2 Conclusions

2.1. In this inquiry we are concerned with the proposed merger of GEC and VSEL, a company incorporated in the UK. We are required by the first question in our terms of reference (see Appendix 2.1) to investigate and report whether arrangements are in progress or contemplation which, if carried into effect, will result in the creation of a merger situation qualifying for investigation, as defined in section 64(8) of the Fair Trading Act 1973 (the Act), in that enterprises carried on by or under the control of VSEL will cease to be distinct from enterprises carried on by or under the control of GEC. The reference provides that, if we find the test in section 64(1)*(b)* of the Act (the assets test) or the alternative test in section 64(1)*(a)* (the market share test) satisfied, we shall exclude the other from our consideration.

2.2. Section 67 of the Act provides for the determination of whether the assets test is satisfied. As is apparent from paragraph 3.55, the value of the assets to be taken over (ie those of VSEL) exceeds £70 million, and the test in section 64(1)*(b)* of the Act is thus satisfied.

2.3. GEC announced an offer to acquire VSEL on 1 November 1994. The offer lapsed automatically on being referred to the MMC. GEC has confirmed to us that, if it is cleared to bid again for VSEL, it is its present intention to do so. We conclude that arrangements are in progress or contemplation by GEC which if carried into effect will result in the creation of a merger situation qualifying for investigation.

2.4. In the period 1992/93 some discussions were held between BAe and GEC about the possible merger of their naval defence activities, together with those of VSEL. There were also some discussions between the parties in 1994, in which BAe informed GEC of its interest in acquiring VSEL, but the parties differ on whether these discussions took place before or after the announcement by VSEL on 29 September that it had received approaches that might lead to a bid. They agree that, following BAe's Stock Exchange announcement on 4 October 1994 that it was in discussion with VSEL, meetings between GEC and BAe were held during which GEC suggested that the two companies should consider a joint offer for VSEL. A proposal for a joint venture in naval systems which would encompass the whole of VSEL was also discussed. BAe told us that it had decided almost immediately not to proceed with these discussions. Subsequently the GEC offer described in the preceding paragraph was made.

2.5. In view of these earlier contacts, we asked GEC and British Aerospace Public Limited Company (BAe) whether each currently had in contemplation arrangements with the other for any kind of joint venture concerning VSEL or YSL, the warship-building yard owned by GEC. GEC stated that no such arrangement with BAe was contemplated, although it would be obliged to consider the position if BAe returned to it to pursue the possibility of a joint bid for VSEL or a joint venture. BAe made clear that it had not ruled out the possibility of a joint venture with GEC either if both bids were cleared or if either it or GEC were successful in bidding for VSEL. It did not appear to us that these statements of the companies' positions supported the conclusion that, for the purposes of the Act, arrangements for such a joint bid or joint venture were in progress or contemplation. Moreover, if firm proposals were to be made for such a joint venture it appears to us that there would then be a new merger situation qualifying for investigation.

2.6. As the proposed arrangements described in paragraph 2.3 have not been carried into effect, the second question in our terms of reference relating to the actual results of the arrangements does not require an answer. We have now to consider the third question in our terms of reference, whether the creation of the merger situation may be expected to operate against the public interest.

2.7. The proposed merger has a Community dimension for the purposes of the EC Merger Control Regulation.[1] As indicated in the preamble to the terms of reference for this inquiry (see Appendix 2.1), on 2 November 1994 Her Majesty's Government took measures under Article 223(1)*(b)* of the EC Treaty[2] to the effect that GEC should not notify the proposed merger to the EC Commission under that Regulation in so far as the transaction related to military activities. Accordingly the EC Commission examined under that Regulation only those aspects of the proposed merger relating to non-military activities and cleared them in a decision communicated to GEC on 7 December 1994.

2.8. The proposed merger was referred to the MMC by the Secretary of State for Trade and Industry on the same date, 7 December 1994. This is the first occasion on which the Secretary of State has referred a merger with a Community dimension for the purposes of the EC Merger Control Regulation to the MMC by virtue of the provisions of Article 223.

2.9. In our consideration of the public interest issues we have taken account of the measures taken by Her Majesty's Government and the decision of the EC Commission and have confined our consideration to those aspects of the proposed merger which relate to military activities; we refer to non-military activities of the companies concerned only to the extent necessary for the purpose of our conclusions on the aspects relating to military activities.

The companies involved

2.10. VSEL was established in 1986, when parts of British Shipbuilders were privatized. Its activities are concentrated at Barrow-in-Furness which, following the closure of VSEL's Cammell Laird (CL) yard, is the only UK shipyard now operational that has a submarine- building facility and the only one capable (with modest investment) of building surface warships over 7,000 tonnes. Submarines have been built at Barrow for many years and have been the only warships produced there over the last decade, but VSEL is keen to get back into supplying surface ships. Two years ago it secured a contract as prime contractor for a large surface vessel, the Landing Platform for Helicopters (LPH), and is bidding to construct either one, or two, Landing Platform Dock (LPD) assault ships (see paragraph 2.18). While submarine construction is dominant VSEL also produces howitzers and ship-mounted guns. Over 95 per cent of VSEL's business relates to these military activities, with a turnover in 1994 of just over £450 million; its non-military activities are limited to the supply of small amounts of equipment for the oil and gas industry and of consultancy and engineering services in these sectors.

2.11. GEC is an industrial group operating world-wide with total sales in 1994 of £9.5 billion, 70 per cent of which were to overseas customers. Its interests are grouped in four major divisions-electronic systems (including defence applications), power systems, telecommunications and industrial (covering a wide range of activities, including electronic components and other industrial apparatus that may be used in defence production).

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[1] Council Regulation (EEC) 4064/89 on the control of concentrations between undertakings.

[2] Article 223(1)*(b)* provides that any member state may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the common market regarding products which are not intended for specifically military purposes.

2.12. GEC's defence interests are mainly located within GEC-Marconi Ltd (GEC-Marconi) which combined GEC's existing defence interests with its Plessey and Ferranti mergers. GEC-Marconi contributed 28 per cent to GEC sales and 37 per cent to its profits in the year ended March 1994 but, since other divisions (in particular, the power systems joint venture company, GEC-Alsthom NV) also have defence-related sales, these figures somewhat understate the contribution of defence to GEC activities. The naval businesses are largely within GEC-Marconi Naval Systems Ltd (GMNS). YSL is a direct subsidiary of GEC but for management purposes is grouped with GMNS.

2.13. YSL is a naval yard located on the Clyde, and engaged solely in the construction of frigates. It is currently constructing three Type 23 frigates for the MoD and two light frigates for the Royal Malaysian Navy. GEC, with BAe and VT, a smaller shipbuilder based at Southampton, represents the UK in the tripartite joint venture with France and Italy responsible for the design of the CNGF, which will be a key part of the MoD's naval procurement in the first decade of the next century. YSL has been chosen to construct the UK first-of-class vessel. YSL can build surface ships of up to 7,000 tonnes displacement but substantial investment would be needed for it to build larger ships. It has a mothballed facility to build GRP hulls. GMNS supplies a wide range of electronic systems and associated equipment: ship and submarine combat management systems, electronic warfare, sonar, radar and underwater weapons systems; and is the UK sole provider (as prime contractor) of torpedoes. GEC companies are also able to provide a range of components for defence equipment.

2.14. In our consideration of the proposed merger, so far as it relates to military activities, we have examined first the effects on the supply of warships, where GEC and VSEL each possesses one of the three remaining warship-building yards. We then examine other aspects related to warship supply (ie potential effects on subcontractors, on exports and on the future of the shipyards) and effects on armaments.

