Western European and North American standards.

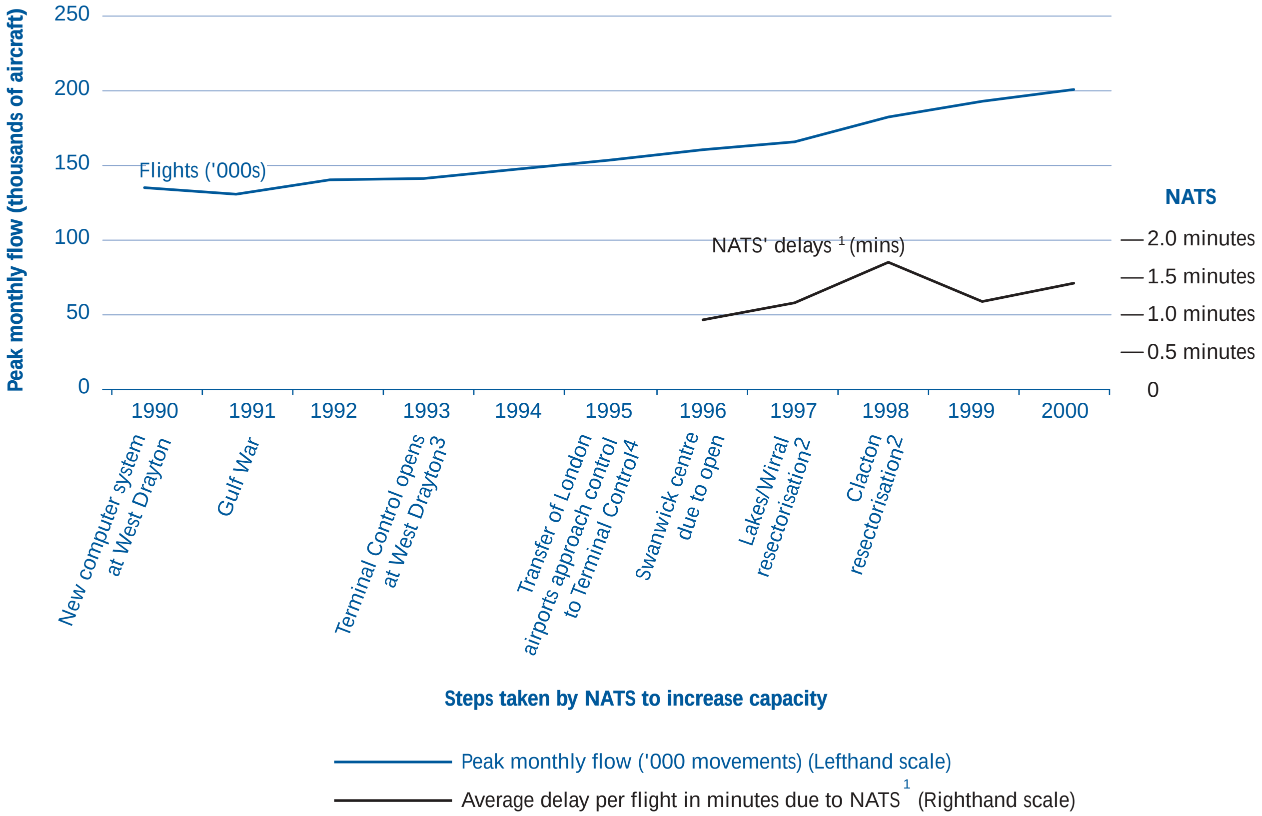
1.4 Though NATS' customers and the Department told us that they respected the Company's operational performance, they had concerns over the level of its charges to users, amongst the highest in Europe (Figure 2), and the management of its investment programme. NATS' biggest-ever investment project, the new en route air traffic control centre at Swanwick in Hampshire, was originally due to open in late 1996, but eventually opened only in January 2002, some £150 million over the £475m budget. A review commissioned by the Department identified problems in project strategy, organisational interfaces, and cultural barriers within NATS, such as:

- poor internal reporting and inhibition of open debate;
- barriers between the project team, senior management and operational functions, leading to difficulties in managing user involvement; and
- lack of senior management large-scale project management experience.

1.5 An additional problem was limited access to the capital that NATS considered necessary to fund its investment programme. NATS' normal annual operating surpluses of some £50 million in the 1990s enabled it to fund some of its investment internally. But it had to compete with the rest of the public sector for borrowing to fund the rest. In addition the Government questioned whether the private sector might manage the risks of major investment projects better. Accordingly in 1993, the Government announced that the New Scottish Centre to be built at Prestwick would be designed, built, maintained and funded via the Private Finance Initiative (PFI) and operated by NATS. But NATS had reservations about losing control of major technical assets, contending that systems needed to be continually updated, and that if NATS did not own the assets its ability to carry out upgrades would be limited. Commercial negotiations with PFI providers proceeded slowly and were eventually overtaken and superseded by the PPP.

1 Key trends in UK airspace since 1990: flights and delays

To meet growth in the number of flights, NATS has taken steps to increase capacity and so limit increases in delays.



NOTES

1. These data are not available on a consistent basis before 1996.
2. Resectorisation: Increasing the number of sectors in UK airspace by splitting the existing ones, giving the controller fewer aircraft to handle.
3. Terminal Control: The operations room controlling traffic over London and South East England under 24,500 feet.
4. Airport approach control: Control of aircraft from when they come onto the landing glide path (about 10-15 miles out) until shortly before landing.

Source: Data from NATS, the Department and Eurocontrol

The Government saw a PPP as the best way to develop NATS business

1.6 Until the PPP, NATS was owned by the Civil Aviation Authority, which was (and still is) the UK's aviation safety regulator. Successive governments considered the case for separation of responsibility for service provision from regulation and an increased role for the private sector. In 1997 as part of a review by the new Government the Department analysed the implications of its options, ranging from the status quo to full scale privatisation. These are summarised in **Figure 4 on page 15**.

1.7 The Government rejected the option of a not-for-profit, non-share capital corporation, as pioneered in 1995 by Nav Canada, the provider of air traffic services in Canada. Nav Canada is a private company with no shareholders, financed by borrowing and governed by a Board of Directors with representation from airlines, general aviation, the federal government and employees. It is described in greater detail in Appendix 3. This model was widely cited as an alternative to the PPP during the passage of enabling legislation through Parliament in 2000. The Department worked on the understanding that in the United

2 The European Perspective, 2001

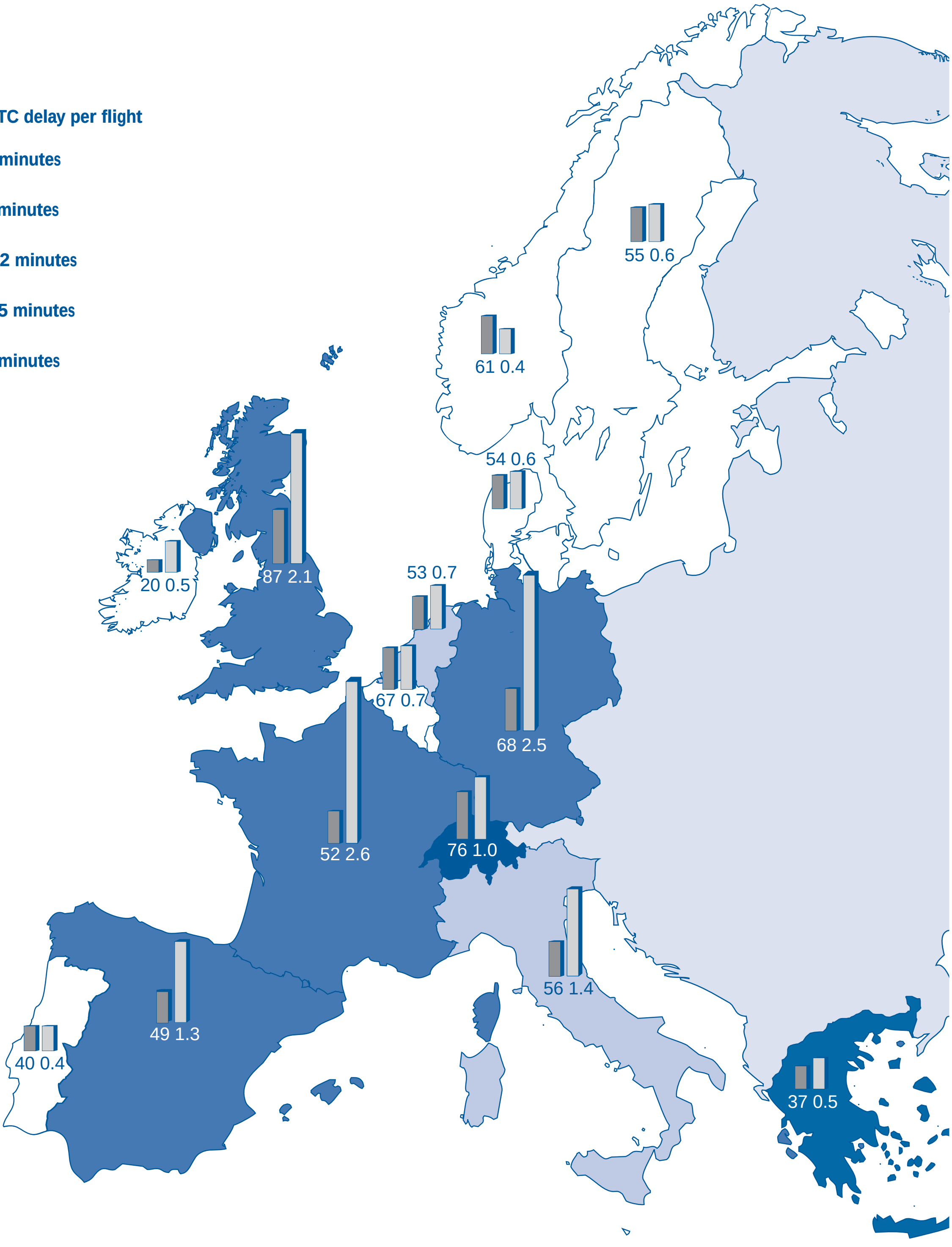
NATS' charges were the highest in Europe. It performed better in terms of flight delays, despite managing some of the most heavily used airspace over southeast England.

KEY

Unit rate charge (Euros)[1] **Volume of traffic (million flights)**

Average ATC delay per flight

- **3 to 4 minutes**
- **2 to 3 minutes**
- **1.5 to 2 minutes**
- **1 to 1.5 minutes**
- **0 to 1 minutes**



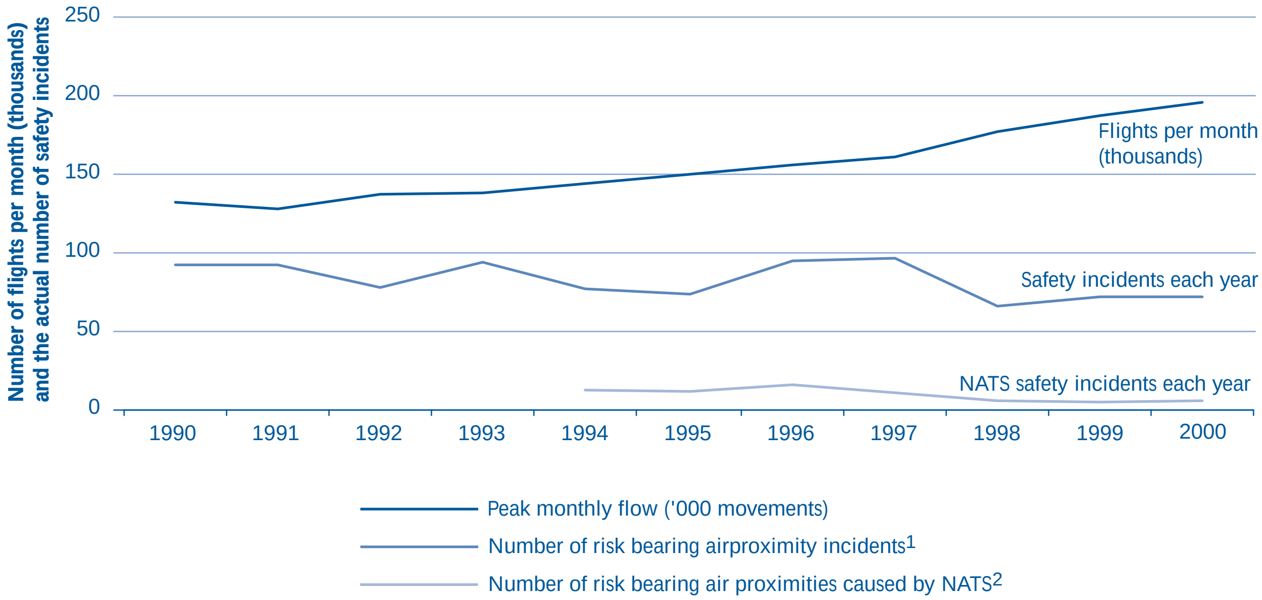
NOTE

1. The unit rate is the charge in Euros for an aircraft weighing 50 tonnes flying 100km.

Source: Eurocontrol Data

3 Key trends in UK airspace since 1990: flights and safety

Despite sustained growth in the number of flights, NATS' performance has helped to keep down the number of safety incidents.



NOTES

1. Risk bearing air proximity incidents occur when separation between aircraft decreases to such a degree that a risk of collision exists.

2. This information was not available on a consistent basis before 1994.

Source: Data from NATS, DTLR and Eurocontrol.

Kingdom the particular structure of Nav Canada would not result in NATS' expenditure being classified to the private sector and would not therefore provide the freedom to invest that was required. However, any definitive view would be subject to detailed assessment of the body's control and risk transfer arrangements. The Department were also concerned that without the profit motive or competition the model had neither of the usual spurs to efficiency and might not be well suited to delivery of a major capital programme.

1.8 Since the Department adopted the PPP as the model for NATS, Nav Canada has demonstrated its ability to improve upon the levels of efficiency it achieved under public ownership, and in 2001 won the annual award of the International Air Transport Association for efficient service to airlines. Nav Canada emphasised to us:

- That inefficiencies are often forgiven in conventional businesses if the business makes a profit.
- That their five user-nominated directors provide a strong incentive to efficiency.
- To avoid disputes between rival interests existing employees of airlines or government cannot serve on the Board.
- Their borrowing is at low cost because they operate an essential service and can recover all costs from customers without referral to an economic regulator. This means that the financial markets rate them as a good credit risk.

In November 2001, Nav Canada put in place an action plan to deal with an estimated $145 million downturn in revenue following September 11th. The plan comprised $85 million in cost reductions, $30 million from drawing on reserves, and $30 million through a 6 per cent increase in charges.

1.9 The Government had the following main criteria for the PPP:

- that standards of safety and national security should be at least maintained, in particular by separating service provision from safety regulation;
- to obtain an injection of private sector money and management skills;
- to develop NATS' business with greater freedom to invest outside normal public sector spending constraints; and
- that the interests of the taxpayer should be safeguarded.

4 Why the Government elected for a PPP, in preference to other forms of private sector involvement

The Department and Treasury saw a PPP as best addressing their objectives for NATS. Ticks show where they considered that Government objectives would be met.

Least private involvement ⟶ *More private involvement*

Objectives	The Status Quo	A public company with increased freedoms	Extended use of private finance initiative projects	PPP via a partial trade sale, regulated by the CAA
Maintaining and improving safety and national security	Not acceptable, as the government also wished to respond to pressure to separate ownership of NATS from the CAA as safety regulator	✓	✓ There could be safety issues about control of PFI assets within NATS' integrated systems	✓
Securing access to private sector capital investment	NATS would continue under public sector and would therefore have no direct access to private sector capital	Unless the balance of risk was transferred to the spending controls, private sector, NATS would continue under public sector spending controls	✓ But limited to individual projects for new infrastructure	✓
Securing access to private sector management and expertise	NATS had "bought in" specialist expertise, such as project management, when clearly required. The Government nevertheless considered that there had been shortcomings in NATS' project management	Probably not to a greater extent than before	✓ But limited to individual projects for new infrastructure	✓
Proving an incentive to efficiency	Weak incentives to invest to improve operational performance	This would be a clearer framework, with targets set by government as a shareholder	Less incentive on the private sector than through a PPP	✓
Accountability to users	Users had no direct say in the way the business was run, although NATS did consult them	This would depend on the terms of the company's charter, negotiated with stakeholders	Unchanged (Enhanced arrangements to consult users would be set in place, in particular through a Stakeholder Council)	✓
Providing freedom to invest and do business overseas	NATS had a consultancy business operating overseas, but there were weak incentives to invest overseas. In any case, tight public sector spending constraints meant that there was little chance of necessary financing	Overseas consultancy would continue, though constraints on foreign investment were likely	Unchanged	✓
Providing a return to the taxpayer	No sale proceeds	No sale proceeds	No sale proceeds	✓ (Proceeds from 46% sale and future dividends)

4 Why the Government elected for a PPP, in preference to other forms of private sector involvement (continued)

Greatest private sector involvement →

Objective	A not-for-profit non-share corporation, as in Canada (Paragraphs 1.7 -1.8 refer)	A fully privatised company, contracted to the CAA, shares sold by flotation
Maintaining and improving safety and national security	✓	✓ In the absence of any Government controls within the company, tight external control would be needed to ensure safety and national security.
Securing access to private sector capital	The Department thought it would be difficult to ensure that NavCanada's particular structure would be classified as in the private sector and so avoid inclusion in public sector borrowing in the UK.	✓
Securing access to private sector management	At that time, government doubted that this model would bring in new management	✓
Proving an incentive to efficiency	Government doubted that this model would incentivise efficiency as strongly as the PPP	✓ Though a company may not bring in new management as quickly as in a PPP. Efficiency would also depend on effective regulation and contract management by the CAA
Ensure accountability to users	✓	Users were not keen on this model, which would give the CAA the dual role of NATS' regulator and consumer.
Provides freedom to invest and do business overseas	Government considered that overseas activities would be constrained	✓
Providing a return to the taxpayer	✓ (Proceeds from 100% sale)	✓ Though a flotation may not be as attractive to investors as a sale to a single trade buyer.

Sources: Assessments of options by NATS and the Department of the Environment, Transport and the Regions, 1997

Figure 5 shows how these criteria were translated into detailed objectives for the PPP. The Department and the Treasury attached importance to the potential proceeds from a sale. Some £500 million in receipts had been assumed in the Department's expenditure totals inherited from the previous administration. In June 1998 the Government announced its decision to adopt a PPP in which a private sector partner would acquire operational control of the business, and take 46 per cent of the shares of NATS. The structure of the PPP is summarised at **Figure 6**.

The Department ran a competitive process

1.10 The main parties involved in the process of selecting a strategic partner for NATS are identified in **Figure 7 on page 18**.

The process for selecting a partner was well planned

1.11 The Department appointed CSFB as lead financial advisers in September 1998 to advise on:

- the feasibility and structure of a PPP, and the preconditions to a deal that bidders would need to see resolved;
- the sale strategy, for example the merits of a trade sale versus a flotation; and
- the optimum timetable.

CSFB also tested the market's appetite for NATS as a business proposition, and assisted the Department and NATS in preparing the company to meet potential bidders.

5 The Government's objectives for the Public Private Partnership

For maintaining and enhancing standards of safety and security

- To enhance aviation safety in the UK by separating regulation from service provision;
- To maintain NATS' effective contribution to national security through effective civil/military joint working arrangements;
- To maintain effective accountability to Government as shareholder, to the CAA as regulator and to the wider public interest.