UK warship supply

2.15. The market for warships has a number of unusual features. There is a single UK buyer of warships, the MoD, and only a few suppliers. It is stated government policy to buy warships only from shipbuilders in the UK (see paragraph 6.1). The business moreover is lumpy, with large orders placed infrequently. Planning horizons for a new requirement are distant, and a period of 15 years may elapse from initial concept studies to the acceptance of the first completed ship. A single order may provide work for three or four years for the shipbuilder. To keep down prices the MoD has increasingly sought tenders for batches of ships to be built by a single supplier instead of ordering ships singly. Success or failure on a single bid can have a major effect on a supplier's viability; Swan Hunter (SH), for example, cited its failure to get the LPH contract in 1993 as a major contributory factor to its going into receivership. The end of the Cold War has led to substantial reductions in the size of the Royal Navy and in the expected orders for new ships. This, together with productivity improvements, has led to reductions over the last five years in the total UK workforce engaged in building warships from 20,000 to about 9,000; of these about 6,500 are currently employed on MoD orders.

2.16. The recent closure of SH has left only three companies, YSL, VSEL and VT, as suppliers of warships. The facilities at VSEL and YSL have been briefly described in paragraphs 2.10 and 2.13 respectively. VT is based at Woolston near Southampton with a second yard at Portchester. It can assemble a single steel ship of up to about 6,500 tonnes at a time and has a GRP facility where two hulls can be moulded concurrently. Since 1980 it has had a virtually continuous flow of work producing GRP vessels for the MoD and for export. Since 1992 it has secured export orders for two steel-built corvettes and four patrol craft which are currently under construction.

2.17. None of these three yards currently has the operational facilities to build the complete range of ships the MoD may require. VSEL is the most fully equipped but lacks a facility to produce GRP ships and, as noted in paragraph 2.10, would need some modest investment in order to produce larger surface ships.

2.18. The main categories of ship for which we are told by the MoD that there is likely to be a continuing requirement, with the expectation, therefore, of further orders, are:

- nuclear submarines with a strategic missile capability, of which two Tridents[1] are currently under construction by VSEL;

- nuclear hunter killer submarines, currently the Swiftsure and Trafalgar classes. A tender invitation for three to five B2TC submarines (for an initial programme of three plus options on two more) has been issued and responses are due in June. Looking ahead a new design is currently under consideration and first orders might be placed in 2007;

- aircraft carriers, for which replacements may be required, and orders might be placed, in the first decade of the next century;

- LPD assault ships, to carry and support amphibious landings of troops and their equipment. VSEL has been asked to submit a `single source' tender for one, or for two, of these ships;

- frigates for anti-aircraft warfare and for anti-submarine warfare. Three Type 23s are currently under construction by YSL and the final batch of three is currently out to tender. Design work has started on the CNGF to be procured jointly by the UK, France and Italy, but with each country constructing its own first-of-class ship. These frigates are intended to enter service from the turn of the century. On present plans the UK will order 12 in all;

- larger support ships, which include LPHs, one of which is currently under construction by VSEL, Landing Support Logistic (LSL) ships, and large auxiliary ships, including Auxiliary Oiler Replenishment (AOR) ships and the less versatile Auxiliary Oiler (AO) ships; orders for two of the latter are likely to be placed in 1997/98;

- minesweepers and minehunters; these are GRP ships, most of which have been supplied by VT which received in 1994 an order for seven minehunters to be delivered over the period 1998 to 2001;

- survey ships (OSVs), of which one has recently been ordered from BAeSEMA as prime contractor, to be built at Appledore Shipbuilders Ltd (ASL), a commercial yard; and

- patrol ships and craft of various types, ranging from 50 to 1,500 tonnes.

2.19. As indicated in the descriptions of the individual yards, the types of work they have carried out since they were returned to private ownership in 1985 to 1987 have been different. VSEL has concentrated on building nuclear- and diesel-powered submarines, and is currently building the last two of four submarines in the Trident programme. YSL has built seven Type 23 frigates for the Royal Navy and is now building three more, and two smaller frigates for export. VT has built smaller corvettes and missile boats, all for export, GRP mine counter-measure vessels and single role minehunters for the MoD; and some minehunters for export.

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[1] Vanguard class submarines carrying Trident missiles.

2.20. For reasons set out more fully in paragraphs 4.20 to 4.25, commercial shipbuilding and warship-building are traditionally carried out in separate facilities; commercial standards differ substantially from the full naval standards required for combat ships and different techniques and organization are required. However, revised commercial standards and the possibility of building some support ships to less than full naval standards have together created an opportunity for commercial yards to play a role in providing some ships for the Royal Navy. The requirement for the LPH is for a vessel built to a mixture of commercial and naval standards and the hull is being constructed at the Clydeside yard of Kvaerner Govan Ltd (KG) with technical assistance from VSEL. As already noted, ASL is also to construct an OSV for the MoD. The MoD has drawn our attention to the possibility of further opportunities for the involvement of commercial yards in constructing ships not required to operate in combat conditions. In addition, a team led by GEC is investigating the possibility of building the B2TC submarines outside a naval shipyard.

2.21. The modern warship can be characterized as a platform on which is integrated a range of increasingly sophisticated systems (weapons, communications, electronic warfare systems, sensors and decoys), usually provided by subcontractors, which together form the combat system. The testing of these systems and their compatibility, their integration into the hull, and the provision of the powerful combat management system through which all the information provided by the systems and other incoming information can be handled by the captain and crew, has become an increasingly important task and is accounting for an increasing proportion of the total cost of a warship. For our purposes, therefore, we have distinguished three important aspects of warship-building:

- the prime contractor role (until recently in effect carried out by the MoD);

- the ship construction task (essentially the supply of the hull, the propulsion system and services); and

- the supply of combat systems (and the combat management system).

2.22. Over the last 15 years there have been major shifts in the MoD's defence procurement arrangements which have achieved substantial savings. Cost-plus contracts have been replaced by the widespread use of firm or fixed price contracts (see paragraph 4.32). Where possible these are let by competitive tender but where competitive procurement is not available the MoD will still seek a fixed price based on access to detailed information about costs and comparable work elsewhere. From the mid-1980s, as part of its drive to contain costs, the MoD has been moving away from the arrangements under which it designed the ship and itself procured and supplied some of the main systems.[1] Before these changes began the shipbuilder's task as lead contractor was to produce detailed construction drawings, to build the ship with its propulsion system and to integrate those systems and equipment procured and supplied by the MoD. As much responsibility as possible was delegated to the shipbuilder but the ultimate risk lay with the MoD. VSEL, YSL and VT have all carried out this task in the past and it is essentially the role VSEL is carrying out for the Trident submarines it is building.

2.23. Under the new arrangements the MoD seeks to appoint a prime contractor responsible for supplying a complete working product to a price. The prime contractor is thus responsible for procuring and integrating all systems which are included in the contract, for guaranteeing their performance, and for providing support for that performance for a specified number of years. For new products, for example the CNGF, the prime contractor may also be responsible for producing the design to meet the MoD's requirements. Prime contracting has operated for some years for

[1]These systems were usually provided as `free issue' government equipment or government-furnished equipment (GFE).

aircraft and avionics but it has only recently been adopted in warship-building, in consequence of the changing role of the MoD described in the previous paragraph. It is likely that the MoD will always retain a voice in the selection of weapons and major systems, so that the prime contractor is unlikely ever to have a completely free hand in deciding how to deliver the requirement. Both the MoD and GEC, however, made clear that the prime contractor's greater assumption of risk means that it must have a greater degree of discretion and choice in deciding how to carry out its responsibilities.

2.24. Two aspects of the prime contractor role described above should be distinguished. First, the prime contractor enters into the contract, thus assuming the overall risk on it and the responsibility for successful systems integration. Second, the prime contractor is responsible for the initial assessment and subsequent management of that risk (including the selection of subcontractors where discretion to do so has been passed to it) and for the provision of the technical expertise to manage the integration task. In most cases the prime contractor will itself undertake both aspects of the role but sometimes subcontractors will provide some or all of the expertise required for the management of risk and of the integration task. Prime contractors are required for the LPD, Type 23 and B2TC orders which are out to tender; VT, YSL and VSEL are all ready to take on the entire prime contractor role for the Type 23, but VSEL has secured an expert input on risk management and combat systems integration from a US firm, Loral Aerospace Systems Integration Corporation (Loral ASIC), in order to undertake the more challenging responsibility of prime contractor for the B2TC first-of-class.