For developing NATS' business

- To ensure that NATS has access to the necessary project and complementary commercial management expertise to provide for its long-term development as a safe and efficient air traffic service provider;
- To ensure the strategic partner takes responsibility for managing NATS' strategy, investment programme and new business development;
- To provide NATS with the commercial freedom to develop its business, within the necessary framework of incentives, regulations and other disciplines;
- To introduce new incentive and performance based regulation to replace the existing "cost-plus" charging regime, to encourage timely and appropriate investment and ensure value for money for NATS' customers;

To provide value for money for the taxpayer

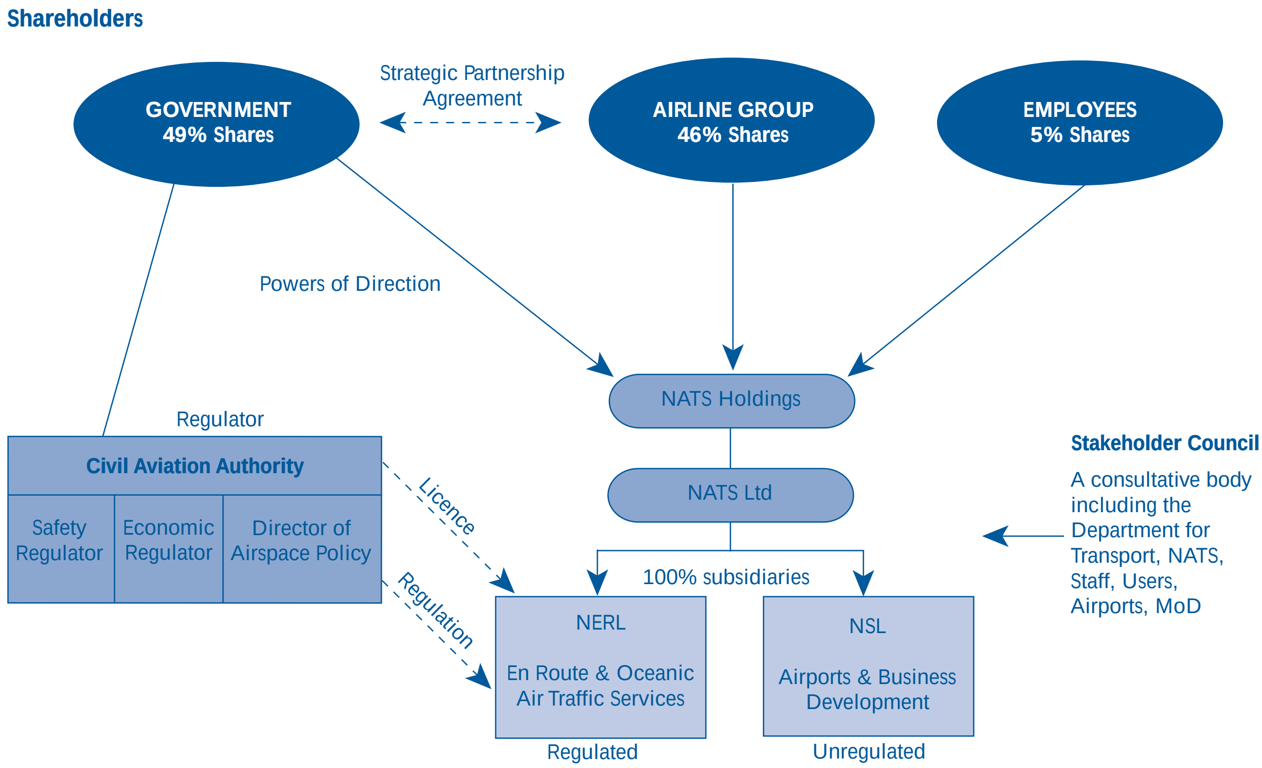
- To ensure NATS has access to adequate capital without adding to pressure on public sector borrowing;
- To ensure long-term value for money for the taxpayer and generate sales proceeds to help fund other transport programmes.[1]

NOTE

1. The Department for Transport had expected sale receipts of £500 million and this was included in their Public Expenditure provision. Without these receipts transport spending may have reduced.

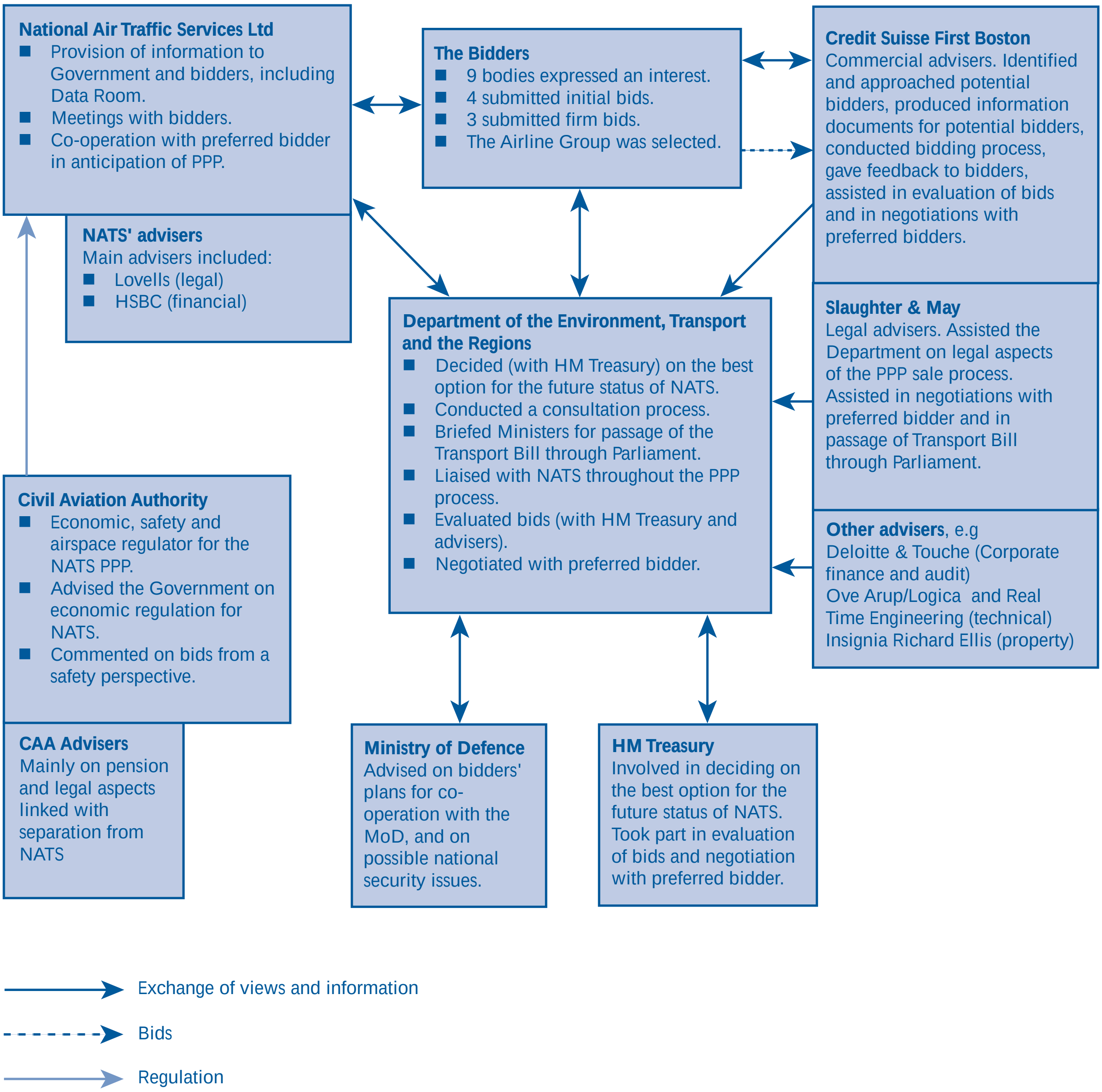
Source: Department of Transport, Local Government and the Regions

6 The PPP Structure



7 Key players involved in the design and implementation of the NATS Public Private Partnership

Many public and private bodies were involved in the process.



Source: National Audit Office

1.12 The key events in the process of selecting the strategic partner, compared to the original timetable, are highlighted in **Figure 8 on page 20**. The timetable was largely met except in the later stages when there was an extra round of bidding, and when closure of the deal with the Airline Group took longer than expected (discussed in paragraphs 1.19 and 1.21). The three shortlisted bidders found the timetable of the final stages very demanding. The Department told us that, once legislation was enacted in November 2000, they saw benefits in progressing quickly and ending the uncertainty over the PPP.

Though relatively few bidders responded, the last two competed strongly

1.13 Marketing NATS to potential partners was not straightforward. No air traffic control provider had been offered to equity investors before and there were relatively few potential partners with both sufficient specialist expertise and financial standing. Formal expressions of interest came from nine parties including all the likely credible bidders **(Figure 9 on page 21)**. Two expressions of interest came from parties who did not want to bid in their own right, and these two did not join up with any of the other seven parties. Only four of these seven put in initial bids, following the withdrawal of Airsafe, Boeing and BAE Systems/AMS. Airsafe withdrew following its inadvertent receipt of unauthorised information. Boeing subsequently joined the Airline Group as an adviser. BAE Systems/AMS withdrew because the calculated forecast return on investment was not commensurate with their business objectives. The price cap proposed by the Civil Aviation Authority was of particular concern to them.

1.14 The four consortia who submitted bids were: the Airline Group, Nimbus, Novares and Raytheon. All faced potential conflicts of interest - the Airline Group, if it won, from possible preferential treatment to its own members; Novares and Raytheon, as equipment providers, from possible long-term non-competitive contracts; Nimbus, as the UK's largest private air traffic control provider, raised competition issues. The Department had expected this since the companies most likely to be interested in NATS were likely to be in complementary businesses. They decided not to reduce the choice of bidders by barring types of company from the competition. Instead they made bidders' arrangements to deal with conflicts of interests a key criterion in the evaluation of bids.

1.15 The Department's evaluation concluded that each of the four bidders met the minimum mandatory requirements for national security and probity, safety management, financial capacity and management credibility, and solutions to conflicts of interest. At this stage, Novares and Nimbus scored best, with the Airline Group in third place, and Raytheon in fourth. Raytheon's traffic, revenue and cashflow forecasts were more conservative than other bidders, resulting in a significantly lower offer. Raytheon also had issues with the transaction documents, and scored less well on their Strategic Plan. So the Department decided to invite Novares, Nimbus and the Airline Group to submit full binding bids.

1.16 When these bids were received at the end of January 2001 the Airline Group had significantly improved the terms of their offer, moving ahead of Nimbus in terms of sales proceeds, with Novares in third place. As Novares also had lower scores on other criteria, the Department placed this bidder in reserve. They then invited the Airline Group and Nimbus to improve their offers, and to remove conditions that the Department considered unacceptable.

1.17 Both remaining bidders had compelling strategic reasons for wanting to acquire a controlling stake in NATS. Nimbus was led by the facilities management group Serco, which already provided air traffic services in a number of countries, including the UK. Serco saw benefits in merging their existing business with NATS. The Airline Group was reluctant to see NATS controlled by any organisation which they felt might have a greater interest in maximising shareholder value, rather than in investing in expanded capacity for air traffic control. As the major users, the Airline Group considered they had most to lose if NATS was not run efficiently and safely.

1.18 After evaluating final offers, the Department decided that, while both were acceptable, the Airline Group's offer was preferable because it offered the potential for higher sale proceeds and conformed better to the terms of the agreement they had proposed. Nimbus wanted significant changes to warranties and indemnities. Their bid required shareholder approval but provided a greater chance of timely completion because the Airline Group had not obtained committed debt financing from banks. A fresh unsolicited offer from Nimbus improved the value of their bid, and withdrew some of the contractual stipulations. Completion with Nimbus could have taken place by the end of April, whereas completion with the Airline Group would not take place before the end of May. But the Department concluded that the Airline Group's bid still offered the potential for £95 million more initial proceeds, and largely conformed to the Government's preferred transaction documentation, whereas Nimbus' bid still contained some unattractive terms.

After an agreement was signed with the Airline Group, the value of its bid reduced

1.19 Before the deal could be concluded, the Airline Group had to secure the financial backing for their offer, by a Government deadline of 31st May. On 23rd May the Airline Group informed the Department that they would not be able to secure the support of their lending banks, unless the Government were prepared to accept a reduction in the value of their offer. They said the problem arose mainly from:

8 Key events in the process of selecting the Strategic Partner

Date	Event	Planned date at June 2000[1]
2000		
March-May	Department's lead advisers, CSFB, market the opportunity to a range of investors. They report [May 4th] that they expect 3-5 credible consortia to emerge and be capable of reaching indicative bid stages.	
16th June	Stage 1: Department invites potential bidders to express interest.	June 2000
14th July	Deadline for bidders to express interest and to supply accompanying information and undertakings. Seven entities respond, plus two companies with an interest in joining a bidding consortium.	July 2000
28th July	Stage 2: Department and advisers request proposals from bidders, "*to ensure that only the most appropriate and committed candidates progress to Stage 3*." Proposals need not be legally binding.	August 2000
August	Bidders review draft PPP documentation.	
Mid September	Bidders receive presentations from NATS management, and ask questions.	
29th September	Deadline for bidders to submit Stage 2 offers. Four consortia submit bids.	September 2000
October	Government and Advisers evaluate Stage 2 offers	
3rd November	Stage 3: Department and advisers request legally binding proposals from the Airline Group, Nimbus (SERCO) and Novares (Lockheed Martin).	October 2000
6th November	Bidders start due diligence, with access to data rooms and to NATS sites and key staff, as well as to the Department and its advisers.	
2001		
26th January	Date at which the data room was intended to close, and due diligence would end.	
31st January	Deadline for submission of Stage 3 offers. Offers received from Airline Group, Nimbus and Novares.	January 2001
19th February	Department decides to invite a further round of bidding from Nimbus and the Airline Group, to resolve issues with the conditionality of these bids. Novares' bid is assessed as poorer than these two, and is held in reserve.	
16th March	Revised Stage 3: Offers received from Nimbus and the Airline Group.	
27th March	Government announces legally binding PPP agreement signed with the Airline Group, conditional on EC merger regulation approval and execution of financing documentation.	March 2001
23rd May	Airline Group inform the Department that due to several factors, including a downturn in traffic projections and an underestimate by AG of staff costs, the original offer could not be financed.	
June - July	Negotiations involving advisers and senior officials of the Department and the Airline Group.	
23rd July	Evaluation group recommend to Ministers to proceed with revised offer from the Airline Group.	
26th July	PPP agreement completed between the Department and the Airline Group	March 2001

NOTE

1. Planned dates taken from the Department's invitation to register expressions of interest, June 2000.

9 Groups expressing interest in the PPP

Seven groups expressed interest in bidding to be the strategic partner, including suppliers of air traffic control systems, a private sector air traffic service provider, and a consortium of UK based airlines. Two other groups expressed interest in participating in other bids.

Name	Business	Outcome of their bid
The Airline Group	A consortium of UK-based airlines which comprises British Airways, Virgin Atlantic, British Midland, Airtours, Monarch, Britannia and Easyjet, with technical assistance being provided by BT and several European air traffic service providers, principally the Irish Aviation Authority.	**Winner.** Signed conditional contract as selected strategic partner in March 2001; contract completed in July 2001
Nimbus	A company set up by Serco and PPM Ventures with technical assistance from ARINC and Cranfield University. Serco is NATS' main competitor for the provision of air traffic control services at UK airports.	Effectively became under-bidder in March 2001 when Airline Group signed conditional contract.
Novares	A company set up by Lockheed Martin (a major supplier of air traffic control systems), Apax Partners and New Zealand's Airways International Ltd, with technical assistance from AEA Technology and DERA.	Stage 3 bid placed in reserve. Company then withdrew.
Raytheon Systems Ltd	Major supplier of air traffic control systems	Submitted proposals in Stage 2 but not selected to make binding bids (Stage 3)
Boeing	Major aircraft manufacturer.	Invited to submit Stage 2 proposals, but decided not to do so.
BAE Systems/AMS	BAE SYSTEMS is a major aerospace systems company, and Alenia Marconi Systems (AMS) is a major supplier of air traffic control systems.	Invited to submit Stage 2 proposals, but decided not to do so.
Airsafe	A consortium led by Thomson CSF, a major supplier of Air Traffic Control systems.	Withdrew in August 2000 before making Stage 2 proposals, after inadvertent receipt of unauthorised information.

NOTE

The table excludes Lloyds Register and GE Group, who expressed interest but did not intend to bid in their own right, and did not join any of the consortia who submitted indicative bids at Stage 2 of the process.

Source: National Audit Office

- oversights in the Airline Group's due diligence process, which had underestimated the staff numbers and costs in NATS, and
- revisions to the Group's air traffic projections.

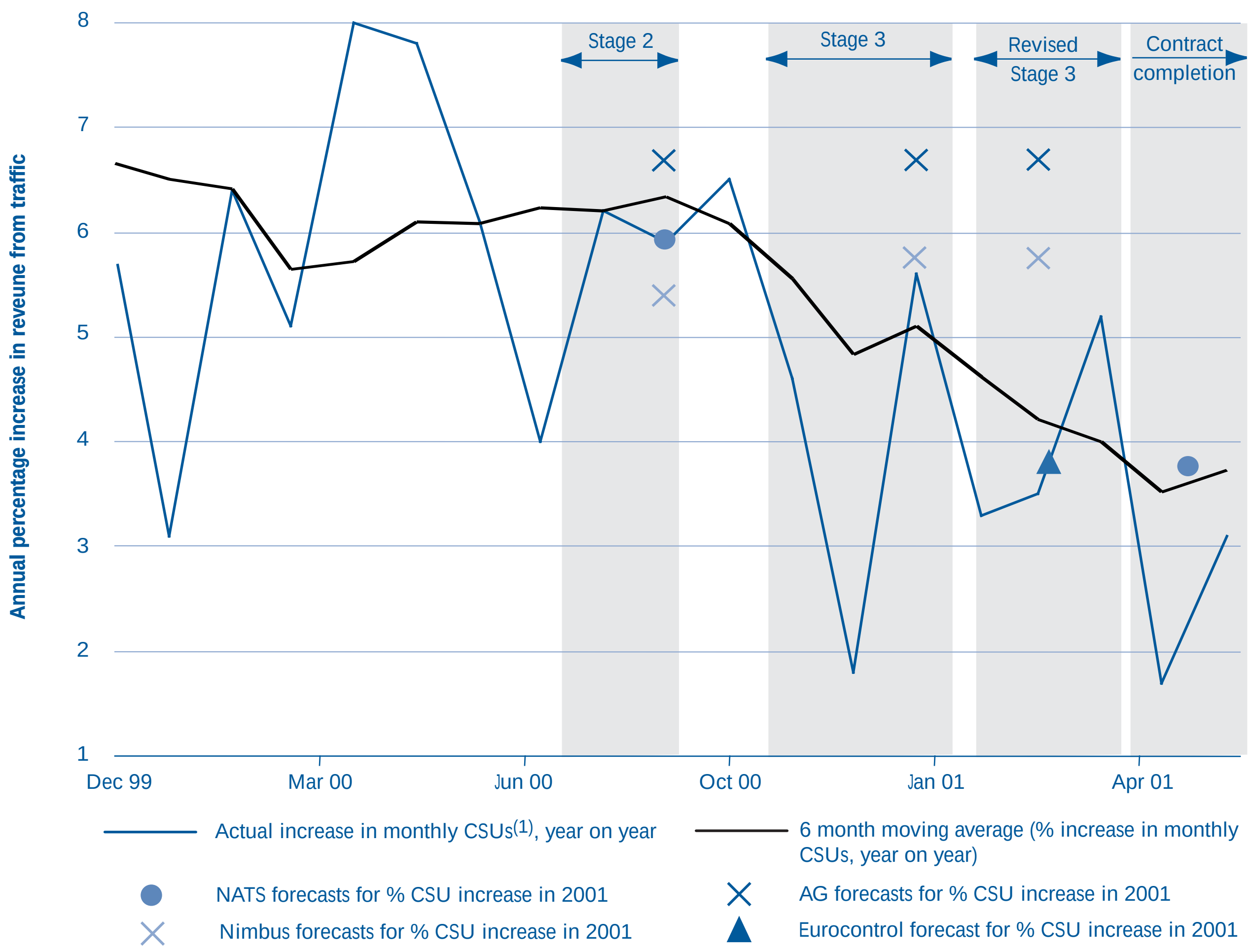
Overall these changes reduced the amount of debt that the Airline Group believed NATS could carry by £135 million, an amount that was reduced in subsequent negotiation.

1.20 The value of NATS is heavily dependent on forecasts of the number and size of aircraft using its services since this affects its en route revenues. The bidders drew on NATS' own traffic forecasts, but came to their own views. The Airline Group's forecast of future traffic growth had consistently been the highest of the bidders. **Figure 10 overleaf** shows that its forecast for 2001 remained unchanged at 6.7 per cent, despite indications by the end of 2000 that traffic growth might be reducing. This decline was due primarily to the slowing US economy and secondly, from February 2001, the effects on the tourist market of foot and mouth disease. In March 2001, the European air traffic management authority, Eurocontrol, revised its 2001 forecast for the UK down from 5.9% to 3.8% growth. The information from Eurocontrol was supplied to the Department, who were also receiving weekly traffic reports from NATS. The Department continued to use NATS' September 2000 traffic forecast as the benchmark in the selection of the strategic partner. Increasing evidence that the US economic slowdown was having a persistent effect on UK traffic levels caused NATS, in conjunction with the Airline Group, to revise its forecasts in May 2001. In terms of whether an earlier revision should have been made, NATS considered that the bidders were also getting monthly reports of traffic levels and should have been able to draw their own conclusions as to whether a downturn was occurring.

1.21 As shown in **Figure 11 overleaf**, the deal eventually agreed between the Department and the Airline Group in July 2001 resulted in a reduction of £87m in initial

10 UK traffic forecasts

This diagram shows the level of revenue increase in 2001 as forecast by the 3 main bidders, and by NATS and Eurocontrol, compared with the trend in actual levels of revenue increase. The diagram shows that bidders did not take into account the downward trend in the rate of revenue increase. Neither did NATS until the contract completion stage.



NOTE

1. CSU - Chargeable Service Unit. The basic unit of air traffic on which NATS and providers in other European states apply their charges. One CSU is equivalent to a 50 tonne aircraft flying 100 km.

Source: NATS, DTLR, Eurocontrol

11 Reductions in the value of the Airline Group bid

Proceeds to government fell mainly because the banks determined that NATS would not support as much debt as originally offered, and because by July there was no surplus cash for the government to extract from the business.

	Airline Group bid March 2001, £ million		Airline Group bid July 2001, £ million	
Equity from the Airline Group		50		50
Additional loan from the Airline Group				15
Bank Debt for the acquisition of NATS		796		733
Cash in NATS at completion		25		3.5
Total Available Funds for the acquisition	**871**		**801.5**	
Less: Banking costs		(26)		(33)
Less: Hedging costs		(0)		(7)
Less: Cash to be left in NATS		(0)		(3.5)
Initial cash proceeds to Government	**845**		**758**	

Source: The Department's bid evaluations proceeds for the Government compared with the Group's March offer. The Government also issued a loan note to NATS for £35 million, repayable over the next 30 years. The value of this loan note was estimated by CSFB to be worth £21m in 2001 terms. These repayments in effect represent deferred sale proceeds for the taxpayer. The value of NATS implied in the Airline Group's offer decreased from £934 million in March 2001 to £873 million in July.

The Department's costs were £44 million, much higher than expected

1.22 The costs to the Department of the PPP process comprised two main elements:

- their direct advisory costs; and
- costs recharged to them by NATS and the Civil Aviation Authority.

Lacking other information the Department based their budgets on indicative estimates prepared by shortlisted firms, which varied widely.

The costs of the Department's advisers

1.23 The Department appointed their advisers following competitive selection processes. Although CSFB demanded fee rates that were 16 per cent higher than their nearest competitor, they were preferred as lead adviser because the Department considered the high quality and relevant experience of their advisory team was the best on offer. We examined the Department's decision-making process for this selection, and found its decision to be reasonable given the particular experience of the CSFB team.

1.24 The Department agreed to pay CSFB a fixed monthly retainer of £222,000 for 18 months, based on the total cost of their bid spread over the expected number of months needed to complete the PPP. This would be irrespective of how much work they did in any given month. They also negotiated the right to stand down CSFB at nil payment for up to a total of six months if there was little or no work for them to do. CSFB told the Department that they would not provide records of actual time spent to enable payment on the basis of "actuals." CSFB were not stood down and received the agreed monthly fee for some 33 months. The Department's legal advisers, Slaughter and May, were paid amounts relating to the amount of actual time spent on the project (subject to a cap for the first two years of their engagement). This was not possible under the arrangement with CSFB. The absence of documentary evidence means that it is not possible to conclude whether payments to CSFB were justified on the basis of the time put in. A further difficulty with such an arrangement is that it makes it harder for the client to monitor and manage the work of the adviser.

1.25 There was no incentive element to CSFB's remuneration, for example through success fees or the achievement of milestones on time. Though CSFB expressed their willingness to include some form of incentives, the Department considered that such an arrangement might put in question the objectivity of their advice. We found no evidence that the basis of remuneration had led CSFB to protract the duration of the PPP process to maximise their fee. The Department were very happy with the quantity, quality and responsiveness of their service, and believed that they had obtained good value for money from the contracts with both of their main advisers, CSFB and Slaughter and May. CSFB told us that their impression was that the fixed monthly retainer had worked to the Department's financial advantage not theirs, because there had been periods in which they did more work than was funded by their fixed retainer. They argued that their prime motivation in bidding for the work had been to position themselves in an important new market sector, of public private partnerships, rather than to make a substantial profit.

Costs were recharged to the Department by NATS and the CAA

1.26 Under the 1982 Civil Aviation Act the Civil Aviation Authority is entitled to recharge the Department for services Ministers have requested, the rest of its costs being recharged to the aviation industry. The Department were alive to the risk that it (and NATS) might recharge costs that were not strictly attributable to the PPP process. The Department set up arrangements to ensure that costs recharged by the CAA and NATS were applicable. We examined these arrangements and found them satisfactory.

1.27 The Department were not directly involved in how NATS or the Civil Aviation Authority selected and appointed their own advisers, nor in setting their basis of remuneration. The National Audit Office does not have rights of direct access to either body; but both have assured us that their advisers were appointed through a competitive process. The cost of NATS' legal advice was over double the initial estimate, in part due to the costs of the slippage in completion dates that caused the overrun on the Department's legal advice **(Figure 12)**. NATS also told us that their estimates for work had been on the basis that much of this work, such as redrafting parts of other documents such as the Information Memorandum to bidders and NATS' operating licence, would fall to the Department's advisers and the Civil Aviation Authority. In the event, there was mutual agreement that it made sense for NATS' advisers, who had relevant knowledge and expertise, to take on more of this work.

12 The costs to the Department of implementing the Partnership

The costs of the PPP process exceeded estimates mainly because the scale of advisers' input was underestimated.

Cost	Estimate (£000)[1]	Outturn (£000)[4]
Lead Advisers, CSFB	4700	8885
Legal Advisers, Slaughter and May	2009	6240
Accountancy Advisers, Deloitte and Touche	960	1946
Other advisers [2]		926
Costs of splitting CAA and NATS accommodation and services	8279	9815
Advisers' costs recharged by the Civil Aviation Authority	933	2307
Provision for redundancies	Maximum 5000	3263
Legal Advisers costs recharged by NATS. (Lovells)	2750	7454
Other advisers costs recharged by NATS [3]	2234	3125
TOTAL	**27165**	**43961**

NOTES

1. Estimate set in August 1999 using estimates provided by advisers, NATS and the CAA.
2. The Department did not separately identify the costs of in-house staff and resources used.
3. NATS other advisers included Herbert Smith who provided legal advice on NATS' PFI contract, Gemini Consulting who helped NATS develop a more commercially orientated and outward looking Business Plan in preparation for the PPP, Deloitte and Touche on audit and taxation matters, HSBC on PPP issues, and William M Mercer on Pension scheme aspects.
4. Costs are in respect of activities in completing the PPP deal, incurred up to July 2001.

13 Transaction costs for trade sales examined by the National Audit Office

Business Sold	Date sold	Sale Costs £ million	Sale Proceeds £ million	Sale Costs as a percentage of proceeds %
Rolling Stock Leasing Companies	Feb-96	10	1743	0.6
Railfreight Distribution	May-96	3.4	255	1.3
Scottish Bus Group	Oct-91	1.8	100	1.8
HMSO	Sep-96	1.7	50	3.4
British Coal	Dec-94	34	963	3.5
National Bus Company	Oct-88	12.6	324.2	3.9
LT Bus Companies	Jan-95	10.1	233	4.3
Royal Ordnance	Apr-87	8.45	190	4.4
NATS	**Jul-01**	**44**	**804**	**5.5**
National Transcomm	Oct-91	4.2	70	6.0

Source: National Audit Office

1.28 Though the costs of the PPP process were higher than expected, we have identified from comparisons with other trade sales examined by the National Audit Office that the Department's initial estimates of the effort required may have been unrealistically low. As each deal is different any comparisons have to be treated with care. As a proportion of the value of the asset sold, the transaction costs are higher than average but not evidently unreasonably so given the need in this case to negotiate an ongoing PPP as opposed to a more straightforward trade sale.

Costs to the shortlisted bidders were high

1.29 The bidding costs to the private sector are important because unacceptably high costs will tend to deter participation in future competitions. The five bidders who responded to our survey of their views on the PPP process considered that the Department and their advisers had managed the process well in terms of moderating the costs to those bidders who did not make it through to the shortlisted stage. In contrast, the three shortlisted bidders incurred some £25 million of costs in total, and the two unsuccessful companies felt that the process did not keep their costs down to a reasonable level. The Airline Group told us that by using success fees, and deferring costlier advice until the final stages, their costs would have been as low as £3 million had they lost.

1.30 The full and efficient provision of information about the business to bidders is vital to the success of any PPP or privatisation process, but the scale of the task can be huge and can take vendors by surprise. It is good practice for departments and the managers of the businesses being sold to scope and plan the provision of data as major projects in their own right, drawing on the expertise of their advisers, public sector experience on other trade sales and timely statements of information needs by bidders.

1.31 Shortlisted bidders reported difficulties with the provision of data from NATS. They were disappointed that the data room, on which they depended to inform their bids, initially held much less data than they had requested, and the other items were provided very late in the bidding process. NATS agreed that there had been problems as a result of an enormous quantity of information in the data room. The exact reasons for this remain a matter of debate between NATS and their advisers on one hand, and the Department and their advisers on the other. But we have concluded that the key factor was a difference in approach between the two teams towards the provision of data, specifically:

- the Department and their advisers favoured determining the information that should be provided for bidders through a relatively low minimum financial threshold, eventually set at £150,000, but offset by selective judgements as to what should be provided above that figure;
- NATS and their advisers preferred a relatively higher financial threshold, but being more comprehensive in the information provided above the threshold.

We consider that the information overload reported to us by bidders reflects in part the process suffering from the worst of both these worlds. Another factor was the commercial confidentiality of some of the data requested by bidders, which led NATS to apply additional procedures to preserve the security of the information.

1.32 Nimbus, the second placed bidder, told us that they had incurred costs of £10 million in bidding for the PPP, and would not wish to participate again in a competition for government business that exposed them to the risk of such high nugatory costs. We found that the main reasons why Nimbus' costs were so high were:

- The extent to which they had responded to government's requirement to provide a fully financed bid, with full approval from their supporting banks' credit committees. Such approval is expensive to obtain, and it is evident that other bids did not obtain such firm financial support as quickly in the process as did Nimbus.
- The inclusion in their bid of Serco's own air traffic control business, which the Department's sales team had to value and subject to a due diligence review.

1.33 The evaluation of Serco's air traffic control business to be merged with NATS was important to the evaluation of bids as a whole. Had the Department accepted Nimbus' valuation, this would have made their bid worth more than the Airline Group's final offer. In the event the sale team derived a much lower valuation than Nimbus'. Nimbus are currently in dispute with the Department over £2.5 million of advisory costs which the Department incurred evaluating the business and had agreed in principle with Nimbus would be recharged to the company. Key factors contributing to this dispute are that:

- the Department's team did more work than Nimbus had expected, in particular by examining individual contracts rather than forming a view on the business as a whole; and
- the work was done in a very short but intense period in early 2001, and it was not clear to Serco that the costs were going to be so high until it was too late to act.

14 The Department's assessment of the bids

There was little overall margin of advantage between the two final bids.

Evaluation criteria	Airline Group[1]	Nimbus[1]	Novares[2]
National Security	ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
Safety management strategy	ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
Certainty, clarity and unconditionality	ACCEPTABLE	ACCEPTABLE/POOR	POOR
Management capability and commitment	ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
Financial credibility and capacity	ACCEPTABLE	GOOD	POOR
Quality of strategic planning	ACCEPTABLE	ACCEPTABLE (BEST)	ACCEPTABLE/POOR
Net sales proceeds	GOOD (BEST)	GOOD	POOR
Satisfactory solutions to conflicts of interest	ACCEPTABLE	GOOD	ACCEPTABLE

NOTES

1. The evaluations were those made in March 2001, reviewed again in July 2001 in the case of the Airline Group to ensure that the assessments still applied.

2. Novares was placed in reserve in February 2001. The Department invited Airline Group and Nimbus to submit a revised stage three bid.

Source: National Audit Office review of bid evaluations

The Award to the Airline Group was objective

1.34 **Figure 14** summarises how the Department and their advisers assessed the final bids from the Airline Group, Nimbus and Novares against the Government's criteria. The Ministry of Defence and the Security Service reported no adverse security or intelligence issues in relation to the companies making up the three bidding consortia. The Civil Aviation Authority reported that, although each bid had different strengths and weaknesses, all three were acceptable from a safety perspective. The Department received some less positive comments about Nimbus from an advisory group to NATS. As the Department considered that its own and the Civil Aviation Authority's investigations were much more comprehensive, the advisory group's comments were not given any weight in the evaluation of bids.

1.35 As referred to in paragraph 1.20, the Airline Group revised their traffic forecasts down, leading to initial proceeds being reduced from £845 million to £758 million, plus deferred proceeds estimated at £21m by CSFB. The Airline Group's bid remained higher than the Department's valuation of the final Nimbus bid at £750 million. Nimbus had sent the Department an unsolicited letter on 20 June 2001, confirming that their offer still stood. Figure 14 shows the Airline Group's advantage over Nimbus in terms of proceeds and the contractual terms attached to their bid. It also shows that their bid was less financially robust than that of Nimbus although the Department had emphasised their aim of minimising the risk of potential recourse to shareholders in the future whilst maintaining an appropriate investment plan.

1.36 CSFB advised the Department in February 2000 that to ensure NATS the maximum flexibility to raise ongoing finance on optimal terms, the PPP should target an agency credit rating of single "A" (which was the investment grade rating of most UK public service utilities). Based on NATS' business plan at the time, CSFB estimated that the maximum debt level that NATS could tolerate to achieve this rating would be £420 million. Subsequent forecasts produced by NATS and the bidders (once the price cap regime for the first five years and the Long Term Investment Plan were more progressed) indicated that NATS would generate a much higher level of cash flow - thereby raising its debt capacity. When the Airline Group signed the contract in March 2001 debt levels had increased such that the cash flow ratios were in line with the "BBB" rating criteria, the lowest investment grade rating. The implications of NATS' financial structure under the PPP are examined in more detail in Part 3 of this report.

1.37 The Airline Group's proposed financing plan necessitated opening debt of £733 million. From the outset this resulted in tight financial ratios. In July 2001, when the deal was completed CSFB advised that these factors would make it unlikely that NATS could achieve an investment grade rating.

1.38 Nimbus had proposed a structure with an initial bank debt of £605 million rising to over £800 million, including a higher working capital facility of £100 million, on the basis of a much lower level of capital investment than the Airline Group. It also sought changes to contract terms which would have increased the risk of claims being brought against the Government.

1.39 The price paid by the Airline Group was towards the bottom of the range of the Department's pre-sale valuations. The Department commissioned two valuations. The first in March 1999 by CSFB was updated in July 2001 to take into account revised traffic and cost forecasts. This gave an Enterprise Value[1] for NATS in the range £825-£965 million. In February 2001, the Department commissioned an independent valuation from PricewaterhouseCoopers which when updated in June 2001, gave an Enterprise Value of £794-£990 million. CSFB's final assessment of the full value of the whole business implied in the bids was £873 million for the Airline Group, and £851 million for Nimbus, therefore both were in the bottom half of the range of valuations for NATS.

1.40 Overall there was little to choose between the Nimbus and Airline Group bids, though the Government's view, based on an objective valuation of both bids was that there was sufficient to make the Airline Group the right choice. The choice of the Airline Group had other advantages. It had presented its bid as being on a "not for commercial return" basis, which meant that in the short to medium term at least, any profits would be ploughed back into the business, and no dividends paid. The Airline Group's bid had attracted support from sections of the public and NATS' employees, some of whom voiced a perception that profits were incompatible with safety. The Airline Group's bid was also formally supported by other airlines, in the form of the International Air Transport Association and other representative bodies.

1.41 There was also opposition from some NATS' employees towards control of the company being awarded to Nimbus, with some expressing fears for the erosion of their terms and conditions, and for the loss of jobs. Unknown to outside commentators, Nimbus' bid proposed to recruit more controllers and create fewer redundancies than either of the other two Stage 3 bidders. The union representing air traffic controllers and engineers, Prospect (at that time the Institution of Professionals, Managers and Specialists), said that if the PPP were to proceed, they would prefer the Airline Group to Nimbus as the strategic partner. Prospect considered that the bid from the Airline Group would lead to fewer redundancies of its members, recognition of the need for greater union involvement in decision making, and a stated commitment to improved partnership and participation in industrial relations.

1 *Enterprise Value is based on earnings of the business before interest, tax, depreciation and amortisation, and also taking the debts of the business into account*

Part 2

Arrangements for safety and national security

2.1 This part of the Report examines whether the Government's objectives for safety and national security in the PPP are exposed to risk. It concludes that there are strong arrangements in place to properly manage these risks.

The level of safety incidents has remained low

2.2 Figure 3 in Part 1 of this report showed the rate of incidents where safety was compromised in recent years. Incidents where a risk of collision has existed have remained steady or dropped in recent years, despite increasing levels of traffic. It is as yet too early to say conclusively whether the NATS PPP has had any effect on safety. The independent UK Air Proximities Board's report on incidents in 2001 shows the lowest annual total of incidents since records of this type began in 1990. But the number of incidents reported shows no increase since the PPP's inception. The latest available data, based on NATS' internal assessment, indicate that there has been only one risk-bearing air proximity incident attributable to NATS to date (mid June) in the current calendar year.

The PPP provides a strong framework for managing risks to safety

2.3 Appendix 4 analyses the possible risks to aviation safety that might arise under the PPP, and whether safeguards exist against those risks being realised. We compiled this analysis in consultation with the Civil Aviation Authority, the safety regulator of NATS and of civil aviation in the UK.