2.25. The development of prime contracting from the earlier MoD arrangements under which the shipbuilder was designated as the lead contractor has meant that the owner of the hull-building capacity generally tenders for the prime contract. Thus, where the shipbuilders mentioned in the preceding paragraph are bidding for the orders listed there, it is as prime contractors. It is possible, however, for these two functions to be split. Thus, although BAe has no hull-building capacity, BAeSEMA has recently been appointed prime contractor for the survey ship to be built by ASL. And, although GEC-Marconi has no submarine-building capacity, it is leading the team preparing the alternative bid for the B2TC contract, which envisages that the submarines will be assembled in a non-traditional yard. There are differing views on whether a prime contractor needs to own hull-building facilities to be fully effective. GEC considers that it is not necessary if the prime contractor has access to the necessary design and construction facilities, either through teaming or subcontracting arrangements. The MoD told us that a prime contractor does not have to own a yard but must demonstrate assured access to one to be acceptable. BAe, however, told us that without ownership of a yard it would not expect to be able to establish itself as a fully credible prime contractor for the whole range of Royal Navy contracts or in export markets.

Competition in warship supply

2.26. The proposed merger would bring under single ownership the two larger of the three existing UK warship-builders. In the light of the relationships described above, we looked first at possible effects of the proposed merger on competition between prime contractors for warship orders (including effects on the ability of firms without their own hull-building capability to act as prime contractors, and effects on the supply of such hull-building capability). We deal in a later section with effects on the procurement of systems from subcontractors.

2.27. The UK market for warships consists of a small number of individual orders, actual and potential. We have, therefore, looked at the effects of the merger in relation to expected orders, examined individually. The Royal Navy's expected future requirements were briefly outlined in paragraph 2.18. Given the time that it takes to procure warships, for some projects (as noted in paragraph 2.15) perhaps 15 years from first formulation of a possible requirement to acceptance of the first in-service ship, we have examined a series of prospective orders covering a longer period than usual in a merger inquiry. These range from contracts currently out to tender, through projects identified in the MoD's forward programme, for some of which design work or other preparatory work is in hand, to those rather less certain prospects where a probable future requirement has been identified. The Royal Navy's aircraft carriers and the nuclear attack submarines fall in this latter group: they are likely to need replacing early in the next century and it appears probable that, while no precise requirement has yet been formulated, and barring some major change of policy, substantial orders can be expected for these ships at some stage after 2005.

2.28. In assessing the potential effects of the proposed merger on competition to supply prime contracting and hull-building services for the future programme, the views of the MoD are of particular relevance. The MoD stressed the importance of the competition introduced into UK defence procurement since the mid-1980s, not only in securing substantial gains for the defence equipment budget from lower prices but in encouraging companies to adopt new attitudes and explore new production and design techniques. These changed attitudes had flowed across into non-competitive procurement. The MoD also assured us that where competitive procurement was not possible it was confident that it had the necessary information, expertise and resources to ensure value for money on such contracts, although it accepted that it could not entirely reproduce the pressures of competition in these cases. The MoD also commented that `the main competition issue raised by the acquisition is the practical effects on the actual prospects for genuine competition to meet [its] planned future requirements' and that `there are circumstances in which [it] will achieve better long-term value for money from a single well-loaded source, with no opportunity of competition, than from two or more underloaded facilities precariously sustained in a series of infrequent “win or die” competitions'.

2.29. We recognize that the MoD is an experienced and competent purchasing authority. The National Audit Office (NAO), in a wide-ranging report on MoD procurement procedures published in 1994,[1] drew attention to the progress made by the MoD with measures to reduce procurement costs. The NAO noted that competition remained central to the policy and that the MoD considered competition had reduced the cost of procurement, perhaps by £1 billion a year on a total defence budget of £10 billion. The NAO also drew attention to the MoD's drive to control the cost of non-competitive contracts through the application of its `no acceptable price- no contract' (NAPNOC) regime under which a contract is placed only when the price reflects what the MoD believes it should cost an efficient contractor to carry out the work. The NAO commented, however, that the MoD was faced with a difficult challenge to improve the quality of data available on which to make these judgments.

2.30. We have noted also in this context the concerns expressed by HM Treasury in its evidence about the difficulties the MoD faces in monitoring non-competitive prime contracts, both in terms of the expertise required and the resources needed to secure equitable prices. HM Treasury pointed out that it is also too early to judge whether NAPNOC contracts have turned out to be reasonably priced.

2.31. Looking first at the programme for the immediate future, our inquiry coincided with preparations for several important orders which are likely to be placed in the next 18 months. The MoD is currently seeking tenders for a final batch of three Type 23 frigates and for a major order for B2TC nuclear-powered submarines. The closing dates for submission of these tenders are 13 June and 29 June 1995 respectively. VSEL and GEC told us that they intend to bid for both contracts. VSEL has recently been designated under single tender procedures to supply either one or two LPDs. In the near future there is expected to be a requirement for two AOs. The next major project, already in hand, is the collaborative design by the UK, France and Italy of the CNGF. GMNS is leading the UK designated team of GEC, BAe and VT responsible for co-ordinating the

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[1] *Ministry of Defence: Defence Procurement in the 1990s*, HC 390, May 1994.

UK contribution to the design. If the project goes ahead, and subject to agreement on price, YSL will build the UK first-of-class but the 11 follow-on vessels currently planned will be open to competition from other UK suppliers. Orders for these will be placed, on present plans, over the period from 2000 to 2005. Later, but not yet in the MoD's forward programme, there are likely to be orders for a new design of nuclear attack submarine and for aircraft carriers. However, while initial design studies may start within the next few years for these vessels, orders are unlikely to be placed until the period after 2005 and, as with the CNGF, they might involve some overseas collaboration.

Type 23 frigates

2.32. The Type 23 competition for which tenders now have to be submitted by 13 June (the date having been postponed by 12 weeks during our inquiry) is for the final batch of three frigates in this class, with an expected total value of about £[*] million, excluding weapons.

2.33. VSEL, YSL and VT are all expected to bid to be prime contractors for this order. YSL has built 7 of the 11 frigates so far delivered and is constructing the current batch of three. It has benefited from the `learning curve' in construction and from efficiency improvements, which have been reflected in the fall in price of the ship platforms to the MoD from £[*] million (at 1994/95 prices) for the first ship to £[*] million per ship for the batch now being constructed. Keen competition for the final batch can be expected, however, from VSEL and VT, which are both anxious to win this order. The MoD told us that, because of the maturity of the Type 23 design, it sees little scope for innovative cost reduction, and hence little prospect of a contractor being able to submit a significantly lower bid than for the last batch unless it were prepared to support it from reserves. VSEL told us that it will have to do this if it is to submit a competitive bid and that this is its intention. GEC told us that YSL will submit a fully commercial bid, and not a loss-making one as it did for the last batch of Type 23s.

2.34. We considered whether the proposed merger would affect VSEL's ability to bid for the Type 23, ie whether the proposed merger, if permitted, was likely to take place before the mid-June tender date and, if so, whether VSEL might be prevented by GEC from making a bid. We have been told by BAe, in our parallel inquiry into the proposed merger of VSEL with BAe, that it is BAe's continuing intention, unless some unforeseen development were to occur, to acquire VSEL. Our finding in that inquiry[1] leaves it free to pursue the merger. If, therefore, GEC were also free to bid again for VSEL (as it has said it intends to do), we would not expect VSEL's final ownership to be settled by the tender date, given the requirements of the City Code on Takeovers and Mergers (see Appendix 3.4). We would, therefore, expect VSEL to be able to tender without constraint for the Type 23 frigates. Because this will be a follow-on contract, for which specifications and design features are subject to only minor modification, the MoD thinks it will not itself need to initiate substantial post-tender clarification or to call for `best and final offers'. However, the MoD confirmed that it would be open to GEC to withdraw a VSEL bid or (subject to any other tenderer being given the same opportunity) to attempt to renegotiate it. GEC told us that if it owned VSEL, and VSEL submitted a bid which GEC regarded as commercially unjustifiable, it would wish to discuss it with the MoD and, if it would impose a large loss on GEC, to withdraw it. We think that VSEL, if free to do so, will carry out its intention to put in a bid supported from reserves. We also think that VT, which is a smaller company with smaller resources, is unlikely to run the risk of putting in a heavily loss-making bid. It is likely, therefore, that whether or not the proposed merger with VSEL had taken place before the tender date, the MoD would be deprived of the opportunity to accept a low bid from VSEL and, therefore, would face the possibility of having to pay a higher price for these frigates than if the proposed merger had not taken place.