2.4 In general, we found that the previous arrangements for managing safety-related risks had been continued into the PPP, and augmented by additional safeguards. The main additions to safety risk management under the PPP are:

- Complete separation of ownership between the service provider (NATS) and its safety regulator (the Civil Aviation Authority);
- NATS' Business Plans for its regulated sector require the approval of the CAA in respect of its form, scope and level of detail. All of NATS' Business Plans require the approval of its shareholders (the Airline Group and the Department); and
- During 2002/3, the safety regulator will carry out audits on the safety performance of NATS.

NATS and the Ministry of Defence are continuing their joint civil and military management of airspace

2.5 Since the 1960s, NATS and the Ministry of Defence (the Ministry) have provided what is known as a "joint and integrated service". NATS is actually responsible for the control of civilian aircraft throughout UK airspace, but in practice some of its responsibilities are carried out by military controllers. NATS provides services within the main airways along which the vast majority of commercial traffic flies, and also the areas around major civilian airports where aircraft will be climbing, descending or holding in "stacks" waiting to land. The Ministry offers a service to both military and civil air traffic in the airspace outside these areas, and at military airfields and air weapon ranges. NATS provides the Ministry with the infrastructure it needs, such as radar information on aircraft entering or flying in UK airspace. This also assists the air defence organisation in spotting unauthorised or unidentified incursions. The Government considered that the joint and integrated approach had worked well and set the Department the objective of retaining it in the PPP. It benefits both NATS and the Ministry. Military controllers are trained to control in the different environment outside the main flight-paths. Where military and civil movements cross each others' flight-paths, having military and civil controllers collocated is helpful to both parties.

2.6 As before the PPP, decisions as to how finite UK airspace is allocated for different purposes are made by the Directorate of Airspace Policy. For example, the Directorate might be called on to decide whether the Royal Air Force could have a fighter training area over the North Sea, how big this might be, and how often it could be activated. The Directorate was formerly a joint Civil Aviation Authority / Ministry body, but was brought wholly within the Authority by the Transport Act 2000. The CAA is now independent of both NATS and the Ministry, and with the powers conferred by the Act is now in a stronger position to judge impartially the often-competing demands of civil and military aviation. The Act requires the Authority to ensure the efficient use of airspace, to meet the needs of all users, and to facilitate civil and military co-operation. Other protections for military / civil co-operation are provided by directions that can be issued to the Authority by Defence and Transport Ministers under the Transport Act and by the conditions of the company's licence.

2.7 The Ministry of Defence is, after British Airways, NATS' second largest customer, paying the company some £43 million each year for equipment and services such as the provision of radars and flight information. One of the key risks facing the PPP was that the Ministry of Defence might decide to procure these services through alternative arrangements. Until the run up to the PPP the organisations had had no formal contract. In August 2000, in preparation for the PPP, NATS and the Ministry signed a five-year contract to put their relationship on a firm commercial footing. NATS and the Ministry have yet to reach agreement within this contract on the performance regime with financial consequences for the Company if its level of performance drops below agreed standards. However the contract between the two parties is capable of operating without this regime.

2.8 Since the signature of the PPP, NATS has been in discussions with the Ministry with a view to securing a follow-on contract. Indications are that costs could be reduced in return for a longer-term 15 to 25 year contract term. Some issues, besides the performance regime, remain. For example NATS is required by its licence to continue to provide existing primary radar, i.e. long-distance radar which is not required for either civil or military air traffic control, but is used for air defence or other purposes. NATS considers that the funding arrangements for these radars should be revisited.

2.9 During the PPP selection process, the Ministry were consulted on bidders' proposals on how NATS would work with the Ministry. The Ministry expressed reservations about elements of the Airline Group's proposals which assumed making greater use of military controllers for civilian traffic. In the event since the PPP there has been little change to joint operations and NATS and the Ministry both told us that they continued to work well together.

Part 3

Arrangements to enable NATS to invest sufficiently in its business whilst protecting the interests of its customers

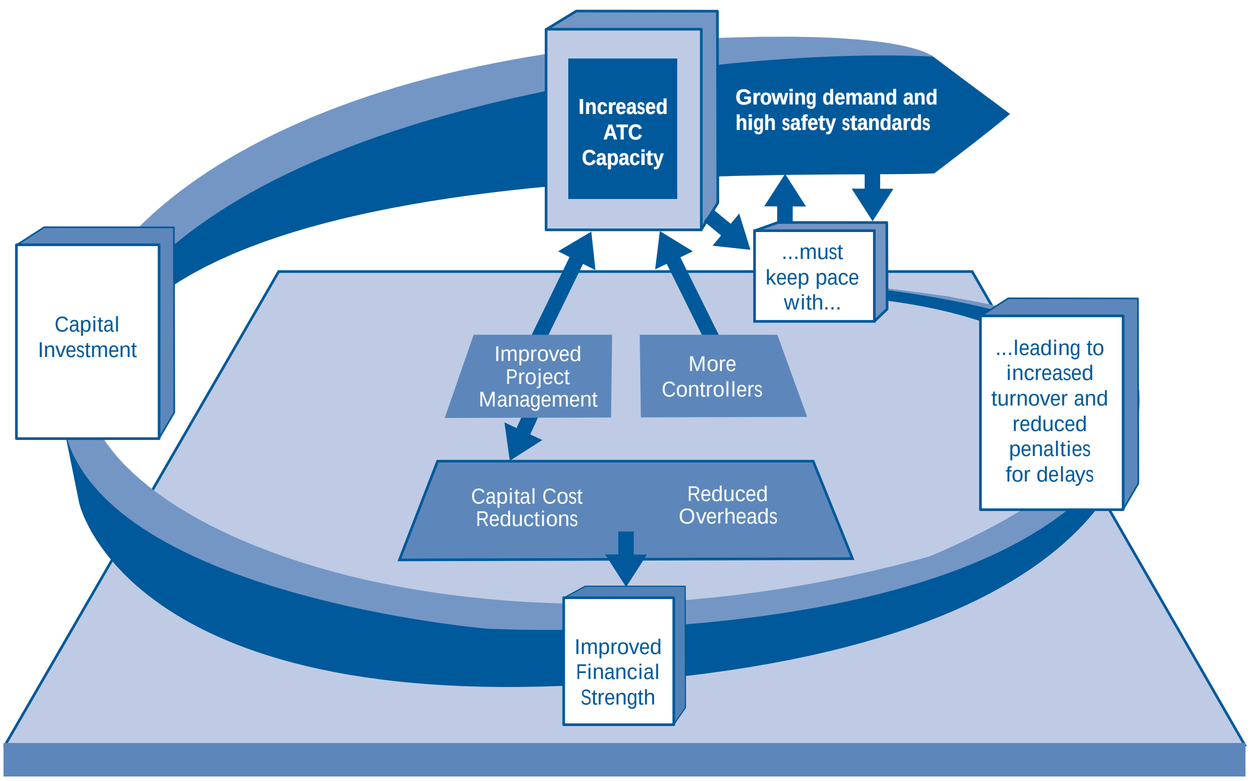
3.1 The key challenge of the PPP is to provide a framework that enables NATS to secure the necessary investment for its business, while at the same time reducing the prices paid by its customers. This framework encompasses not just the Partnership itself, but also the arrangements for economic regulation through the Civil Aviation Authority. The key risk is that investment, to provide new systems and additional air traffic control capacity, will not be made. **Figure 15** illustrates the virtuous circle of growth and investment that the Partnership must achieve.

The PPP operates within the standard UK model of utility regulation

3.2 As shown in Part 1 of this report, NATS managed to keep pace with heavy growth in air traffic during the 1990s. Of greater concern for the future is evidence that continued increases in traffic levels will have a more than proportionate impact on delays unless capacity is increased, **(Figure 16)**. The Government was concerned that besides securing the necessary investment to

15 Making a success of NATS

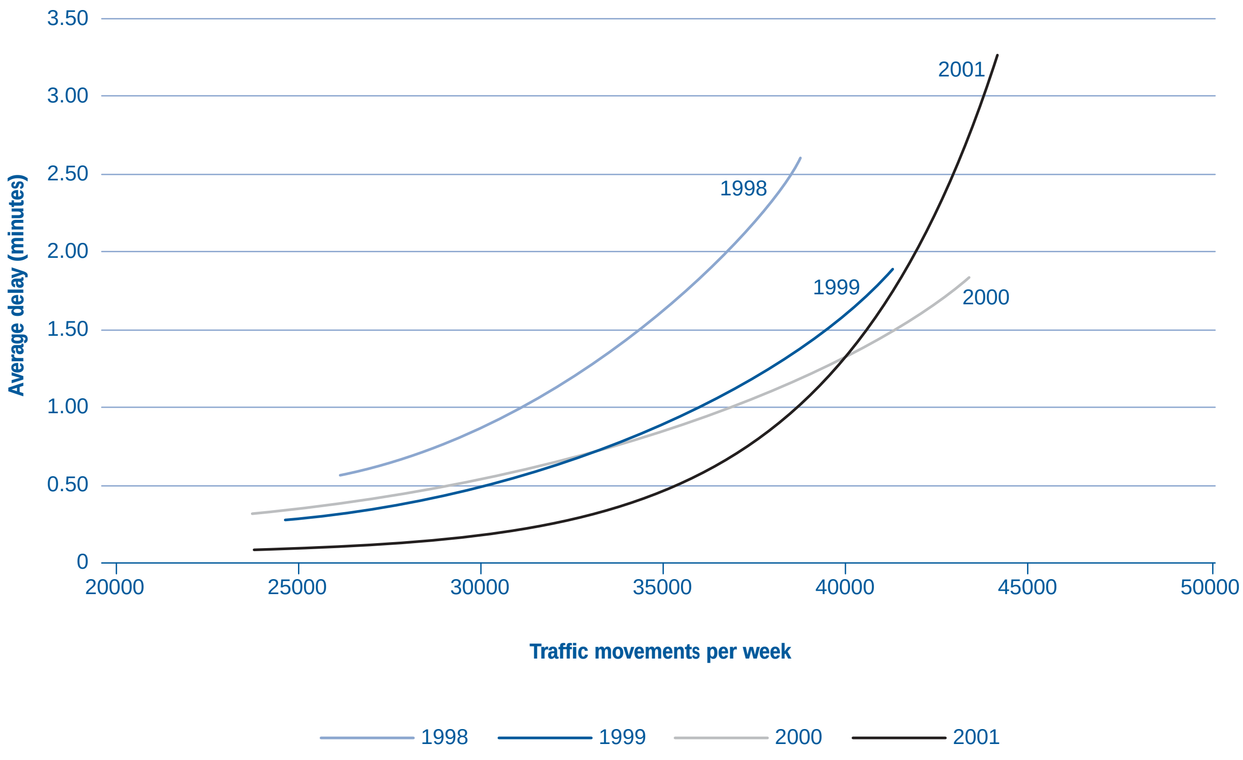
The key challenge facing the Public Private Partnership will be to provide the increased capacity to meet growing demand in air travel, and to use the financial rewards to build for growth in the future.



Source: National Audit Office

16 How NATS' delays rose with increased traffic levels, 1998-2001

The curves shown are a best fit of the relationship between numbers of flights and delays in each year. Shifts to the right between years indicate improvements in UK airspace capacity (more traffic being delivered for the same delay). Higher delays in 2001 may have been due to the need to remove controllers from operational work to train them on the new systems at Swanwick.



Source: NATS

increase capacity, progress should also be made in reducing NATS' charges, which were the highest in Europe, (Figure 2).

3.3 To incentivise investment while reducing charges to airlines, the Department adopted for the NATS PPP the RPI-X price regime, which has become standard practice in this country's approach to regulation of utility companies. Regulators set price or revenue limits every four or five years, which should enable the companies to deliver the services expected of them. Prices are set such that the company's revenue should cover operating expenses, depreciation and a reasonable return on its investment in assets. This regulatory approach ensures that prices change in a predictable way, and usually less than retail price inflation. Our recent report "Pipes and Wires" (HC 723, April 2002) concluded that the way regulators have applied the RPI-X approach has brought considerable benefits to both consumers and companies in the water, electricity and telecommunications sectors. Companies have become more efficient, and not at the expense of quality of service. Though most experience in using RPI-X has been in domestic utilities, the Civil Aviation Authority also uses it in regulating charges to airlines at UK Airports.

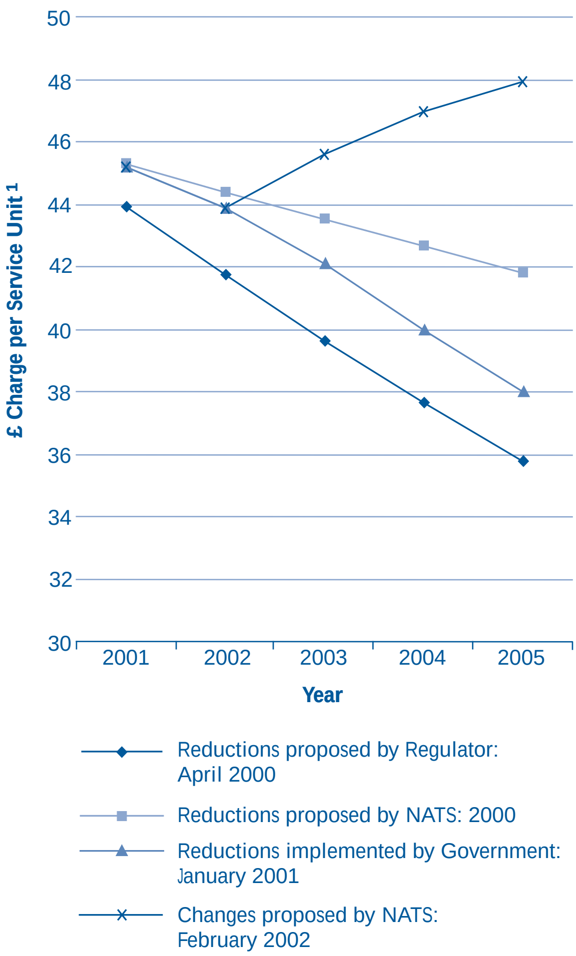
3.4 In preparing for the PPP, the Department consulted openly on the regulatory regime for NATS, receiving views from NATS, its customers and potential bidders, as well as formal advice from the Civil Aviation Authority. Ministers had assured Parliament that on no account would they set the price cap at a level that would create operational difficulties for NATS. **Figure 17** below shows that in setting a price cap for the first five years of the Partnership, the Department steered a middle course between the differing views of the Civil Aviation Authority and of NATS. In doing so the Department took into account:

- the likely effect on sale proceeds of tighter prices;
- the risk that a relatively stringent price cap might constrain delivery of investment;
- the limitations of data, and uncertainty as to NATS' future costs; and
- the need for a smooth transition into the PPP.

3.5 The reductions in prices implemented by the Department would, by the end of the five year period, have reduced NATS' real charges to a level close to the current average in Europe.

17 Proposals for reducing NATS' real charges to customers in the first five years of the PPP

The Government steered a middle course between the recommendations of the Regulator and NATS. In the changed circumstances since September 2001, NATS has requested a rise in prices.



NOTE

1. Charge per Service Unit. This is the level of charge that NATS would be entitled to levy on its users. One service unit is generated by a plane of 50 tonnes flying for 100km through UK airspace.

Source: The Department and the CAA

3.6 Another important aspect of the arrangements for economic regulation was to provide a direct financial incentive on the Strategic Partner to minimise delays to flights. Air Traffic Control Charges represent only some three to five per cent of airlines' total operating costs, and in 2000, the average en route charge per flight was around 480 euros. The average cost per flight of en route air traffic control delays was in the region of 170 to 250 euros[2]. Costs to passengers were higher still.

3.7 The Department recognised that airlines regard reducing delays as more important than price cuts through regulation. Conversely they, the Regulator and NATS all agreed that any penalty regime for delays should be capped, to avoid pressures on management to put punctuality ahead of safety. The Department again steered a middle course between the differing views of NATS and the Regulator as to the level of this cap, **(Figure 18)**.

3.8 The delay penalty regime is the first of its kind anywhere in the world of air traffic control, and has been designed cautiously. It therefore has a number of limitations:

- With the cap, NATS' maximum penalties are smaller than the likely costs to it of increasing capacity to reduce delays, which NATS estimated to be around 30-35 per cent of its investment programme, or around £30 million each year. During consultation on the proposals, the Airline Group wanted to see a stronger delay penalty. However, NATS has other incentives to increase capacity, notably the commercial incentive to handle more flights, and the demands of its airline shareholders.
- Penalties do not apply until NATS' average delays per flight exceed the 1.2 minutes it achieved in 1999. Though this is a demanding achievement in historical terms because 1999 was a good year for NATS, it is still above the one minute target set by Eurocontrol (paragraph 1.2).
- The penalties are applied through a reduction to NATS' standard rate two years later. A system to direct rebates to the routes or users who suffered the worst delays was rejected as too complex, and might also fall foul of Eurocontrol regulations on charges.

Following the introduction of Swanwick into operational service, restrictions were imposed while air traffic controllers familiarised themselves with the new system. The average delay per flight in the year to date (mid June 2002) is 2.18 minutes.

2 *Costs of Air Transport Delay in Europe, Institut du Transport Aerien, November 2000*

18 **Maximum penalties in the PPP for flight delays due to NATS' performance**

The Department gave NATS two years' grace before it would face the full risk of penalties proposed by the Regulator.

			£ Million		
	2001	**2002**	**2003**	**2004**	**2005**
Proposal by the Regulator	5.7	5.7	5.7	5.7	5.7
Proposal by NATS	2	2	2	2	2
Adopted by the Department, December 2000	**2**	**2**	**5.7**	**5.7**	**5.7**
As a proportion of NATS revenue (1)	**0.5%**	**0.5%**	**1.3%**	**1.3%**	**1.3%**
Penalties applied to date	**T.B.C.**				

NOTE

1. Penalty expressed as a percentage of projected En Route revenue, December 2001

Source: National Audit Office and NATS

NATS' business plan provides a basis for acceptable performance, subject to future technological developments

3.9 NATS introduced its first post-PPP Business Plan in December 2001. The Plan was heavily influenced by the downturn in air traffic following the events of September 11th 2001, and the finances to support implementation of the Plan have still to be put in place. Nevertheless, the Plan has been better received than most previous NATS' Business Plans, not least because there has been extensive consultation with shareholders, users and NATS' regulators during its drafting. A new Stakeholder Council, set up as part of the PPP, has been an additional forum through which NATS' customers have expressed their views. The Stakeholder Council is chaired by a government-appointed Partnership Director and the NATS Board is required to formally consider its representations. As well as NATS, the Stakeholder Council meetings are attended by representatives of the Government (the Department and Ministry of Defence), the Airline Group, airlines, airports and other users of NATS' services, environmental interests and NATS staff representatives.