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[1] *British Aerospace Public Limited Company and VSEL plc: a report on the proposed merger*, Cm 2851, May 1995.

*Figures omitted. See note on page iv.

B2TC

2.35. The forthcoming B2TC order is the largest likely to be placed by the MoD in the 1990s. It has two components. There is the prime contract (worth about £[*] million) for the first three of five submarines (in total expected to cost about £[*] million) in the MoD forward programme (see paragraph 2.18), and there is a prime contract for the management of the programme for procurement of a weapon systems package and other items for the existing Swiftsure and Trafalgar class submarines, to be fitted to those vessels during their mid-life updates in the Royal Dockyards. It is expected that most of the update package will also be adopted for the B2TC-hence the move to place its management with the prime contractor to be chosen to provide the B2TC submarines. Tenders from potential prime contractors are due by 29 June 1995, at which time we expect that, if GEC were free to bid for VSEL, the ownership of VSEL would still be undecided (see the preceding paragraph). VSEL owns the only yard which currently builds submarines and for recent submarine contracts has been designated without competition. On this occasion the MoD has stimulated competition at the prime contract level: it has persuaded GEC to form a team with Rolls-Royce Nuclear Engineering Ltd (Rolls-Royce), British Maritime Technology Group Ltd (BMT) (an independent design consultancy) and AMEC Plc (AMEC) (with oil-rig construction experience), to explore alternative technology for building the submarines. The MoD is meeting £[*] million of the pre-bid development costs. (VSEL is in a position to recover its pre-bid costs through its arrangements for recovering overhead costs from the MoD.) In order to compete as a prime contractor for the B2TC contract, VSEL has employed Loral ASIC, a US firm with prime contractor experience in other areas, to enhance its system integration, risk management and project management skills.

2.36. The MoD told us that it expects the GEC team to provide credible competition to VSEL in terms of the technical content and feasibility of its bid; other evidence has expressed some doubts about whether the GEC team could provide fully effective competition. Many witnesses believed that the VSEL nuclear submarine-building capability is a unique UK asset which will have to be maintained and thus that VSEL is bound to secure the contract. The MoD, however, told us that, were the B2TC contract to be awarded to the GEC team, it would be ready to accept the closure of the VSEL yard after the Trident programme was completed. VSEL itself is confident of its competitive strength and told us that it proposes to quote to cover full overheads and normal profit margins.

2.37. The evidence we have received from the four members of the GEC team and from the MoD suggests that the GEC team will be able to produce a tender proposal that is technically credible, although the MoD does not know whether the team is likely to provide an effective alternative on price to the VSEL bid. If, contrary to our expectation, GEC were able to complete the proposed acquisition of VSEL before 29 June, we think pressure from the MoD and strong encouragement from GEC's partner, Rolls-Royce (which would have a larger share of the GEC team bid and thus stand to gain more from it if successful than from its role in the VSEL bid) would make it difficult for GEC to abandon a bid. Nor do we consider that there would be much scope at that late stage for altering the components of either bid.

2.38. However, if GEC were to acquire VSEL, either before or after 29 June, GEC would own one bidder and be by far the largest partner in the other. The MoD told us that in this kind of competition, where the tenders are expected to develop radically different ways of meeting the requirement and the initial solutions offered are unlikely to comply fully with the tender requirements, an extended period of discussion with the parties is necessary. The MoD programme allows a year from the receipt of tenders for such discussions and obtaining approval to place an order.

*Figures omitted. See note on page iv.

2.39. We note that in November 1994, as part of the conditions to be observed in relation to the B2TC tenders if the proposed merger went ahead, GEC committed itself to offer stipulated ceiling prices for the initial batch of three submarines and for the optional fourth and fifth vessels, and undertook to do its best to persuade any joint venture which might be formed for the B2TC to accept them. GEC said that these prices reflected the early stage of the work completed on the B2TC tender and the MoD told us that, although binding as a ceiling, it was far too early to regard them as realistic and that it would expect final prices to be lower. We think that, if effective competition between the two bid teams were maintained, the ceiling prices offered by GEC would not be relevant in the negotiations to achieve an acceptable price to the MoD.

2.40. The MoD has secured assurances from GEC that, if its bid for VSEL were successful, it would maintain the two separate B2TC bid teams for up to six months after the tender return date, and the MoD told us that it would press for a longer period if that were necessary. The MoD also thought that the members of GEC's team would be able to exercise pressure on GEC to maintain a fully competitive alternative bid.

2.41. Even if the two bid teams are maintained for a specified period they will both be run by GEC. The MoD will have to embark on detailed discussions with each team to examine the bid and explore adjustments to it, as outlined in paragraph 2.38, which will all need to be evaluated and costed.

2.42. The MoD has asked VSEL and the GEC team for detailed information about the make-up of the tenders, including `make-or-buy' plans for items costing £50,000 or more. GEC has agreed with the MoD that, if the proposed merger takes place, the MoD will have full visibility of the make-up of both bids to assist evaluation. The MoD envisages that, if necessary, it will have representation on the bid teams to ensure that the rules are followed, although it recognizes that it may not be possible to keep track of all aspects of the revised bid proposals and that it may be difficult to ascertain the validity of the tender price.

2.43. As noted in paragraph 2.40, GEC has agreed, if it acquires VSEL, to maintain the two separate bid teams for up to six months. While `Chinese walls' of this kind may formally be maintained it will be impossible to ensure during these complex negotiations that each team reacts with the same willingness to offer the best possible deal for the MoD on every aspect of the proposal that it would if in head-to-head competition. Perhaps more important, with a contract of this size, senior management of GEC and Rolls-Royce, almost certainly at Board level, will need to review and endorse any significant changes and particularly to underwrite decisions on the risk element to be undertaken in any revised bid. This in particular is likely to be an area outwith any scrutiny by MoD staff. We note that the MMC examined a similar issue in relation to the maintenance of such barriers between different units of British Gas[1] and concluded that the problems of conflict of interest at Board level could not be overcome by the establishment of `Chinese walls' at a lower level. Two members of the Group disagree with this assessment for the reasons set out in their note of dissent at the end of this chapter.

2.44. We are also doubtful whether the members of GEC's team will be in a position to ensure that rigorous competition continues throughout the post-tender period. It is true that Rolls-Royce is playing a larger role in the GEC team bid (where it will supply the complete propulsion system) than in the VSEL bid (where it will only supply the nuclear steam-raising plant). But it is not yet known what element of risk it will bear, whilst BMT and AMEC would be subcontractors without any direct involvement in the contract negotiations.

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[1]*Gas*, Volume 1, Cm 2314, August 1993, paragraphs 2.155 to 2.166.

2.45. Against this background the majority of the Group, while recognizing the arrangements that the MoD has put in place to supervise the post-tender period, consider that the MoD is ultimately likely to achieve a less favourable contract price for the B2TC and to be offered a narrower range of options than would have been available if two wholly independent VSEL and GEC teams had remained. The proposed merger would, therefore, lead to higher prices being paid by the MoD for the B2TC submarines and a proposal offering fewer production and technical innovations than if the proposed merger had not taken place.

LPD

2.46. The LPD project is for one, or for two, ships, estimated to be worth about £[*] million together. VSEL is proposing to bid as prime contractor with the technical support of KG (in a development of their earlier co-operation over the LPH), but in this case the hull is to be built by VSEL. The vessel is too large to be built at the YSL or VT yards, and neither YSL nor VT was able to make arrangements with a hull-builder in order to bid. A factor in this may have been the [*] agreement between VSEL and Kvaerner AS (KG's Norwegian parent company) which runs until [*] (with the possibility of renewal). Tenders for the LPD were originally due on 15 March but the MoD has notified VSEL that competition has proved not to be feasible on this contract and has instructed VSEL to prepare its tender as a non-competitive bid under NAPNOC procedures. The MoD's switch to single source procedures opens the way to negotiations over the price but, whether or not the tender is put in before the future of VSEL is decided, it seems unlikely that the proposed acquisition of VSEL by GEC would add substantially to the MoD's problems in assessing the tender.

CNGF

2.47. GEC-Marconi is leading the UK contribution to the CNGF project and YSL has already been selected to build the UK first-of-class CNGF. The follow-on orders, however, will be opened to competition and the MoD said that it would expect to invite only UK prime contractors to tender. Currently the planned total programme is for 12 ships, with orders for the 11 follow-on ships to be placed from the year 2000 probably in batches of three and two. The timing and number of orders may be altered but this is a substantial programme, worth over £[*] million if it is adhered to; it is thus much the most important surface warship project which is expected during the next decade.

2.48. The proposed merger of VSEL and GEC would bring together two of the main potential competitors for the role of prime contractor for follow-on ships. VT has also indicated a strong interest and the MoD sees it as a credible contractor. But, at 6,500 tonnes, the CNGF would be larger than anything VT has so far built. However, if VT were to secure a contract for one or more of the last batch of Type 23s, this would provide experience with rather larger ships than it is currently building. More important, VT told us that, by using the facilities at both of its yards, it believes it could at best deliver one CNGF vessel every 16 months. This means that, unless the MoD were prepared to double the length of the proposed procurement timetable, which we do not expect, VT would be unable to bid for all the programme.

2.49. For the three impending contracts (Type 23, B2TC and LPD), discussed in the preceding sections, VSEL's arrangements to bid as prime contractor are well advanced and the proposed merger will not, therefore, foreclose any opportunities for other prime contractors to bid using VSEL's hull-building facilities; these opportunities do not at present exist, by virtue of VSEL's current refusal to enter into such arrangements.

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*Details omitted. See note on page iv.

2.50. We considered whether, in relation to the CNGF contract, the proposed merger would foreclose an opportunity for any other company to establish itself as a prime contractor by using VSEL's warship-building facilities. VSEL told us, however, that-for as long as it remains independent-it regards it as essential to act itself as prime contractor for the ships it builds. It said that negotiations on BAe's participation in the VSEL bid for the B2TC foundered on this point. It is true that VSEL has been able to assume full prime contractor responsibility in its B2TC tender only with the support of Loral ASIC to provide the risk assessment skills and systems integration experience needed. However, the CNGF, as a follow-on contract, is likely to be a less challenging task for a prime contractor than the complex B2TC assignment and there is at this stage no reason to suppose that VSEL would be prepared, if still independent, to be involved in any bid except as prime contractor. We think, therefore, that the proposed merger would not materially alter the opportunities for other potential suppliers of prime contracting services to participate in the CNGF programme.

2.51. However, we consider that the proposed merger of VSEL with GEC can be expected to reduce from three to two the number of prime contractors likely to be offering effective competition for the CNGF follow-on contracts. Moreover this figure of two assumes that VT remains as a competitor. As we note later in our discussion of the future of the yards (paragraphs 2.90 to 2.98), there are many uncertainties but we see no reason at the moment to expect that any of the three yards will be closed by the time tenders are sought for the CNGF follow-on ships or that, if a yard were to be closed, it would necessarily be VSEL or YSL. But if VT were itself to close, the proposed merger would have removed any UK competition for these CNGF orders. Even on the assumption that VT does bid as a credible competitor, it is unlikely (see paragraph 2.48) to be able to compete to supply more than about one-half of the ships. The proposed merger can thus be expected to remove a significant potential constraint on the prices YSL would be able to quote for the follow-on CNGF ships. We consider that this will result in the MoD paying higher prices for a majority of the ships than it would if the proposed merger had not taken place and in a loss of potential innovation in production methods that greater competition would have stimulated.

Other ships

2.52. Invitations to tender for the two AOs are expected to be issued in 1996. These ships are likely to be built, in effect, to commercial standards and to be suited to construction at a commercial yard. Harland & Wolff (H&W) and KG would both be well qualified to bid and both could act as prime contractors in their own right, with technical design support if necessary. VSEL, without recent experience of commercial ship design and construction, is unlikely to be able to offer a competitive price. Its proposed acquisition by GEC would, therefore, be unlikely to affect competition for this order.

2.53. So far we have been looking at the effect of the proposed merger on projects that feature in the Royal Navy's forward programme. We have noted in paragraph 2.31 that further ahead substantial orders are likely for aircraft carriers and nuclear submarines and that these might be placed in the period from 2005 onwards. At this distance in time there are inevitably increasing uncertainties about the background against which procurement might take place, for example whether such ships might be procured in collaborative ventures, as with the CNGF, and whether at that stage the policy of buying warships only from UK shipyards will be maintained.

2.54. It is clear that the proposed merger would transfer to GEC the only facilities currently available for the construction of submarines or for surface ships above 7,000 tonnes to full naval standards. It is possible, however, that by then ways may be found of providing alternative facilities. The MoD has drawn our attention to the possibility that competition can be stimulated for future prime contracts through arrangements involving commercial yards, the Royal Dockyards, or even facilities not traditionally used for naval shipbuilding, such as those being devised for the

B2TC. All may be technically feasible, although whether they would be effective in establishing competitive prices is not known. Moreover for a Royal Dockyard to build as well as refit would require substantial investment; this would be unlikely to be undertaken without the firm prospect of sufficient ship orders to justify it.

2.55. We think that, if the proposed merger were not to take place, GEC, with its prime contracting and warship-building experience and as the largest supplier of major systems and equipment, would be in a strong position to put together bids for such longer-term projects with the owners of such hull-building facilities. As a systems supplier, it could be expected to win a major part of the contract. It would therefore be in a better position to manage the total risk in the contract than any other firm that had the necessary skills to act as prime contractor on such a major contract but did not have hull-building facilities or systems to supply. Such a firm would be likely to have a smaller share of the overall contract and thus, for the reasons explained in paragraph 4.43, find it more difficult to assume the risk involved, even if it were able to acquire access to other hull-building facilities.

2.56. It is likely that in the absence of the proposed merger both VSEL and GEC would be able to participate either as prime contractors or as members of consortia in competition for the expected submarines and aircraft carrier orders. The MoD might well want to take advantage of this potential competition at the earlier stage when design requirements were formulated, holding a competition between prospective prime contractors to carry out full development of the design some years before tenders for the ships themselves were sought. The proposed merger would remove an important and technically well-equipped potential contender from such a competition and from the later competition to supply the ships themselves. It would be possible for the MoD to try to create competition but it would be expensive and might not be effective. GEC, through its ownership of the VSEL hull-building facilities and of major systems suppliers, would be a stronger contender in any competition than other potential prime contractors, for the reasons set out in the preceding paragraph. The proposed merger may therefore weaken effective competition for these more distant prospective contracts, and may result in higher prices to the MoD for the ships involved than would be the case in the absence of the proposed merger. There would, too, be some loss of potential innovation in design and production of these ships.

Effects of loss of competition for future warship contracts

2.57. We have given detailed consideration in the preceding paragraphs to the effect that the proposed merger may be expected to have on competition at the prime contractor level on projected UK warship orders. We consider that, although there are some uncertainties about how the various tendering situations might develop, the proposed merger can be expected to lead to the removal as an independent entity of a well-equipped shipbuilder, potentially able to act as prime contractor for most forthcoming orders and thus to a loss of competition in the supply of warships. We recognize the various techniques available to the MoD to secure value for money but we consider, and the MoD has accepted, that these cannot fully replace the downward pressure on prices, and the incentive to seek new solutions both for design and production problems, that is created by competition between prime contractors. We think, therefore, that this loss of competition can be expected to result in the MoD paying higher prices than if the proposed merger had not taken place. Since the defence budget is constrained these increased prices would result in less equipment being bought. In addition, a loss of incentive to innovate can be expected to lead to the loss of design, technical and production improvements that would otherwise be applied to defence equipment. Both consequences would result in a reduction in the resources applied to UK defence, which would be adverse to the public interest.