3.10 We have examined how NATS' business plan addresses the main risks to the achievement of the Partnership's objectives for developing the business. We consider the key risks are:

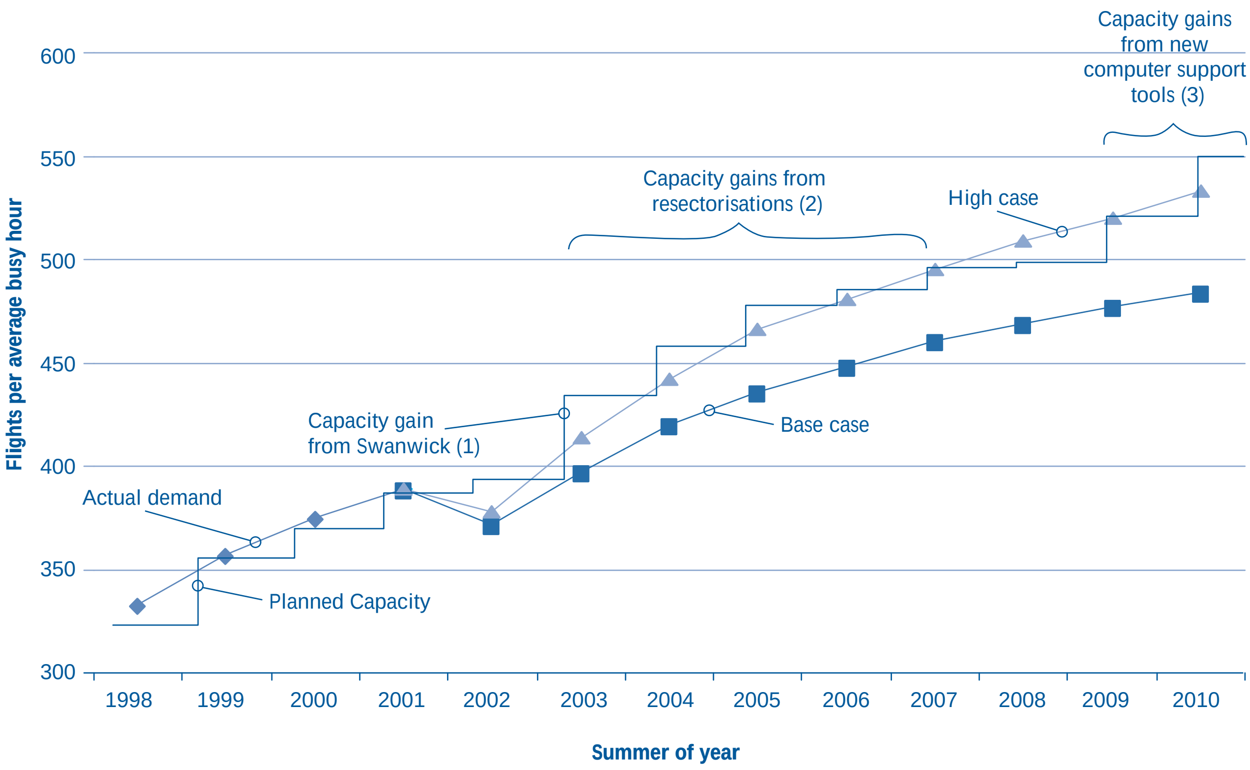
- that the plan might not provide for sufficient additional air traffic control capacity;
- that sufficient controllers or systems may not be available; and
- that management capability in NATS may not be enhanced to meet the challenge.

These risks are described in paragraphs 3.11 to 3.17 below.

3.11 The plan covers the ten years to March 2011. During this time, NATS expect the annual number of flights it handles to increase from just over 2 million to around 2.8 million, but the Company has planned to provide sufficient capacity to meet their high growth forecast, which predicts around 3.1 million flights per year by 2010, **(Figure 19)**. This is prudent because projects to increase air traffic control capacity typically take several years to bring into operation, and under-capacity tends to have disproportionate effects on delays. Figure 16 (on page 32) shows that, as airspace capacity is approached, the level of delays rises exponentially. Greater air traffic control capacity will reduce delays, and will also have environmental benefits because aircraft will burn less fuel and cause less noise pollution. The Civil Aviation Authority told us that in their view the projections for growth used in the business plan were sensible.

19 The growth in capacity proposed in NATS' 2002 business plan

NATS' business plan proposes increases in capacity to deal with a high rate of traffic growth in the skies above Southern England.



NOTES

1. For example, providing more controllers per sector.
2. Capacity gains from splitting the airspace into smaller sectors.
3. New computer tools to carry out some of the functions currently done by controllers.

Source: NATS

3.12 For most of the Plan period, up to 2008, NATS will improve capacity in the same way as it did in the 1980s and 1990s; by labour intensive methods. These involve splitting its airspace into smaller sectors, and changing the way in which controllers work (such as by having two controllers per sector instead of one). These methods will require more controllers than NATS currently has, and the Company has embarked on a demanding programme of recruitment. The annual intake of trainee controllers at NATS' training college will only be increased from 120 to 130, but NATS hopes to achieve significantly higher pass rates by more selective recruitment and effective training, and shorten the period of "on-the-job" training. Increasing the complement is a particular challenge because, due to recruitment patterns in the 1970s and 1980s, many controllers are due to retire in the next few years. NATS plans to increase the number of en route controllers from 1421 in 2001 to 1617 in 2011. It is too early to say whether these measures will be sufficient to deliver the planned increases in capacity over the period of the Plan, but controller shortage is a problem across much of Europe. The new control centre at Swanwick provides space to accommodate the increased controller numbers required for airspace over England and Wales.

3.13 Beyond a certain point, splitting up airspace into increasingly smaller sectors will cease to be effective, because aircraft need to be formally handed on from one sector to the next, and with smaller sectors these handovers will take up more and more of controllers' time. Therefore from around 2009, NATS aims to introduce new technology to increase controller efficiency. These tools will automate some of the controllers' functions, and also warn of potential collisions far in advance of the aircraft coming near to each other. However such tools are not currently available, and it is not yet clear when they will be developed and what level of capacity or efficiency gains they will bring.

3.14 Like other shortlisted bidders for the NATS PPP, the Airline Group proposed moving away from NATS' previous usual strategy of commissioning custom-built systems for its major projects such as Swanwick. The Business Plan intends to reduce the risks and costs of system procurement by modifying existing "off-the-shelf" systems to meet NATS' particular needs. NATS plans to buy such systems jointly with air traffic control authorities of neighbouring states, who supported the Airline Group's bid. In May 2002, NATS and the Irish Aviation Authority announced that they had agreed to investigate potential areas of co-operation including airspace management, systems investment and support services. For example, the two authorities could combine their staff training programmes, and manage parts of each other's airspace. The other air traffic authorities which supported the Airline Group bid, and with which NATS would be most likely to co-operate, are those of Germany, Holland, Belgium and Iceland. Such moves are likely to be encouraged by the European Union's Single Sky initiative, which aims to restructure and simplify air traffic control in Europe, and may lead to fewer air traffic control providers. Forming alliances in the same way as airlines have done may improve the position of entities like NATS if and when such restructuring takes place.

3.15 The main immediate effect of September 11th on the NATS Business Plan was to postpone the opening of the New Scottish Centre at Prestwick, probably until 2009. The target opening date for this centre when the PPP was signed was 2007, but in fact the existing Scottish centre at Prestwick does not have the same capacity constraints as existed at Swanwick's predecessor at West Drayton. The safety regulator believes that a delay to 2009 is feasible, although NATS will have to monitor and update the existing centre's hardware and support systems, some elements of which will be 30-40 years old by then. Another relatively aged NATS asset is the flight data processing system at West Drayton, which processes information on flights in UK airspace, and on which the new centre at Swanwick is dependent. The system was installed in 1975, and although the hardware has been replaced on a number of occasions (most recently in 2001), the software is written in a language no longer in general use, except in the equivalent system in the United States. The system has a good reliability record (99.96 per cent in 2001) but has had three serious failures since 2000, including two so far in 2002, severely affecting operations at Swanwick. The current NATS Business Plan envisages replacement of the flight data processing system in stages from 2007, but still expects it to support some operations at Swanwick until 2011. This timetable is under review in the light of the recent incidents.

NATS has strengthened its management team in important areas

3.16 One of the Government's main aims for the PPP was to bring in more commercial management expertise. Since the inception of the PPP, NATS has done this at Board and senior management level. A more detailed view of the current NATS Board is at Appendix 5. The main changes to date have been:

- Appointment of a new Chairman and Chief Executive Officer.
- The former Chief Executive Officer has become Chief Operating Officer.
- Replacement of the non-executive Directors with five non-executive Directors appointed by the Airline Group, including one non-executive Director nominated by the International Air Transport Association (IATA), and three non-executive "Partnership Directors" appointed by the Department.

3.17 At senior management level, NATS has made several changes. Recognising the importance of improving the delivery of new systems, the Company has created a new post of Chief Technology and Programmes Officer, appointing to it a former Marconi manager. Reporting to him, there is a Programmes Director, in charge of project delivery, who comes from the management services and engineering group Bechtel. In some respects this is a consolidation of the previous situation, as for the previous two years the post was filled by another Bechtel employee on secondment to NATS to improve the company's delivery of major projects. Other key appointments since the introduction of the PPP include those of Commercial Director (a new post), and new incumbents in the posts of Human Resources Director, Treasurer and Financial Controller. It is too early to demonstrate significant improvements to NATS' performance arising from these changes.

But there are particular risks to NATS' ability to finance itself

The PPP was set up with a tight financial structure

3.18 On completion of the PPP deal on 27 July 2001, the Airline Group provided £795 million of funds, from its own resources and from a loan taken out with a consortium led by four main banks. They used this to acquire NATS and meet associated transaction costs, leaving £3.5 million of cash in the business **(see Figure 20)**.

20 NATS' indebtedness has increased as a result of the deal

To finance the PPP deal, NATS' indebtedness rose from £330m to £733m.

Source of funds	£ million
Cash from the seven Airline Group shareholders	50.0
Strategic Partner shareholder loan, from British Airways[1]	15.0
Capital from strategic partner	**65.0**
Cash in NATS at completion	3.5
Bank Loans for the acquisition, repayable by NATS[2]	733.0
Less hedging costs	-7.0
Total available funds	**794.5**
Uses of funds	
Equity purchase from government	65.0
Repayment of NATS' existing National Loan Fund debts	330.0
Purchase of stake in NATS from Government	370.0
Hedging costs	-7.0
Government's immediate cash proceeds	**758.0**
Banking costs	33.0
Cash left in NATS	3.5
Total funds used	**794.5**

NOTES

1. British Airways provided further funds after the Airline Group announced that it could not finance the acquisition on the terms it originally offered, (Part 1).

2. NATS is required to meet the cost of servicing these loans, arranged by Abbey National, Bank of America, Halifax Bank of Scotland and Barclays, over a 20 year period.

Source: National Audit Office

3.19 The strong competition between the final two bidders had driven the sale proceeds up to the limit of what they considered the business could sustain, based on their assumptions about growth in traffic and the need for further investment. In addition, the regulatory regime required NATS to reduce the level of its charges. NATS had long needed to borrow to meet its investment needs, but as a result of the acquisition, the level of debt within NATS rose from £330 million to £733 million (compared to its regulatory asset base of £632 million in 2000/2001 prices). Debt would rise further over the next twenty years as the Company would draw on a further £715 million of loans to invest in new air traffic control capacity.

3.20 The head of the Economic Regulation Group in the Civil Aviation Authority expressed to us his concerns over NATS' indebtedness. In particular, he noted that NATS' debts are now greater than its £632 million regulatory asset base, the value of assets on which the regulator allows it to make a return when setting its prices. There are various ways in which the company can find financial headroom to mitigate this problem, for example its income may grow, or its costs may be cut, more quickly than the regulator predicted when setting prices. But even with these factors, the Regulator has questioned whether NATS' indebtedness is likely to be sustainable.

3.21 Whilst recognising the Regulator's perspective, the Department and their advisers assessed the indebtedness of NATS under the Airline Group's proposals in different terms, specifically whether the business would have sufficient cash flow to meet its debt obligations.

3.22 In order to match loan payments with expected growth in NATS' income, the debt arranging banks adopted a debt repayment profile which loaded debt repayments into the latter years of the loan. Such customised profiles are normally used to reduce debt repayments during periods of heavy investment and ensure sufficient cash flow in the business to cover the loan. Deferral of repayments also increases the total amount of interest payable by borrowers. For NATS to meet its debt service obligations, continued growth of the business will be essential. The necessity to expand the business in order to cover rising debt makes NATS' finances vulnerable to downturns in the volume of traffic.

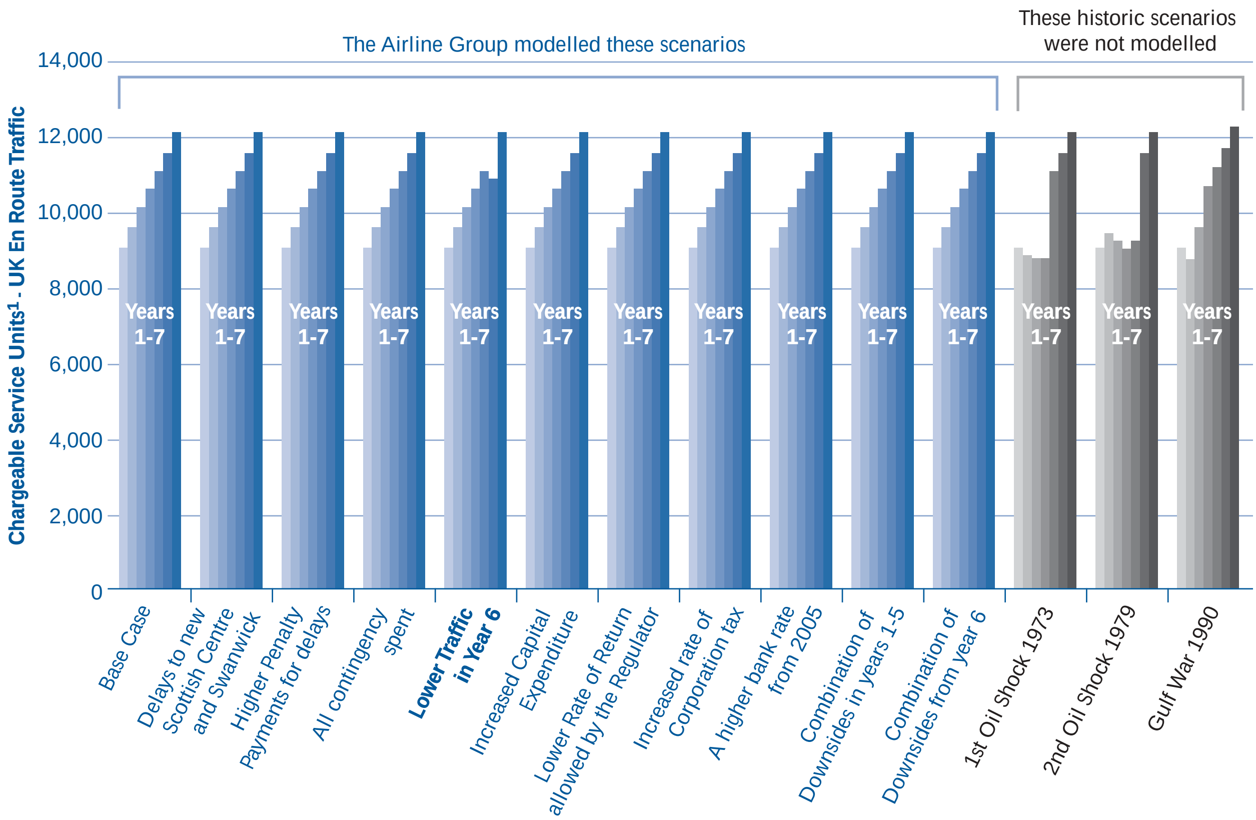
3.23 The Department and their advisers required Nimbus and the Airline Group to demonstrate the strength of their financial proposals against a range of uncertainties. These nine mandatory scenarios tested were mainly for the risks that capital expenditure and staff costs would be higher than expected. One scenario dealt with adverse variations in traffic; specifically the risk that annual growth in business would be only 3.5 per cent as opposed to the 6.7 per cent each year in the baseline assumption. In the case of the Airline Group, the result of these mandatory tests was that NATS would have enough cash to fund its debts. Margins were however acknowledged to be tight, with NATS' available cash estimated to be between 1.2 and 1.5 times the debt payments.

3.24 In addition to these mandatory tests, the Department and their advisers requested sight of any further sensitivity tests that had been run on the bidders' financial models at the request of the Group's lender banks. The Airline Group produced ten such further scenarios, only one of which considered lower than expected traffic volumes, a slight fall in UK traffic only in year six of the Partnership **(see Figure 21)**. It allowed for no drop in the number and average size of aircraft crossing the North Atlantic, from which NATS normally derives around 45 per cent of its en route traffic revenues. Nevertheless even the scenario allowing for a fall in traffic in year six produced tight debt service cover ratios after the first five years of the Partnership, when increased capital investment by NATS would coincide with temporary cessation of growth in traffic, **(Figure 22)**. Even this short-term halt in the rise of traffic would have brought NATS close to, but not quite into, a position of not having enough cash to service its loans.

3.25 We consider that other scenarios could usefully have been tested, such as a lower traffic case, given the risks of growing economic recession in the USA and uncertainty as to whether airports could cope with four to six per cent annual growth in perpetuity. The economic regulator can adjust for such factors every five years when capping NATS' prices, but in the meantime NATS may encounter financial difficulties.

21 Testing the Airline Group bid against different scenarios

The Airline Group modelled a range of scenarios to demonstrate the financial robustness of their bid. None of them included a severe and protracted hiatus in traffic growth to the extent seen in previous decades.



NOTE

1. The Chargeable Service Unit is the basis on which European air traffic providers charge airlines for their services. It represents an aircraft of 50 tonnes flying 100km.

Source: National Audit Office

22 Covering NATS' debt

Testing of the Airline Group's bid predicted that NATS should have easily enough cash to cover its payments on its debts in the first five years, but that margins would be very tight afterwards as investment peaked. The banks required that the cover ratio should not dip below 1.1 over the duration of the loan.

Cases that were used to test the Airline Group bid in July 2001	Peak debt (£m)	Minimum debt cover in years 1-5[1]	Minimum/ average debt cover from year 6 on[2]	Minimum loan life cover ratio[3]
Base Case	1,281	2.33	1.30/1.61	1.26
1. Delays to major projects	1,271	2.31	1.27/1.52	1.24
2. Higher penalty payments for delays	1,286	2.32	1.26/1.53	1.25
3. NATS spends all its contingency	1,344	2.35	1.19/1.48	1.25
4. Temporary halt in traffic growth in year 6 (paragraph 3.24)	1,294	2.34	1.10/1.40	1.21
5. Capital spending up 10%	1,294	2.34	1.23/1.53	1.25
6. Regulator allows lower return when setting NATS' prices	1,281	2.33	1.13/1.41	1.21
7. Corporation tax rises to 35 per cent	1,287	2.32	1.19/1.52	1.23
8. Higher bank rate	1,297	2.33	1.12/1.40	1.22
9. A combination of downsides in years 1-5	1,242	2.27	1.04/1.38	1.21
10. A combination of downsides in years 6 on	1,357	2.29	1.02/1.36	1.20

NOTES

1. This ratio measures the extent to which the business' net revenues are sufficient to cover the debt. A ratio of 1.1 would mean that NATS was forecast to have £1.10p for each £1 that it must pay in debt interest and repayments. **If NATS' forecasts fell below this ratio, it would be in breach of its loan terms, and could not draw down more lending**.
2. The expected cover ratios will be much tighter from year five onwards because this is when NATS intends to draw on most of its loans for investment purposes.
3. This measures the ratio between the net present value of projected revenues for the rest of the loan and the outstanding amount of the loan.

Source: National Audit Office analysis of Airline Group Financial Model.

3.26 The events of September 11th resulted in a dramatic downturn in NATS' North Atlantic traffic. This has resulted in NATS slipping into financial distress. It was of course impossible to foresee the September 11th attack as the trigger for a downturn in air traffic volumes. Nevertheless there have been two significant downturns in air traffic over the last 30 years. In order to identify the effects of more serious traffic downturns on NATS' business we analysed the three key periods in the last 30 years during which the pattern of growth in air traffic has been interrupted, inputting these variations into the Airline Group's financial model for NATS[3]. These periods were:

- the first Oil Shock, starting in 1973;
- the second Oil Shock, starting in 1979; and
- the Gulf War 1990.