2.58. For the reasons set out in paragraphs 2.43 to 2.45, and 2.51, we expect these detriments to arise in relation to the procurement of the B2TC submarines and of the follow-on CNGFs. The

B2TC and CNGF contracts are expected to be for such large sums that a comparatively small percentage increase in the tender price could lead to a significant additional cost to the MoD.

2.59. With regard to the other projected orders we have examined, we noted that the overall effect of the merger will be to reduce the number of potential prime contractors for surface warships from three to two. This is at a time when the promotion of competition, to keep down prices at the prime contract level and provide incentive for innovation and design, remains of major importance to the MoD in seeking to utilize effectively its reduced defence budget. Moreover, these two remaining companies, GEC/VSEL and VT, would not be competing on equal terms, since VT has more restricted capacity and smaller financial resources. We are concerned that adverse effects of a similar nature to those described above may arise in relation to the procurement of the further Type 23 frigates and the possible future procurement of aircraft carriers and replacement nuclear attack submarines. Nevertheless in each case there are a number of uncertainties. For the Type 23 frigates these relate primarily to the bid levels and bid strategies of the contenders; for the later vessels they relate to possible developments in the industry and in government policies. For these projected orders we do not consider the evidence sufficient to support an expectation that these adverse effects will occur.

2.60. Two members of the Group dissent from the findings in paragraphs 2.57 and 2.58 for the reasons set out in the note that follows these conclusions.

Systems supply and subcontracting

2.61. Having examined the effects of the proposed merger on competition to supply the MoD's forward programme and other prospective warship orders, we now examine its effects on the supply of systems by subcontractors, in particular the possibility that GEC, in relation to any warship-building contracts for which it became prime contractor as a result of the proposed merger, might favour systems or components produced within its own organization.

2.62. As described in paragraph 2.21, a warship is a platform on which the warship-builder brings together many different systems, almost all supplied by other firms as subcontractors. Elements of these systems are themselves subcontracted, perhaps several times. The subcontractor's role can range from the provision of a complete weapon system to a comparatively small contract for a standard systems component, and the subcontracts themselves can vary in price from several million pounds to a few thousand. There are many interlocking relationships between prime contractors and main subcontractors: rivals for one contract will be working closely together in another. GEC is the prospective UK prime contractor for the CNGF project, with BAe as its principal subcontractor; Rolls-Royce is a member of the GEC team bidding for the B2TC order, and would be VSEL's main subcontractor for the same project; BAe is the prime contractor for the OSV, with GEC as a potential subcontractor; VSEL is the prime contractor for the LPH, with BAe and GEC as systems subcontractors; GEC (through YSL) is building Type 23 frigates, with VSEL as subcontractor for the Mark 8 4.5 Inch gun and other GEC and BAe subsidiaries as systems subcontractors. At the lower levels, of subcontractors to sub-subcontractors, the relationships become progressively more complex.

2.63. The extent to which the MoD oversees the prime contractor's selection of subcontractors depends on the nature of the contract. Where there is competition at prime contract level, the MoD does not involve itself in ensuring competition at the subcontract level. It must be fair and even-handed in its dealings with its own contractors but relationships below that level are essentially a matter for the parties involved. The MoD takes the view that potential prime contractors, when in competition, will seek best value for money from their subcontractors in order to put forward the most competitive bid for the project as a whole. The prime contractor will be held accountable by the MoD for the performance of its subcontractors, and so the responsibility for selecting them must lie with it. Detailed information is provided to the MoD by the prime contractor about the selection procedures it adopts for subcontractors and with some tenders it may be required to provide detailed `make-or-buy' plans (see paragraph 4.110). The MoD does not oversee the tendering processes themselves to ensure that they are fairly conducted. The MoD does, however, need to be satisfied over the quality and performance of subcontracted items and sometimes the supplier may offer it a choice of equipment to be procured, with consequential adjustments to price.

2.64. On the other hand, where the prime contract has not been awarded as a result of effective competition, single tender NAPNOC arrangements will apply (see paragraph 4.33). The MoD will then monitor the subcontract arrangements. It will wish to see `make-or-buy' plans, usually for items costing £50,000 or more, and may require specified parts of the work to be put out to competition and the cost-effectiveness of the prime contractor's proposals to be demonstrated.

2.65. We received evidence from several major systems suppliers expressing concern that the proposed merger would strengthen GEC's position as a warship prime contractor; that it would give it more opportunity to favour its own subsidiaries in the award of subcontracts; and that this would assist it to build up a dominant position in the supply of such equipment. These concerns were linked with the changes that these suppliers saw in the MoD's policies, with moves towards placing responsibility for oversight of subcontracts with the prime contractor, and with the concurrent decline in the numbers of MoD staff engaged on that task. The concerns were more about the future than about existing MoD arrangements. There were also some criticisms of the selection of some GEC subsidiaries' products [*]. We also noted HM Treasury's concerns that the MoD could not guarantee maximum competition at subcontract level.

2.66. The main concerns expressed were not that tendering procedures would not be observed. Some potential subcontractors suggested that, particularly on first-of-class contracts, the prime contractor could use its position to frame the overall design, interfaces and particular configurations in a way which suited supply by its subsidiaries and that this would be difficult to prevent. Interfacing is discussed further in paragraph 4.106. Nor, with the MoD no longer involved in design detail, would it be easy for it to monitor or to challenge the choice of subcontractor when this was made on grounds of design or risk rather than price. There was also concern that, in order to integrate systems, a prime contractor had to work closely with the supplying subcontractor and inevitably would learn a great deal about its business, design approach, and other matters which, without any breach of intellectual property rights, might be passed on within the prime contractor's organization.

2.67. GEC said that these concerns were wholly unfounded. It knew of no complaints by systems suppliers and stated that it always acted on a competitive basis. MoD supervision was close and had not weakened in recent years. Most large systems were in any event from nominated suppliers. GEC agreed that there might be short-term advantage in a prime contractor favouring its own subsidiaries, but argued that this would undermine its position in the longer term. GEC agreed that, with export orders, where the customer was looking to the prime contractor for a package, there was greater scope to influence the choice of supplier. Even here, however, the customer would have clear ideas on its requirement. In all cases the overriding need was for the prime contractor to justify and maintain its reputation by meeting the requirements of the contract to the customer's satisfaction. GEC also drew our attention to the appraisal of competition at the subcontractor level in the MMC report on the BAe-Thomson merger[1] in which, in a similar situation, the MMC concluded, on balance, that the proposed merger would not give rise to adverse effects in so far as subcontracting in the UK was concerned. We discuss this last point at the end of this section, in paragraph 2.83.

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*Details omitted. See note on page iv.

[1]*British Aerospace PLC and Thomson-CSF SA: a report on the proposed merger*, Cm 1416, January 1991.

2.68. The MoD told us that the reorganization that had taken place in the Procurement Executive was intended to leave it equally effective in the future with reduced numbers. The MoD was confident that it would be able to continue to monitor those contracts let non-competitively as effectively as before and that the need to meet the conditions of competitive contracts would put strong pressure on suppliers to choose the most efficient subcontractors. Even for competitive contracts the MoD was likely to acquire a good deal of information about the make-up of a bid and the suppliers to be used; for example, the MoD had asked both VSEL and the GEC consortium for `make or buy' plans for the B2TC, in part to avoid delays if the tendering arrangements did not lead to effective competition and single tendering had to be adopted.