3.27 Figure 21 also shows the effects of these historic downturns on NATS' traffic volumes. During the Gulf War, the increase in military activity across the North Atlantic counterbalanced NATS' downturn in civil aviation, and we found that NATS finances may have dealt with such pressure. Conversely, given a reduction in traffic on the scale experienced in both of the oil shocks, each of which lasted several years, we found that NATS would have been unable to meet its debt service obligations.

3.28 We discussed with the Department's lead financial advisers, CSFB, the implications of a less tight financial structure for NATS. We asked them whether the Department could have placed restrictions on the structure that bidders could have proposed, for example by requiring a minimum level of cash reserves to be kept in NATS, or by placing a maximum limit on the indebtedness of the company. CSFB considered that it

3 *We have used the data that was available over this full period, showing the number of flights handled by NATS. In a downturn NATS tends to experience a disproportionate reduction in revenue owing to fewer large transatlantic aircraft flying long distances across the UK. Therefore the number of flights may understate the full effects on NATS' revenues.*

would have been unwise for the Department to have mandated a particular financial structure for NATS. They had found little appetite amongst investors to provide more equity for NATS, so if the government had required high reserves to be kept in the company, this would have fed, pound for pound, into lower sale proceeds for the taxpayer. CSFB regarded this as an inefficient way of protecting the company from the risk of financial stress. It was better for the shareholders to respond to the company's needs as risks transpired. Also, a more cautious financial structure might still have been tested by the effects of the aftermath of September 11th on NATS' revenue and plans.

NATS faces new risks in financing its business plans

3.29 The PPP has changed the nature of the risks faced by NATS. As a public body it was protected from the risk of insolvency. Its costs were passed through to its customers. The major financial risks NATS faced were the uncertain availability of public sector funding and the effects of its inability to deliver major capacity-enhancing projects on time and to budget. The PPP brought new freedoms, but also exposes the company to other business risks (see paragraphs 3.31 to 3.40 below). The financial situation is now much more complex than before the PPP, because strengthening the position of the company now requires positive and complementary responses from many more parties, principally:

- the Government as minority shareholder;
- the seven members of the Airline Group who form the controlling shareholder;
- possible additional equity investors;
- the company's employees;
- the lending banks; and
- the economic regulator, which is statutorily independent of government.

3.30 To be able to draw on its bank loans, NATS must certify to its lenders that it is not aware of the occurrence of any event of default. The impact of the events of September 11th on NATS' revenue base were such that the company may have been construed as being in breach of certain of the provisions within the conditions attaching to its loan facilities. As a result, NATS agreed that it would not seek to draw further on its loan facilities and would fund capital expenditure from operating cash flow. In this situation significant management time and effort is diverted away from managing the future development of the business, to managing short-term cash flow. The solution to these symptoms of corporate financial distress can only lie in three areas - raising revenues, cutting costs and raising alternative finance.

NATS is constrained in its ability to increase its revenue

3.31 NATS has little control over its traffic volumes. Though it is a monopoly its customers have the freedom to vary their use of the service between zero and the maximum volume allowed by safety standards. Monthly year on year traffic growth can be highly variable **(see Figure 23)**. A further adverse trend, prevalent since September 11th, has been for airlines to use smaller aircraft, which cost NATS as much to handle as larger aircraft but attract lower charges.

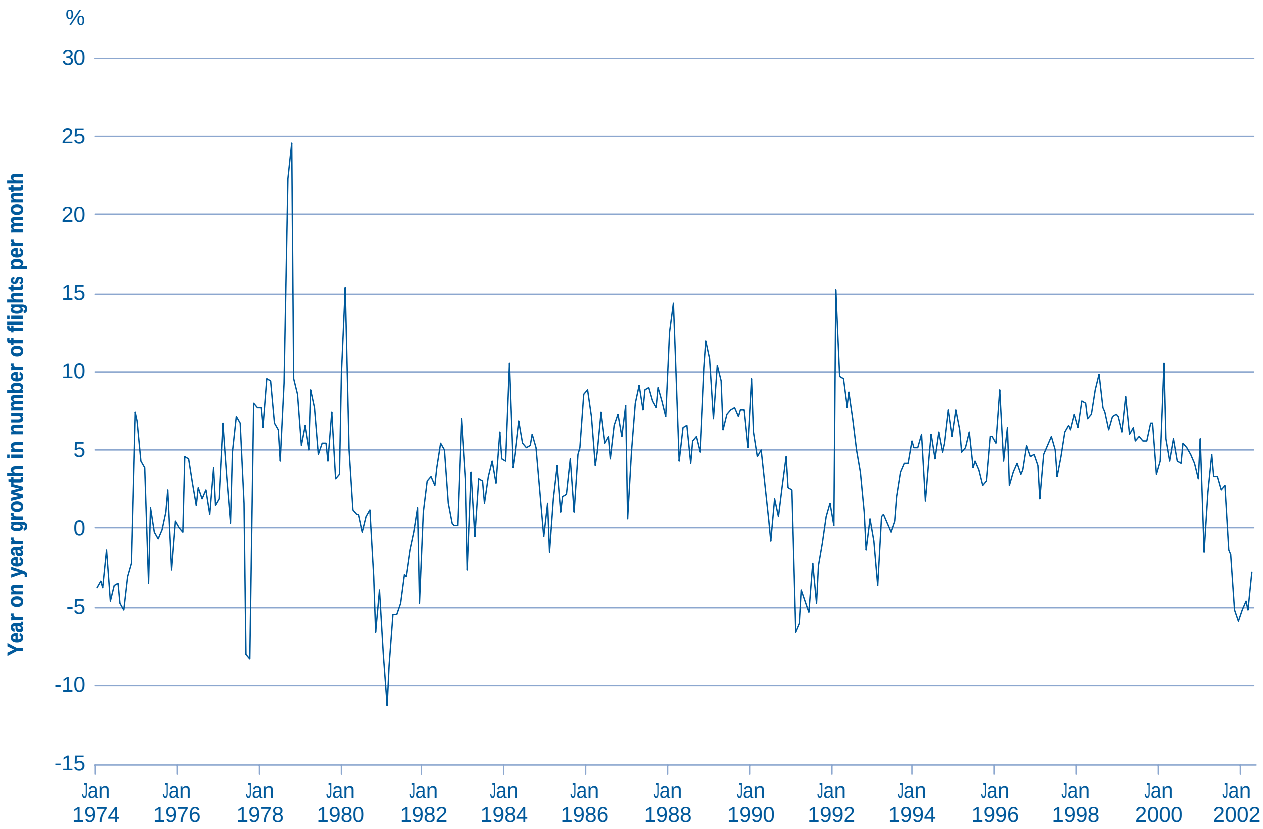
3.32 To increase its charges above the limits set by the price cap, NATS must apply formally to the Civil Aviation Authority. The review process must follow formal procedures of consultation and consideration as required by the Transport Act 2000 and the rules of Eurocontrol. Practically, this means that the Authority will take several months to respond to requests from the company to consider changes in circumstances. Another constraint is that charges are normally set within Europe only once a year. If the operator and regulator cannot determine the need for an increase before prices are set in late November for the following calendar year, the operator will have to wait a further year. This severely limits the ability of NATS to change its prices in response to changed market circumstances. Following September 11th, NATS applied to the Regulator in February 2002 for a price increase to take effect from January 2003, and the Regulator announced its initial determination in May.

NATS' plans for developing its unregulated business are not yet clear

3.33 NATS Services Limited is the subsidiary of NATS that conducts unregulated business activities, such as air traffic control at Airports. It was an objective of the PPP to provide a framework in which the Company could better develop additional business at airports in the UK and sell its expertise and services world-wide. The Airline Group's proposals for NATS made clear that though the Group had plans for developing this business, they would give priority to developing the core regulated business. We are unable to comment on whether development of NATS Services Ltd will make a significant contribution to the financial position of the NATS Group as a whole because we have not seen a business plan for the subsidiary. The Strategic Partnership Agreement between the Airline Group and the Government required an initial business plan to be produced for the whole group by the end of November 2001. NATS told us that their priority has been to stabilise NATS Service's business following the events of September 11th and that a revised business plan for the subsidiary is being prepared for Board approval. A factor in the delay in producing this

23 The volatility of UK air traffic levels, 1974-2002

Traffic volumes are largely out of NATS' control, and can be highly volatile, leading to sudden changes in revenue.



Source: NATS

business plan is the extent to which management time has been diverted by managing the financial constraints on the business.

NATS has a high base of fixed costs, and cuts will be challenging to achieve

3.34 NATS is a relatively capital intensive business, and most of its costs, for infrastructure and specialist staff like its 1400 en route controllers, are fixed in the short and medium term. It is not well placed to reduce its costs quickly when there is a reduction in the number of flights it handles. In their bid for the PPP, the Airline Group made a number of proposals for operating cost reductions, mainly by reducing the number of staff in support functions and by consolidating NATS' accommodation outside London. The Airline Group proposed the largest reduction in staff of any of the three short-listed bidders, partly offset by an increase in the number of controllers. The effect of September 11th has been to accelerate NATS' timetable for cost savings. But it is evident that the financial position of the company must be improved before the programme can be fully implemented. For example, some redundancies in non-operational posts have been delayed while the Company sought ways of affording the redundancy payments.

3.35 Some of NATS' proposals for staff cuts or efficiency improvements, such as changes in maintenance staffing, will need to obtain the approval of the Safety Regulation Group of the Civil Aviation Authority. Implementation of any substantial programme of staff reductions brings with it risks for industrial relations. NATS has sought to improve its management expertise in this area in order to achieve a constructive relationship with the principal Trade Union, Prospect. There is evidence of some improvements in relationships in that Prospect has agreed to a holiday in employer's contributions to the staff pension fund, on the understanding that the holiday is regularly monitored for its effect on the fund and its obligations.

There are difficulties in seeking additional external finance

3.36 NATS has three main options when it requires additional external finance:

- To request additional equity or loans from its two main shareholders; the Government and the Airline Group;
- To seek additional equity or loans from a new investor; and
- To request finance from its banks, (Abbey National, Barclays, Bank of America and Halifax Bank of Scotland).

3.37 The Department found during the contract completion stage between March and July 2001 (Paragraphs 1.20 to 1.22), that the Airline Group were constrained in the additional equity they could provide. The Group had been constituted with equal shares for each of the seven Airlines, and smaller members were not as able or willing to provide additional equity as the larger companies. When the Airline Group had to provide additional capital to ensure that the deal could be signed this came in the form of a £15 million loan from the largest airline of the seven, British Airways. The global scale of the post 11th September downturn has added to the difficulty of raising extra financing from the airlines, which are themselves affected to varying degrees by the same downturn as NATS.

3.38 Though the members of the Airline Group have declined to produce additional equity for NATS themselves, we understand that, through the forum of the NATS Chairman's Committee, they are discussing the scope for investment with potential new equity partners. At the time of this report the outcome of these discussions is unclear, but the Chairman of NATS has told the House of Commons Transport Sub Committee that the aim is to obtain an injection in excess of £50m from a new private sector partner, either in the form of equity or subordinate debt. An appropriate injection would be matched by the Government, and would significantly reduce the company's reliance on bank debt. The identity of the proposed equity partners is unknown, although press speculation has centred on Serco and the airport operator BAA plc. It has been reported that Serco has withdrawn and BAA announced in June 2002 that talks were in progress with a view to their participation in the financing of NATS.

3.39 In March 2002 the Department and Treasury were advised by CSFB that NATS was in a serious financial position and was at risk of defaulting on the terms of its loan agreement with the banks. Without short-term support, the NATS Board would have to consider whether the company should apply to be taken into administration. To relieve the financial pressures on NATS the Government agreed to make available a further £30 million, linked to another £30 million from the lending banks, as short-term loan facilities, which would be repayable by 30th September 2002. This facility was designed to protect NATS' cashflow while a longer term solution is developed. NATS has not yet drawn on these facilities and we have not examined their terms. But, these funds are available on broadly equal terms with the bank's existing senior debt. This is consistent with the principles of acting in partnership with the private sector.

3.40 There remain inherent risks that NATS may have to request further financial support from the Government, although it is the Government's intention that the solution currently being devised for NATS should be sufficient to enable NATS to prosper in the future without further financial support. These risks are principally:

- **If NATS income does not recover**. There remains considerable uncertainty as to how quickly traffic, particularly more profitable North Atlantic flights, will recover. This is a normal business risk that cannot be removed.
- **If a new equity investor is not forthcoming, or if the Airline Group objects to a new shareholder**. Whilst declining to provide more equity, the Airline Group have undertaken to offer all reasonable co-operation in finding a new investor.
- **If the Economic Regulator continues to be unconvinced by NATS' proposals for an increase in prices**. On 21st May 2002 the Civil Aviation Authority announced that it was minded not to grant NATS' request for an increase in prices in full. However, it would consider allowing a limited rise in charges, conditional on (or following) a financial restructuring of the Company. The Regulator has stated that its final response will depend in part on users' views on a price increase and on financial strengthening of NATS. In practice strengthening will require more equity or an easing of debt repayment terms.
- **If the banks were to withdraw their support from NATS**. The Banks have an interest in avoiding the Company going into administration because this would place their existing loans at risk. The Banks still retain a right to alter the structure, terms and pricing of their loans to NATS if the Banks consider it necessary in order to syndicate their loans to NATS to other financial institutions.
- **If the Government is obliged to apply for an administration order**. This is a last resort which the Government wishes to avoid. But it has said that it would take such action if necessary.

Part 4

Accountability to government and the public interest

4.1 In designing the PPP the Department had to incorporate controls over the business to protect safety, national security and the public interest, without taking operational control of the business away from the Strategic Partner. The Department and their advisers addressed these needs mainly through arrangements for corporate governance of the Company laid down in a Strategic Partnership Agreement, and through the provisions of the Company's licence to provide Air Traffic Services.

The PPP gives the government ultimate powers to intervene

4.2 In devising a partnership structure which ceded operational control of NATS to the private sector, the Department had to consider carefully with their advisers, CSFB and Slaughter and May, the specific powers and protections they needed to retain. Their team drew up a Strategic Partnership Agreement to govern the relationship between the shareholders in the PPP. This was accepted without substantial amendment by the Airline Group, so the Department obtained the safeguards that they demanded.

4.3 The Strategic Partnership Agreement and the associated documentation governing the PPP are complex and extensive. But a summary of the main ways in which they protect against some of the key risks of a joint venture is set out at **Figure 24 overleaf**.

4.4 Drawing on Corporate Finance advice we have examined the Strategic Partnership Agreement and other PPP documentation and found that the powers and rights reserved for the government as the minority partner are consistent with normal commercial practice. Government has more rights to be consulted or to approve than is normal in a joint venture. In line with good practice, the agreement provides for heavier sanctions to be applied progressively, firstly by Partnership Directors, then by the Shareholder, and finally if vital by the application of Government powers.

4.5 The Crown Shareholder has various powers through legislation in the event of a failure by NATS to meet its responsibilities, some of which would be triggered by the serving of an "air traffic administration order". Application for such an order can be made to the courts by the Secretary of State or by the Civil Aviation Authority with his consent.

4.6 Ultimately, the Government retains a right to hold the strategic partner in default if there is a serious and sustained failure to perform at NATS. If the partner defaults it is obliged to transfer its shares in NATS to the Crown Shareholder at market value in the event of:

- material or persistent breaches of the Strategic Partnership Agreement; or
- a change of control or insolvency of the private sector shareholder or its parent company; or
- any disposal of shares in breach of the Agreement.

Pending such a transfer, the strategic partner would have its shareholder voting and other rights suspended.

Arrangements for representing the public interest within NATS are working

4.7 A key feature of the PPP is the role of the three "Partnership Directors" nominated by government. Their prime function is:

- to exercise their independent commercial judgement on issues of strategy, performance, resources and standards of conduct; and
- to seek to ensure that the Board, as the principal decision-making forum in the Company, functions effectively and transparently.

In particular, their duty is to protect the taxpayer's financial interest in the company, and to ensure that NATS retains its capability to operate without undue reliance on the Airline Group.

24 An overview of how key risks are addressed through the PPP documentation

The main safeguards against risks to the public interest are contained within the Strategic Partnership Agreement, the operating licence granted to NATS' regulated business by the Secretary of State, Government's "Special Share" and the Articles of Association of the Company.

Key Risk	Safeguards for government
That control of NATS may pass to undesirable owners	■ Changes or increases in share capital require approval of each shareholder. ■ No shares may be transferred to a third party without the approval of the Crown shareholder, and government would have a pre-emption right. ■ A "special share" gives government an effective veto on attempts to reorganise the share capital of NATS or to obstruct the Crown shareholder's right to appoint Directors. ■ NATS' articles of association prevent any individual shareholder except the Crown owning more than 15 per cent of voting shares at a time when the shares are listed. ■ NATS' licence may be revoked if there is a change of control which the Secretary of State deems detrimental to national security.
Asset stripping in NATS' regulated business	■ Material sales require the approval of the Partnership Directors. ■ Under its licence, NATS must give the CAA three months written notice of intentions to dispose of assets, to obtain the Authority's consent. ■ Under the Transport Act 2000, NATS must have regard in "providing, developing and maintaining the system to the demands which are likely to be placed on it in future."
That NATS may enter into unsuitable business ventures	■ NATS' licence restricts diversification outside the core en route business, in part through a three per cent ceiling on turnover and a one per cent ceiling on investment in other business. ■ Material changes in the nature and scope of the business would require Crown shareholder approval. ■ Any changes in NATS' business plan, and external investments, require Partnership Director approval. ■ Changes in business plan that require new funding also require shareholder approval.
That NATS may not replace essential facilities that have come to the end of their useful lives, or allow services to erode.	■ The Transport Act 2000 requires a licence holder to maintain a safe, efficient and co-ordinated system and to meet reasonable future demand. ■ NATS' licence includes a general obligation to meet "any reasonable level of overall demand.. ..having regard to the objective of permitting access to airspace on the part of all users." ■ NATS' licence defines the services it must provide. If they wish to reduce materially the scope of their services they must formally apply for CAA consent to modify the licence. ■ The Airline Group signed up to get Swanwick and the New Scottish Centre operational in 2002 and 2007 respectively.[1] ■ In the event of a breach the remedies of injunction and / or an order for specific performance would be available to Government, not just damages.
That NATS may become more indebted	■ NATS' debt is not to exceed greater of £2bn and 15 times the capital and reserves of the company without approval of the Crown Shareholder. ■ Under its licence, NATS' regulated business must obtain the CAA's consent if it wishes to mortgage its assets. ■ Partnership Directors must approve any new indebtedness beyond normal trade credit, and any mortgaging of assets. ■ NATS' regulated business must certify to the CAA each June that it has sufficient financial and operational resources for the next two years to meet its obligations under the Transport Act and its licence to provide services. This certificate is to be supported by an auditor's report.

NOTES

1. There was an obligation on the Secretary of State in the Transport Act 2000 to ensure that plans were in place to complete the centres before he sold shares in NATS. The government, acting as shareholder, has now agreed with the Airline Group that the obligation to complete the New Scottish Centre by 2007 can be extended, probably to 2009.

National Audit Office examination of PPP documentation and the Air Traffic Licence of NATS' regulated business.

4.8 We examined whether the Partnership Directors have appropriate powers and expertise to discharge these responsibilities.

4.9 The backgrounds of the three Partnership Directors nominated by Government are identified in Appendix 5. They have a wide range of relevant experience that should help them discharge their duties, in particular:

- the lengthy experience of NATS' operations provided by Bill Semple;
- Stephen Pettit's experience of managing commercial, manufacturing, people and safety issues in the private sector; and
- the background of Lord Brooke in the field of labour relations.