2.69. The extent and complexity of the subcontracting arrangements involved make it difficult to attempt to measure the possible scale of any potential problem, particularly since most of the concerns relate to the future, to the time when the MoD's revised procurement arrangements will have taken effect. As a result of the changes in MoD procurement policies the concerns that were expressed to us, although put in the context of the merger, may arise on any contracts for which GEC is appointed the prime contractor. Only if GEC were to secure new prime contracting opportunities as a result of the proposed merger would a potential for detriment arise in the context of our inquiry.

2.70. It is clear that GEC would acquire prime contractor responsibility for the LPD tender if the proposed merger took place. We would also expect GEC to be certain to acquire a substantial portion of the CNGF follow-on orders because of VT's inability to bid for more than about one-half the programme as at present planned. As a result of the proposed merger GEC would be the potential prime contractor on both the expected B2TC tenders and as a result would be expected to secure the contract. Accordingly we considered subcontracting issues in relation to these contracts.

2.71. In considering these issues we noted that GEC itself had recognized that a problem could exist where the MoD was not involved in overseeing the procurement process. GEC companies would be able to supply a wide range of systems and equipment. For some of these they would be sole sources, or preferred or nominated suppliers. We looked at the position in relation to the circumstances of the prospective prime contracts noting that when it secures the first-of-class contract the prime contractor, being responsible for the specification and interface of the subcontracting requirement, is also well placed to ensure that its subsidiaries secure work on follow-on contracts.

2.72. We looked first at the main systems and equipment which a prime contractor will procure. As described in paragraphs 4.114 to 4.126, for a few of these, for example nuclear steam-raising plant or turbines, there is effectively only one supplier at the moment; in others, such as combat management systems and weapon systems, the MoD is likely to continue to exercise a close oversight over the choices made by the prime contractor. However, we identified several other areas where there are competitive suppliers and where GEC companies would be able to supply all or part of the equipment, including naval gears, optronics, communications, some types of sonar and radar, and electronic warfare systems. The concerns described in paragraphs 2.65 and 2.66 came from suppliers of some of these systems.

2.73. Problems might also arise in relation to smaller contracts at a level below supply of major systems. We therefore looked at information provided by the parties and by the MoD on the proportions of the LPD and the B2TC contracts, currently out to tender, that were likely to be selected by the prime contractor, the proportions that were likely to be put to competition, and the proportions for which GEC companies might compete.

2.74. The MoD hopes that the B2TC contract will result in competitive prime contracts but has said that NAPNOC procedures will apply to the LPD contract. The MoD will continue to specify, or state a preference for, a large amount of equipment for these contracts, particularly for the major systems. In particular, it seems certain that it will select the combat management system and weapons. Its agreement will be needed for other systems proposed by the prime contractor; the move to requiring the prime contractor to take the risk on a contract, however, means that if it selects a subcontractor on its stated appraisal of quality or reliability it will be extremely difficult for the MoD to override the choice, especially if the prime contract has been awarded competitively.

2.75. The MoD estimates that the proportion of the total contract available for competition managed by the prime contractor will be about 25 per cent for the LPD, worth perhaps £[*] million for each ship, and some 90 per cent for the B2TC. As explained in paragraph 2.77, this last figure greatly overstates the amount open to effective competition by systems suppliers.

2.76. As GEC has not bid to be the prime contractor for the LPD, it was unable to provide detailed information on its ability to supply equipment for that contract. On the assumption of a total ship cost of £[*] million it estimated that it would be able to supply up to about [*] per cent of the value, nearly all as a result of competition; however, the contract for the communications system, [*], has already been awarded elsewhere.

2.77. For the B2TC contract, 90 per cent of the value will be formally left to the prime contractor's choice, and the responsibility thus transferred to it. But in practice most of the weapon systems and some other systems for the Swiftsure and Trafalgar updates have already been selected by the MoD and the possibility of the prime contractor suggesting an acceptable alternative solution for the B2TC seems remote. GEC told us that it estimates, on the basis of its own team's proposals, that the proportion of the B2TC submarine contract, including the hull construction, that would be within its control as prime contractor and likely to be put out to competition is about 63 per cent, of which existing GEC companies could, it believes, compete for four percentage points, or perhaps £[*] million worth of business on the first three vessels. VSEL's estimate, in relation to its own bid for the B2TC, of the proportion of the contract which GEC companies could compete to supply is somewhat lower (see paragraph 4.46). This perhaps reflects the innovative strategy of the GEC team's bid.

2.78. The figures in the preceding paragraph are broad estimates. They suggest, however, that, for both the LPD and the B2TC contracts, GEC companies are in a position to compete for a significant amount of subcontract work of substantial value and we would expect the proposed merger to result in a greater proportion of this work going to GEC companies, at the expense of companies that would otherwise have won the order on price or quality. Since neither prime contract would have been awarded under fully competitive conditions, we would expect the prime contract price to be affected and for the MoD to obtain poorer value for money in terms of price or quality.

2.79. For the CNGF follow-on orders, with an established design, it is possible that a higher proportion of the requirement will be for a nominated or preferred supplier and a smaller proportion selected freely by the prime contractor. GEC's position as lead design authority, with YSL as first-of-class shipbuilder, will further place GEC companies in a strong position to secure orders as the nominated or preferred supplier for any follow-on ships YSL builds and, taken with the weakened competition we envisage at prime contractor level for these follow-on ships, can be expected to result in a higher overall price.

2.80. For these later orders, if potential subcontractors have the impression, rightly or wrongly, that they are not likely to be able to secure contracts, they will not be willing to go to the expense of tendering. They will also be unwilling to tender where they fear that the details of the tender will disclose business secrets to a competitor. Any such factors would clearly have to be weighed by the potential subcontractor against the size and potential importance of the contract, to decide whether

*Details omitted. See note on page iv.

the risk was worth taking. On the basis of the concerns expressed to us we expect that some contractors will react in this way. We conclude that this can be expected to lead to a narrower range of alternative products and sources being available for the prime contractor, and the MoD, to select from, and thus in the longer term to the procurement of less satisfactory equipment than might otherwise have been available.

2.81. Where the design element is absent, for example where the subcontractor meets a `build to print' requirement, the discouragement of tenderers will again result in fewer bids being submitted and the prices of such items may be expected to be higher. Where prime contracts have not been let competitively, prices of such components may therefore be expected to be higher than they would otherwise be, leading to higher prices for MoD-procured equipment.

2.82. We conclude that, in relation to the prime contracts which GEC may be expected to acquire, mentioned in paragraph 2.70, the proposed merger may be expected to lead to an increased proportion of subcontract work being secured by GEC subsidiaries and thus to higher prices and a reduced choice of defence equipment, leading to a reduction in the resources applied to UK defence which would be adverse to the public interest.

2.83. We noted that, in relation to the BAe/Thomson proposed merger,[1] the MMC had concluded that, on balance, the merger would not give rise to adverse effects so far as subcontracting in the UK was concerned. But there were some different factors in that case. The guided weapons market was open to competition from foreign suppliers at all levels, which imposed a constraint on prime contractors' behaviour. A factor in the MMC's assessment, too, was the expectation that the merger would lead to additional contracts for the joint venture company and thus to more opportunities for subcontractors. The size of the UK warship programme, and therefore of subcontracting opportunities arising from it, is unaffected by the proposed merger and, as explained below, the prospects of it resulting in additional warship exports is too uncertain to rely on. There was thus no benefit in the present case to be set against the adverse effects we have identified.

2.84. On export contracts the prime contractor is likely to have greater scope to select subcontractors, although the need to quote a competitive price will act as a constraint. A great deal will depend on the purchasing government's preferences for the weapons and systems to be supplied. The merger will affect the position only if export orders for VSEL are secured as a result of the proposed acquisition by GEC. But this, as we explain below, is a possibility too uncertain to rely on in our findings.

Exports

2.85. Before turning to the question of the effect of the proposed merger on the future of the VSEL and YSL shipyards, we consider the effect of the proposed merger on exports.