4.10 We interviewed the three Partnership Directors to establish how their role was being discharged in practice. They saw it as being very similar to that of non-executive directors in industry generally, and considered they were being treated within NATS on a par with the other non-executives on the NATS Board. The Strategic Partnership Agreement between the Government and the Airline Group gives them additional rights. It specifies that one Partnership Director, currently Mr Semple, would chair the Board's safety review committee. Mr Pettit chairs the Stakeholder Council, while Lord Brooke chairs NATS Employee Sharetrust Ltd, which manages the five per cent staff shareholding. The Partnership directors also sit on the audit, remuneration and Chairman's committees. The Board as a whole is not in quorum unless at least one Partnership Director is present. The Agreement confers additional powers, enabling the Partnership Directors to demand papers and information from management, or even to trigger a special investigation of the company. The Partnership Directors told us that though they welcome these powers, they see them very much as remedies of last resort, and there have been no occasions to date when they have had to invoke them.

4.11 In discussion with us, the Partnership Directors illustrated ways in which they had contributed to the governance of NATS during the difficult period since September 11th 2001. Their remuneration had been set on the assumption that they would provide two days of their time per month, but in the new circumstances their input had been greater. They felt that their main contribution had been:

- to help the Board's consideration of cost cuts, and agree a programme which would balance the books but at the same time not risk NATS' operational capability in the longer term.
- to assist the Company's efforts to raise additional finance, Mr Pettit has served on a three-man team of directors undertaking discussions with advisers, financial institutions and possible investors.

There are appropriate safeguards to prevent NATS discriminating in favour of its shareholders

4.12 When considering the Airline Group's bid for NATS the Department satisfied themselves that there would be adequate arrangements to prevent NATS discriminating in favour of the Group's members. The Office of Fair Trading, and the European Commission's mergers task force, both accepted that Airline Group control of NATS should not be anti-competitive.

4.13 It would be difficult for NATS to discriminate in favour of particular airlines by giving them preferential treatment, for example:

- NATS does not control the allocation of airspace between different groups of users such as airlines, the military, business aviation and recreational fliers. The Civil Aviation Authority regulates such matters.
- Nor does NATS control the allocation of air traffic "slots". Aircraft in regulated airspace receive these from the European authority, Eurocontrol, which also applies NATS' charges on a common scale to all airlines operating in UK airspace.
- Relevant experts, including NATS' safety regulator, have consistently told us that other users would almost certainly identify systematic operational discrimination such as taking aircraft out of holding patterns before their "turn".
- There is an explicit prohibition on discrimination in NATS' licence, enforceable by the regulator.

4.14 The PPP has other arrangements which should obstruct other, less direct forms of discrimination, such as investing in flight-paths more heavily used by Airline Group members, for example:

- NATS' Board now includes three government-appointed directors with rights of access and investigation within the company, and the Director General of the International Air Transport Association, which represents airlines worldwide;
- the government, NATS’ regulator and its customers must all be consulted in respect of its business plans; and
- the Airline Group have undertaken not to discriminate; this has been given legal force in the Strategic Partnership Agreement and in NATS operating licence.

There are controls over the remuneration of management

4.15 In their bid for the PPP the Airline Group contended that NATS was paying its senior executives below market rates, and highlighted the importance of attracting new managers of the right calibre. New entrants to the company, notably the new Chief Executive Richard Everitt, have joined the company at rates significantly above that of their predecessors. In 2001/02 the remuneration of the highest paid director rose to £216,000, from £180,000 the previous year. As a matter of general principle, the packages for senior managers are set using the Hay Group executive assessment approach, which benchmarks senior executive pay and responsibilities against some 800 organisations worldwide. At the same time, annual leave entitlement for senior staff under new contracts is cut from 33 days to 26 days reflecting norms in the private sector. The Board remuneration committee, on which all shareholders are represented, is responsible for approving the salary and bonus arrangements for members of the Group Executive and the general arrangements applying to all staff on personal contracts.

4.16 At the time of our examination, NATS was finalising the details of new bonus arrangements for its senior executives. Senior executives participate in the Company's share scheme (NATS Employee Sharetrust Ltd), on the same basis as all other permanent members of staff. This is not part of the senior executive incentive scheme, and bonuses are payable as a proportion of basic salaries. This protects to some extent against the risk that remuneration could fluctuate wildly in response to factors outside management's control, such as traffic levels. The bonus scheme is designed to incentivise executives to meet the Company's objectives, **(Figure 25 refers)**. In addition, the scheme protects the company against the risk that key executives could leave by incorporating an additional long term bonus worth up to a third of initial bonuses, which can be held over for five years to encourage staff to stay.

25 The new bonus scheme for NATS executive management

Criteria for award[1]	Maximum percentage of basic salary[2]
Business Objectives	
Financial Performance	6
Operational Performance	6
Employee satisfaction	3
Customer satisfaction	3
Achievement of Personal objectives	18
Bonus at Chief Executive's discretion	9
TOTAL	Up to 45

NOTES

1. All bonuses are subject to the approval of the remuneration committee.
2. NATS' has set bonus thresholds such that bonuses towards the top of the scale will be extremely difficult to achieve.

Source: NATS.

There are restrictions on shareholders taking profits out of NATS

4.17 The Airline Group stated when bidding that their bid was on a "not for commercial return" basis. If NATS makes profits the Group would reinvest these in the business; the returns to the airlines would come instead by safe and efficient increases in Air Traffic capacity. At the time of this report the difficult financial situation of NATS effectively precluded the payment of dividends to the shareholders, though even without these difficulties the terms of bank loans would prevent the payment of dividends to shareholders for some years. In April 2002, Easyjet, one of the seven members of the Airline Group, wrote off the full value of their £7 million stake in NATS, stating that they did not expect to see a return for several years. The other members of the consortium have not written down their investment.

4.18 Notwithstanding the "not for commercial return" basis of the Airline Group's bid, the Department and their advisers drafted the PPP Agreement in a form that would also be compatible for bids on a profit making basis. The PPP therefore makes provision for dividends to be taken by the Strategic Partner, the Government and NATS Employee Sharetrust Ltd, but only if certain conditions have been satisfied, for example:

- a dividend policy is set out in the Strategic Partnership Agreement between the Government and the Airline Group which requires an auditor's report on profits that are distributable, and which prohibits distribution of profits using funds required for other purposes in NATS' business plan; and
- there are prohibitions under NATS' operating licence which prevent the company declaring a dividend until it has certified to the Civil Aviation Authority that it is and will remain in full compliance with the key financial conditions of its licence.

Glossary

Term	Meaning
Air Proximity (or Airprox) incident	An incident reported by a pilot or controller in which standard minimum separation distances between aircraft have been breached. A risk-bearing airprox is one where the UK Air Proximity Board considers there was a potential risk of collision.
Airspace Management	Classification of airspace into various categories of controlled and uncontrolled airspace, such as main airways and control zones, firing ranges or fighter exercise areas. Deciding on the geographical extent of these areas, and where necessary on when they should be in operation.
Approach	The time from when an aircraft has joined the pre-set route of descent into an airfield until it comes under the control of the airfield for landing.
Area Control Centre	An air traffic control centre that controls air traffic in the en route phase of flight prior to descent into the terminal area and approach to the destination airport.
Central Flow Management Unit	A unit of Eurocontrol, based in Brussels, which helps to regulate the flow of aircraft in overcrowded areas of European airspace, for example by instructing air traffic control authorities to delay departures from airports.
Cost Plus charging	The method of en route charge determination used by all Eurocontrol member states except the UK. It was also used by NATS before the start of the PPP. Under cost-plus charging, air traffic control authorities are allowed to recover all their en route air traffic control costs, as well as any related interest costs. Depreciation of assets can also be charged for, provided the assets concerned are operational.
Credit Committee	A committee of senior bank officials whose approval is normally required before a bank will agree to make a loan.
CSFB	Credit Suisse First Boston, the financial advisers to the Department of the Environment, Transport and the Regions.
Data Room	Room where shortlisted bidders could access all the information they required for due diligence on NATS. There were actually three data rooms, one for each shortlisted bidder.
Due diligence	The process through which a party to a proposed transaction, such as a business acquisition, investigates in detail the risks associated with it.
The Department	The Department for Transport. Name of the vendor Department. Formerly the Department of the Environment, Transport and the Regions (1997-2001) and Department of Transport, Local Government and the Regions (2001-2002).
En Route	Aircraft flying in controlled airspace under the control of a NATS area control centre.
Enterprise Value	Enterprise Value is based on earnings of the business before interest, tax, depreciation and amortisation, and also taking the debts of the business into account.
Eurocontrol	The European agency for the safety of air navigation, based in Brussels.

Information Memorandum	Publication issued by the Department and its advisers to potential bidders, describing the activities and finances of NATS.
Investment Grade Rating	A high level of credit quality with a low risk of default. Specifically, a rating of BBB or above conferred by Standard and Poor's, or Baa and above by Moody's Investor Services.
Mandatory Occurrence Report	Controllers, pilots, aircraft maintenance engineers, telecommunication engineers and aerodrome licensees must by law file a Mandatory Occurrence Report if they think an incident has taken place that might have threatened safety.
NATS	National Air Traffic Services Ltd
NATS Services Ltd	The unregulated subsidiary of NATS which provides air traffic services to airports and consultancy services to customers worldwide.
Non-Share-Capital company	A private company that has no shareholders. The lack of shareholders means that profits are recycled to pay debt, finance capital expenditure or reduce prices. All capitalisation is in the form of debt. "Members", usually key stakeholders interested in the success of the business, appoint the Board of Directors, approve corporate by-law changes and appoint auditors.
PPP	Public Private Partnership between the Government and a private sector strategic partner.
Senior debt	Debt that has first call on the cash of the borrowing business when due for repayment.
Single European Sky	An initiative by the European Union to rationalise air traffic control in Europe, by standardising procedures, improving co-operation between different national air traffic control services, and eventually reducing the number of different ATC providers.
Stacks	Holding areas used at times when airports are busy. Incoming aircraft arrive at the top of a stack (located by a radio beacon) and circle downwards until they can be taken from the bottom of the stack to complete their airport approach.
Strategic Partnership Agreement	The agreement between the two main shareholders in NATS; the Department and the Airline Group

Appendix 1 The National Audit Office's approach to the examination

Scope

Our examination covered the process for selecting the Strategic Partner for NATS, and was also aimed at evaluating the extent to which the PPP has promoted the achievement of the Government's objectives, (Figure 4), namely:

- above all, for standards of safety and national security to be at least maintained, in particular by separating service provision from safety regulation;
- an injection of private sector money and management skills:
- for NATS to benefit from greater freedom to invest and to improve its services free of public sector constraints; and
- that in achieving these prime objectives the interests of the taxpayer should be safeguarded.

We have also looked at the risks to the achievement of the Government's objectives following completion of the NATS PPP deal in July 2001.

Main aspects of the National Audit Office's Methodology

In undertaking this examination we:

- Designed the examination using experience acquired on earlier studies of privatisations and Private Finance Initiative projects;
- Reviewed information from the Department's staff, advisers and records about the background to the PPP, the conduct of the selection process, and the formal Partnership agreements;
- Met with NATS, the Partnership Directors and the Airline Group to understand how the PPP structure has performed since signature, particularly the effects of September 11th 2001 and its aftermath;
- Used external expertise to advise us on best practice in Corporate Governance issues in joint ventures; and
- Obtained the views of parties participating in the selection process and of interested parties in the aviation industry.

Collection of information

We gathered relevant information from a number of sources including:

- an extensive examination of the Department's papers, documentation prepared by advisers, and bidders' submissions;
- interviews with the Department's relevant officials and advisers, on how they approached the development of the PPP and managed the selection process;
- the financial models submitted by the Airline Group in support of their bid, with the sensitivities run by them at the request of their bankers and of the Department;
- monitoring of reports and commentary in specialist aviation industry websites and news "feeds", including public discussion boards used by NATS staff;
- interviews with staff in the safety, economic and airspace regulatory groups of the Civil Aviation Authority's, covering the design of the PPP and the future regulation of NATS; and
- a survey of bidders participating in the auction, supplemented in the some cases by detailed interviews.

Use of external expertise

We commissioned the Corporate Finance arm of PriceWaterhouseCoopers[4], who have considerable experience in aviation infrastructure finance, to advise us on;

- the financial robustness of the winning bid by the Airline Group; and
- whether the arrangements built into the deal to secure the interests of the taxpayer as minority shareholder, appear sufficient and in accordance with best private sector practice for minority shareholders.

4 *PricewaterhouseCoopers did carry out an independent evaluation for the Department of the value of NATS' business in 2001, but were not involved in the PPP sale process itself. They did not provide advice or opinions to the Department on the issues where advice was subsequently sought from them by the National Audit Office. In these circumstances we did not find that any conflict arose in commissioning advice from them.*

Survey of bidders in the auction

We surveyed the nine companies or consortia who expressed an interest in the NATS PPP. The survey was supplemented with face to face interviews where respondents made points that required greater elucidation. The main purpose of the survey was to gain an understanding of how bidders perceived the selection process, and to identify lessons that might be learned for future PPP selection processes. All nine parties responded to us.

The survey sought bidders' views on the following key issues:

- The extent to which the Department consulted potential bidders in the run-up to the PPP;
- The provision of background information on NATS and the PPP, and debriefing, during the Expressions of Interest and Preliminary Offers stages;
- The reasons why certain bidders did not pursue their interest in the PPP;
- The provision of detailed commercial information on NATS' business during Stage 3, the submission of firm priced bids;
- NATS' Long Term Investment Plan, and on the proposed PFI projects, and how these affected their view of the business;
- How far the government's proposals for economic regulation, and for preserving the government shareholder's interest in the company, both affected their view of NATS as a business proposition;
- The costs of the bidding process to bidders; and
- Whether the bidders consider they were treated fairly.

Seeking views of interested parties

We consulted a range of aviation industry bodies during the preliminary stages of our work, and supplemented this by examination of the results of the Department's own consultative exercise that preceded the PPP process. We also established an Expert Panel which at the start of our work advised us on issues to examine and later provided feedback on our findings. The members of the Expert Panel were:

- Dr Peter Brooker, Civil Aviation Authority Professor of Air Traffic Management and Environmental Policy at Cranfield University. Formerly Group Strategy and Planning Director of the Civil Aviation Authority, 1995-2001;
- Tony Grayling, Transport Specialist at the Institute of Public Policy Research
- David Learmount, Operations and Safety Editor, Flight International;
- Derek McLauchlan, former Chief Executive of NATS, 1991-1997, and latterly with Civil Air Navigation Services Organisation, the representative body of corporatised air traffic service providers; and
- Laurence Price, Director Aviation and Travel Consultancy Ltd, and adviser to the Commons Transport Sub-Committee.

Appendix 2 National Air Traffic Services Ltd

Before the disposal of a 51 per cent stake through the Public Private Partnership in July 2001, National Air Traffic Services Ltd (NATS) was a wholly-owned subsidiary company of the CAA. NATS provides air traffic control services in UK airspace, and jointly with Ireland in the Oceanic Control Area over the North-Eastern Atlantic Ocean. In the year 2000, NATS handled more than two million flights carrying around 200 million passengers.

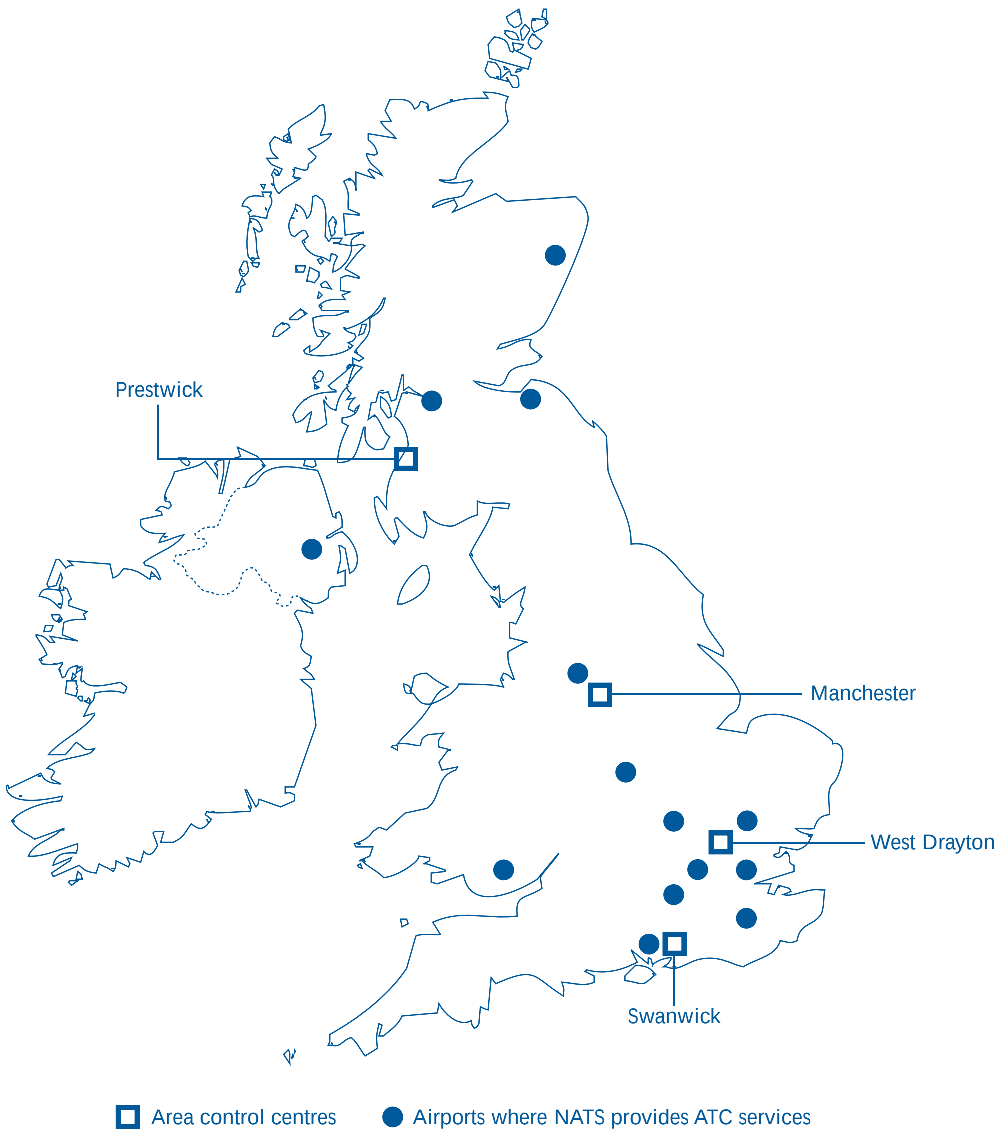
Control of aircraft in UK airspace flying between airports, or en route to overseas destinations, is known as en route air traffic control, and this is NATS' major activity, accounting for around 82 per cent of its revenue (around £486 million in 2000/01). Charges for en route services are collected on behalf of NATS by a division of the European organisation for the safety of air navigation, Eurocontrol.

En route control of aircraft flying along the major airways over most of England and Wales is carried out at NATS' new London Area Control Centre at Swanwick in Hampshire, which opened in January 2002. Control of the complex and congested lower airspace over London and the surrounding areas is still carried out from the London Terminal Control Centre at West Drayton, near Heathrow. Two centres at Prestwick in Ayrshire control the airspace over Scotland and Northern Ireland and also (in conjunction with the Irish Aviation Authority) provide a service to aircraft over the north east Atlantic. There is also a small en route centre at Manchester which covers north west England. NATS has developed a two-centre strategy to rationalise these facilities, involving the transfer of the West Drayton functions to Swanwick, and the construction of the New Scottish Centre at Prestwick, that will replace the existing facilities at the existing Prestwick site and take over the functions of the Manchester centre.

NATS' second major source of income (around 13 per cent of turnover, or £81 million in 2000/01) is through control of aircraft arriving at and departing from UK airports. NATS provides air traffic services at 14 major airports, including the major UK operations at Heathrow, Gatwick and Stansted. At airports, NATS recovers its costs either directly from aircraft operators or through charges paid by the airport company. Provision for airport air traffic control is a competitive market. Some airports provide their own ATC service, while others use private companies such as Serco.

NATS also receives revenue for services provided to the MOD, for providing services to helicopters operating in the North Sea, and for various training, engineering support and consultancy contracts in the UK and overseas. One of the key features of UK air traffic control is the way in which NATS and MoD controllers currently work together aided by collocation. NATS is formally responsible for en route air traffic control throughout UK airspace, and controls the designated air routes, other busy areas such as the terminal control areas in South East England and Central Scotland, and advisory routes. NATS also provides services to aircraft in certain areas outside controlled airspace. However, the services to aircraft outside controlled airspace are shared with Ministry of Defence controllers who, using NATS equipment, control military and some civilian traffic. They also make use of NATS equipment for defence purposes (e.g tracking intruders).

NATS' main centres of operations



Area Control Centres

West Drayton. Area control facilities managing traffic in the southern half of the UK, were replaced by the new centre at **Swanwick**, outside Southampton in January 2002. The London Terminal Control Centre remains at West Drayton, as does the Military Area Services Operations Room, pending relocation to Swanwick. Both are relatively modern facilities completed in the early 1990s.
Manchester - a small area control centre, likely to be subsumed by the New Scottish Centre within the next 10 years.
Prestwick Centre, managing traffic in the northern part of the UK, and the North-East Atlantic (jointly with Ireland) to be replaced by a New Scottish Centre at the same location, probably by 2009.

Appendix 3 NavCanada - A not-for profit corporation

NAV CANADA is the non-share capital, private corporation which owns and operates Canada's civil air navigation service (ANS). NAV CANADA is a private company and not a federal agency, though its safety performance is regulated by Canada's Transport department. It purchased the system from the federal government, on November 1, 1996, for $1.5 billion. The company is responsible for the safety and efficiency of the ANS. It provides customers (airlines and aircraft owners and operators) with air traffic control, and other air traffic services. It employs some 5,500 staff, similar to NATS.

NAV CANADA operates on a break-even basis. Year-end financial results for fiscal year 2000-2001 show revenues matching expenses, at $Canadian 916 million. The company has no shareholders and is financed through the debt markets. NAV CANADA has $2 billion in long term bonds at very favourable rates due to a high "AA" credit rating.

The company is governed by a stakeholder Board of Directors with representation from the four founding members of the company: airlines, general aviation, the federal government and bargaining agents representing employees. Each of the four members has representation on the Board as follows: airlines - 4; general aviation - 1; federal government - 3; bargaining agents - 2. These 10 directors then elect four independent directors, and the Board appoints the President and Chief Executive Officer.

Since 1998 NAV CANADA's revenues have come from service charges paid by its customers. Airlines now pay 35% less than they used to collect from passengers for Air Traffic Services under previous arrangements.

In 2001, there were approximately six million aircraft take-offs, landings and overflights in domestic airspace and international airspace assigned to Canadian control. Despite a 20 percent increase in air traffic volume since NAV CANADA acquired the service in 1996, it has maintained one of the world's best safety records, with slightly more than two operating irregularities per 100,000 aircraft movements - compared to 2.6 in 1996. This has been achieved while at the same time reducing delays in air traffic control.

Since taking over the ANS, the company has invested over $700 million in new systems and technologies. Though affected by the current industry downturn, the company developed a balanced plan to make up for an anticipated $145 million revenue shortfall in the fiscal year ending August 31, 2002. The plan involves $85 million in cost reductions, $30 million in new revenue and revenue from a rate stabilization fund set up mitigate the risk of downturns in revenue, and $30 million from a 6 per cent increase in charges from January 1, 2002. Subsequent to September 11, 2001, Moody's Investors Services and Standard and Poors reviewed all major aviation credits in North America. NAV CANADA was the only large credit that escaped a downgrade and had its AA+ rating maintained.

In 2001, NAV CANADA received the Eagle Award from the International Air Transport Association (IATA). The company was cited as a unique example of a successful conversion of a government bureaucracy into an efficient corporate operation. The award praised NAV CANADA's productivity improvements, responsiveness to customers, and its success in deploying new technology and innovative procedures to help airlines save fuel and reduce emissions.

Appendix 4 The Management of Safety-related risks in the context of the NATS Public Private Partnership

Perceived Risks	Principal Safeguards *(Changes instituted as a result of the PPP are in italics.)*
1. Potential risks relating to the overall management of safety	
1.1 That safety risks and incidents might not be adequately reported.	There is a range of reporting arrangements involving pilots, air traffic engineers, controllers, NATS management and independent bodies: **Independent Reporting** ■ Mandatory Occurrence Reports. Pilots, engineers and controllers are bound by law to report serious safety-related incidents to the Safety Regulator. ■ Independent Air Proximity Board, which takes reports from pilots or controllers of aircraft "near misses". ■ CHIRP (Confidential Human Factors Incident Reporting Programme). An independent charitable trust to which aviation staff can report incidents in confidence. ■ Overload reports, are filed by controllers when they consider that a situation has occurred during which they experienced excessive workload to the point where safety was, in their view, compromised. **NATS Internal Reporting** ■ Automated safety performance monitoring equipment. NATS controllers have equipment known as short term conflict alert, which warns them when distances between aircraft may become too small unless corrective action is taken. This acts as a safety net while other equipment records incidents when minimum separation distances have been breached, for appropriate action by management. ■ *Since the PPP, there has been more extensive reporting of the most serious risk-bearing,safety incidents to the Board of NATS, including the Government's Partnership Directors. One of the Government's Partnership Directors chairs the Board's Safety Review Committee.* ■ *NATS plans to institute an extra Voluntary Reporting System in 2002 to complement the Mandatory Occurrence Report scheme, and a central database for analysing safety data from 2003.*
1.2. That action may not be taken to reduce the number of flights in a sector to a safe level once a potential overload is discovered.	If NATS management consider that there is a potential risk to safety from the expected number or configuration of aircraft in a particular sector, the normal recourse is to reduce the number of flights entering that sector. This is done by holding flights at UK airports, and contacting the Central Flow Management Unit at Brussels, which will limit the flow of traffic into UK sectors. The controls that ensure that this happens are: ■ The head of the Safety Regulation Group of the Civil Aviation Authority (the "Safety Regulator") is aware of, and audits the process to determine Target Sector Flows. ■ Action can be taken by NATS to stop or reduce the traffic departing from UK airfields. ■ NATS constantly monitors the traffic planned to enter a sector so that flow restrictions can be imposed in a timely manner via the CFMU.
1.3.That the safety regulator may not be sufficiently resourced and empowered to be effective.	The Independent Enquiry into the Paddington Rail crash of 1999 concluded that under-resourcing of the Safety Regulator had been a factor in the background to the incident. The Safety Regulator told us that the Authority had sufficient powers and resources to regulate NATS, in particular: ■ *The Safety Regulator is now fully separated from NATS as a consequence of the PPP.* ■ Safety Inspectors have unrestricted rights of access to Centres, which they continually exercise. ■ The Regulator considers it has sufficient inspectors to exercise the required programme of visits to Air Traffic Control Centres. Formal separation of NATS from the CAA has not changed the way in which the Safety Regulator addresses safety issues in NATS, so additional inspectors are not considered to be required.

Perceived Risks	**Principal Safeguards** *(Changes instituted as a result of the PPP are in italics.)*
1.3. That the safety regulator may not be sufficiently resourced and empowered to be effective *continued*.	■ The Regulator meets regularly with NATS' Directorate of Safety and Quality, and with operational managers. ■ The Safety Regulator has stronger powers than did rail safety regulators - these include the right to enforce its decisions through the Air Navigation Order 2000. ■ The Safety Regulator has powers to prevent new arrangements such as incentives on staff to handle more flights, or punishment of staff involved in incidents, if it considers these would be detrimental to safety. ■ *During 2002/3, the Safety Regulator will conduct audits on the safety performance of NATS En Route, Oceanic and Airport services. Reports will be made to the CAA Board in March 2003, but any urgent issues arising from the PPP would be dealt with in advance.*
2. Potential risks associated with pressures to maximise income	
2.1 That the operator may try to handle more flights than it is safe to do	There are a variety of safeguards against this risk including: ■ The Safety Regulator sees proposals to increase en route or Oceanic capacity. The Safety Regulator is able to audit and if necessary challenge capacity proposals that it considers unsafe. ■ Controllers are highly trained professionals, with ground rules for the number of flights they should be expected to handle. They would be likely to object strongly to moves designed to make them handle excessive traffic levels. ■ There is a legal responsibility on controllers to report overloading via the MOR scheme. Other reporting schemes exist (see 1.1 above) ■ Controllers comply with detailed, fixed procedures to ensure the separation of flights.
2.2 That the operator may try to offer a preferential service to aircraft of certain customers, in a way that could be unsafe.	■ *Clauses in NATS' licence and the Airline Group's partnership agreement with government forbid such discrimination.* ■ Any systematic preference would quickly become apparent to other customers - pilots would notice. The commercial advantages of such discriminatory activity would not be significant unless carried out systematically. ■ Controllers are trained to process aircraft on a "first come, first served" basis, and would be likely to object. The only times this is normally disregarded are to improve flow of traffic (e.g a small aircraft cannot follow close behind a large one, as it would be buffeted by the air disturbance in the wake of the large aircraft), or if two aircraft from the same airline wished to exchange places in a waiting stack. ■ There are standard scales of charges for all customers, recovered through the independent Eurocontrol clearing house.
3. Potential risks associated with attempts to minimise costs	
Capital Costs and Investment	
3.1 That there may be risks to safety if the operator seeks to defer investment.	■ *NATS' Business Plan requires the approval of Shareholders and the CAA in respect of form, scope and level of detail.*

Perceived Risks	**Principal Safeguards** *(Changes instituted as a result of the PPP are in italics.)*
3.1 That there may be risks to safety if the operator seeks to defer investment *continued*	■ Older and less reliable equipment will be limited in terms of the number of aircraft movements it can process, thereby restricting NATS' income in the long term. Therefore the benefits of deferring investment are largely short-term.
3.2 That the operator may seek to reduce investment	*Overall NATS' draft business plan for 2002 schedules 21 per cent of total capital investment for the development of service and safety for the next ten years, some £188 million. Investment safety projects include:* ■ *Further "Safety net" systems based at Area Control Centres or on aircraft, to warn of the possibility of collisions.* ■ *Automation of Traffic Control functions to reduce the possibility of human error.* Again, cancellation of safety-supporting investment would have a short-term financial benefit, but in the longer term would be likely to mean a stagnation in capacity rather than reduced levels of safety.
3.3 That the operator might try to rush in new investment before it is fully ready.	■ Any proposed changes to NATS' equipment or procedures has to be accompanied by a Safety Case, which must be approved by the safety regulator. Such Safety Cases should show a systematic approach to risk management, and state how risks will be managed in the new environment
Operating costs	
3.4. That the operator might seek to reduce the number of controllers	■ *NATS' Business Plan shows that they intend to increase the number of operational controllers by over 13 per cent over the next 10 years. Any reduction in levels per shift of operational controllers would require the safety regulator's approval, and would probably lead to a reduction in NATS' handling capacity.*
3.5.That proposed reductions in the Engineering capability of NATS might detract from reliability of systems	*In its 2002 business plan, NATS envisages substantial cuts in engineering staff in four tranches over the next 10 years.* ■ *NATS will inform the safety regulator of any proposed cuts through a formal process and will have to show how it proposes to manage those aspects of the business so that safety will not be compromised by a reduction in engineering capacity. The regulator will be able to challenge the process.*
3.6. That reduced numbers of Air Traffic Assistants might have implications for safety	NATS plans to reduce significantly the number of its Air Traffic Assistants over the next 10 years. These staff provide support to controllers. ■ Any significant reduction in the number of assistants would require the approval of the safety regulator.
3.7 That measures to increase the rate at which new controllers are qualified might have implications for safety	*NATS has proposed reducing the average time a trainee takes to his/her first validation by 20 per cent . Once a controller is validated on a particular sector, he/she can work unsupervised. NATS also hopes to be able to improve the success rate for testing for the first validation. NATS also plans to improve the pass rate from its College of Air Traffic Control from 70 per cent to 85 per cent within two years.* ■ The safety regulator will gain assurance through the College assessment and verification process that standards are not allowed to decline. Additionally, the safety regulator oversees training and initial competence examinations at all ATC units and maintains ongoing oversight of controller competence on at least an annual basis. ■ *NATS has proposed the use of non-UK instructors.* The safety regulator has insisted that NATS put in place processes which deliver assurance on the levels of instructor competence whatever their background. Similarly, if NATS wished to employ non-UK controllers on an operational basis, the safety regulator would first decide on an individual basis what level of additional training such controllers might require before taking up operational posts
3.8. That more flexible working hours for controllers might have implications for safety	■ *NATS has proposed changes to controllers' working hours to make them more flexible. Any changes that would take the hours worked by ATCOs outside of the requirements laid down by CAA require the safety regulator's approval.*

Source: National Audit Office and the Civil Aviation Authority.

Appendix 5 The Board of NATS

Executive Directors

Richard Everitt - Chief Executive Officer. Mr Everitt was formerly Group Planning and Strategy Director of BAA plc, the operator of most major UK airports. He led BAA's Group on safety and security and was also responsible for BAA's role in all aspects of aviation policy and development, including the Heathrow terminal five proposals.

Colin Chisholm - Chief Operating Officer. Mr Chisholm was Chief Executive of NATS prior to the PPP and is an air traffic controller by background having served in a wide variety of operational and HQ posts in NATS.

Nigel Fotherby - Finance Director. Mr Fotherby joined NATS in October 1999 as Finance Director. He previously worked for Lex Service plc as Finance Director of its retail group and then for BT Cellnet, where he was Deputy Finance Director.

Non Executive Directors

Dr Chris Gibson Smith. Non-Executive Chairman: Dr Gibson Smith has academic qualifications in Geology, Geochemistry and Business. He worked for the BP Group in many roles from 1970, rising to become Group Managing Director in 1997. He is also a non-executive director of Lloyds TSB, Powergen and Arts and Business Services Ltd.

Partnership Directors nominated by Government

Bill Semple. After service in the Royal Air Force he joined NATS in 1965 and worked in progressively senior controller roles until 1978. He then worked in Airport management. In 1987 he rejoined NATS as Director of Civil Air Traffic Operations & Airport Services. From 1990 to 1997 he was responsible for all NATS' operational activities, first as Director General Air Traffic Operations and then as Chief Operating Officer. He was Chief Executive of NATS from 1997 to Autumn 2000, then non-executive Deputy Chairman to July 2001.

Stephen Pettit. He began his career with British Petroleum, where he held various roles both in the UK and overseas. He rose to be Chief Executive of the Petrochemicals Division of BP Chemicals, a role which required the management of commercial, manufacturing, people and safety issues. He joined Cable & Wireless in 1994 as Managing Director for Europe and was made a main Board director responsible for Europe and Mobile in September 1995. He then became Executive Director, Global Businesses in 1997, before taking on the role of Executive Director, Corporate Development in 1999. He holds a number of non-executive directorships in several high technology and financial service companies.

Clive Brooke (Lord Brooke of Alverthorpe) is a working Labour Peer. Since December 1999 he has been a member of the House of Lords European Union Select Committee and Chair of its sub-committee on energy, industry and transport. He also undertakes some business consultancy work, with a variety of organisations. He is a member of the Pensions Compensation Board.

He spent the early years of his career in tax collection at the Inland Revenue. He worked for the Inland Revenue Staff Federation for 30 years, holding posts as Assistant Secretary, Deputy General Secretary, and, from 1988 to 1995, General Secretary. He was a member of the TUC General Council and Executive Committee from 1989 to 1996. From 1996 he became Joint General Secretary of the Public Services Tax and Commerce Union. He stood down from this post in 1998 to combine consultancy and duties as a Peer.

Airline Group appointees

Danny Bernstein - Managing Director, Monarch Airlines

Mike Lee - Chief Executive, Airtours International Airways

Silla Maizey - Procurement Director, British Airways

Nigel Turner - Chief Financial Officer, Bmi British Midland

Representative of the International Air Transport Association

Pierre Jeanniot, Director General, IATA

Appendix 6

Key recommendations from the NAO report on Maximising the benefits of defence equipment co-operation (March 2001)[5]

We commend the Department's actions in taking forward the Capability Management initiative and endorse its intention to encourage partners to discuss opportunities for co-operation on the basis of future capability needs rather than specific requirements.

We recommend that the Department:

- analyses the factors which have contributed to the technological and financial success, or otherwise, of co-operative research programmes and learns the lessons so that future arrangements are identified, established and undertaken efficiently;
- completes its planned review of the methodology used to assess the benefits of co-operative defence research programmes as quickly as possible and explores the potential to augment the database with information on the Department's expectations when it commits to co-operative research and the benefits of other forms of defence research co-operation;
- in line with the intentions underpinning the agreements reached with European and United States partners;
  - enhances decision-making on where to concentrate international defence research effort and where to rely on mutual interdependence with partner nations by ensuring that plans to include a more clearly defined international dimension to the "Towers of Excellence" model are taken forward. [This model recognises that the department cannot afford to fund world-class research across the complete defence technology spectrum];
  - ensures that the potential opportunities to rationalise and integrate the various multilateral research forums are taken full advantage of;
  - encourages the co-operative use of research and testing facilities and ensures that in commissioning new facilities or modernising existing ones, full consideration is given to the scope for co-operation.

We recommend that the Department works with its partners and OCCAR[6]:

- to identify common success factors in previous defence equipment co-operation;
- to develop performance measures to ensure that OCCAR is able to demonstrate it is providing cost, timescale and operational benefits compared with past, or alternative, co-operative arrangements;
- to monitor implementation of the principle of global balancing to ensure that worksharing arrangements do not impose cost and timescale penalties on individual equipment programmes;
- to assist in developing an equivalent of the Department's Acquisition Management System to underpin the programme management procedures which OCCAR have already produced. Such a system supported with suitable training will help to ensure that the principles already agreed are successfully implemented;
- ensure the responsibilities of the OCCAR Executive Administration, Programme Offices and nations are clearly delineated to allow the agency to function as proposed.

We recommend that on programmes which fall outside the OCCAR umbrella, the Department works with partners to:

- learn from past experience to identify common success factors in defence equipment co-operation;
- build on the discussions which have already taken place to translate the Smart Acquisition principles into working practices which will bring about continuous improvement in the arrangements for executing both existing and new international co-operative programmes; and
- consider opportunities for co-operative support at an early point in the equipment lifecycle.

5 HC 300, Parliamentary Session 2000-01. Other, earlier, NAO Reports have focused on individual collaborative projects, such as Eurofighter.

6 OCCAR is the Organisation Conjointe de Cooperation en matière d'Armement. It is a four nation (Germany, France, Italy, UK) armaments co-operation agency.

We recommend that the Department:

- ensures that the objectives set for the Defence Procurement Agency and Integrated Project Team Leaders responsible for delivering programmes against defined cost, timescale and performance parameters fully reflect the extra complexity and challenges which co-operative programmes often pose;
- from the outset of the decision-making process, continues to work closely with other government departments and industry to ensure that all factors affecting decisions on whether or not to co-operate are analysed rigorously with the risks to the defence vote and the full range of anticipated beneficial outcomes quantified to the greatest extent possible;
- continues to work closely with other government departments to establish mechanisms to assess the achievement of all the beneficial outcomes for the United Kingdom as a whole, anticipated at the time decisions to commit to co-operative programmes are made.