2.86. VSEL told us that a main reason for welcoming the proposed merger was that ownership by GEC would give access to its marketing and sales skill in the defence area and that this would markedly improve its export prospects. GEC drew attention to its established network of contacts in potential markets and its ability to support export bids through trade deals and other arrangements. It was hopeful that export orders would be secured well within five years and saw some opportunities for submarine exports.

2.87. Several witnesses have stressed the difficulties of the export market and the strength of foreign competition. The decline in the home markets of foreign warship-builders has forced them,

[1] *Op cit*.

like UK yards, to seek new overseas orders. The increasing tendency for countries to set up their own warship-building yards is also likely to decrease opportunities. We agree that the proposed merger, by giving VSEL access to the full range of GEC's export marketing and sales support, would put it in a stronger position to compete for export orders, but these will still be extremely hard to secure. The two dissenting members of the Group considered that the possibility that Far Eastern commercial yards would enter the warship market if prospects improved was a further argument against expecting UK firms to gain export orders. The majority of the Group thought prospects were unlikely to improve enough to encourage these firms to enter. They thought such yards would find it hard to overcome the recognized difficulties of combining warship and commercial shipbuilding, and that warship-builders with an established reputation for providing support services as well as ships would retain an advantage. They also noted evidence provided by the Department of Trade and Industry (DTI) which cast considerable doubt on whether the large South Korean yards enjoyed any advantage in terms of unit labour costs. The majority did not think this a factor materially worsening the prospects of UK warship suppliers.

2.88. Against this background, GEC's views on the time within which orders can be secured and on the prospects for submarines may be optimistic. They may turn out to be justified but at this stage it is uncertain whether prospects will be translated into firm orders in time to provide significant additional work for VSEL before the end of the century.

2.89. GEC suggested that UK export prospects for defence equipment could be harmed when more than one UK company was competing for a contract; other countries tended to concentrate support on a single `national champion' in such bidding competitions and this improved its prospects of securing orders. It saw the increased likelihood of a single UK bidder for overseas warship contracts as a possible benefit of the merger. VSEL and YSL, however, have been potential competitors only in relation to frigates and other ships of less than 7,000 tonnes, which VSEL has not built for many years for either the home or export markets. We have also noted that the Minister of Defence Procurement has recently announced the Government's intention that the Defence Exports Sales Organisation (DESO) should move to supporting a single UK contender for defence export opportunities. We do not think, therefore, that the proposed merger would materially change the situation that would otherwise exist.

Future of UK warship-building

2.90. We then considered whether the proposed merger might lead to reorganization by GEC of the YSL and VSEL shipbuilding facilities and whether it might involve the closure of one of those yards.

2.91. There has been a sharp decline in employment on warship-building in the three UK yards over the last five years, from 20,000 to about 9,000, and the level of current and expected orders suggests that a further decline is likely. If this situation continues it is possible that at some stage closure of a yard will be cheaper than continuing to operate underloaded yards. In its submission the MoD drew our attention to this possibility and indicated that it saw further concentration as largely a matter of time. VT told us that it thought the reduction of naval employment to the levels expected within the next few years indicated work for only two yards.

2.92. The need for, and timing of, such moves, and how they would affect the three yards, depend on a number of factors. Export orders, or the lack of them, could have an important effect; even a single order achieved by a yard might secure its future for a couple of years. As we have suggested in paragraph 2.88, it is uncertain whether or when such orders for VSEL might materialize as a result of the merger and we have not taken them into account in the following discussion. Exports by UK yards, with the exception of VT, have been small in comparison with the MoD programme and in the following discussion we consider only the effects of prospective MoD orders.

2.93. Working at less than full capacity is likely to impose higher unit overhead costs, but both VSEL and YSL have reduced their levels of employment considerably below those earlier considered viable, and have retained capability, without incurring major cost penalties. VT appears to operate profitably well below capacity. VSEL told us that it had managed to keep the proportion of overheads to total costs broadly stable, although it thought the process of reducing overheads could not be carried much further. There are many uncertainties in attempting to assess the likelihood of closure of either yard were the proposed merger to take place. The financial aspects would have to be weighed by its owner with other aspects; the expectation of new home or export orders, local employment levels and the MoD view of the need to maintain capability might all come into the appraisal. However, our review of information provided to us by GEC (see paragraphs 4.139 to 4.149) suggests that the financial advantages of closing either yard while it retains work at levels expected in the immediate future are doubtful.

2.94. None of the three UK warship yards looks likely to close for the next two or three years, although the current order books will not maintain the present levels of employment. The Trident programme will provide VSEL with some work until 2000. YSL has the slimmest order book; the current Type 23 and Malaysian frigates will be completed by 1997, but work on the UK first-of-class CNGF will not start at the earliest until then, so that without the Type 23 contract there would not be continuous employment for many of YSL's present workforce. VT has export orders for surface ships and GRP minehunter orders, but the former will be completed by 1998 and the latter by 2001.

2.95. We have been told by several industry sources that tonnage produced, although far from precise, is a fair measure of the volume of a shipyard's work. Recent and expected MoD orders are set out in Tables 4.4 and 4.7 (and see also paragraphs 4.67 and 4.72). Looking at prospects to the end of the century, we note that MoD warship orders have fallen from an annual average of about 20,000 tonnes in the period 1985 to 1989 to an average of about 9,000 tonnes per annum in 1990 to 1994. Over that period as a whole they averaged 14,700 tonnes per annum. These figures compare with the average level of about 12,000 tonnes per annum projected in the MoD forward programme for the period 1995 to 1999. These tonnage figures cannot be translated directly into amounts of work available at the yards, but they suggest that the decline in work over this period is not likely to be severe. The outlook for the three yards will depend largely on how the contracts for the LPD, the Type 23s and the B2TC submarines are placed. YSL can bid only for the Type 23 work and GEC told us that in the absence of the Type 23 order YSL would have to close in two or three years. However, GEC also assured the MoD that if it acquires VSEL it will keep YSL open for the time needed to complete the CNGF first-of-class, which implies until 2002; it has indicated that this could involve simply maintaining the design team and mothballing the other facilities until the time came to start the build. VSEL is bidding for all three contracts. It now appears that it will get the LPD contract, but that alone is not a sufficient source of work. VSEL hopes to offer a bid for the Type 23 frigates pitched at a level to offset YSL's learning curve advantage. VSEL is also confident that its bid for the B2TC will win the contract and whoever wins that contract will have work, on present plans, to 2007 on the first batch of three, and until 2011 on the remaining two. Were VSEL to lose the B2TC to the GEC team it might still get some fabrication work and the loading of the nuclear core. VT has work on the minehunters until 2001, though these alone provide an order book far below what would be needed to maintain current employment levels. It intends to compete strongly for the Type 23 order.

2.96. GEC stated that if it acquired VSEL and if either YSL's or VSEL's bid for the Type 23 frigates was accepted it would build them at YSL. This may enhance the prospects for YSL, which has the slimmest order book, but YSL must be regarded as the favourite to win that contract anyway. GEC also told us that it would expect VSEL, if it did not win the B2TC contract and if it were under GEC's ownership, to win a significant amount of B2TC work. But again some of this work might come its way in any event. VSEL could lose the Type 23 work as a result of the merger but this would not seem likely to determine its future.

2.97. To sum up, present order books provide work for YSL for the next two to three years and for VSEL for four years. If YSL acquires the Type 23 and the CNGF first-of-class contracts, and more so if VSEL gets a significant share of the B2TC work as well as the LPD contract, the closure of either yard may not need to be considered until after 2000. We note that our two dissenting colleagues do not envisage a closure until the early part of the next century.

2.98. At that point the B2TC contract will still have a long way to go. The CNGF follow-on orders, which on present plans would produce a larger volume of new orders for surface ships, and the possibility of further substantial orders for aircraft carriers and attack submarines, also come into the picture. We have considered carefully the views of our two dissenting colleagues that MoD orders will fall off sharply at that stage and that rationalization, ie a closure of at least one of the yards, will then be overwhelmingly probable. We do not think the evidence available on the expected volume of orders, discussed in paragraph 2.95, and on manpower requirements, as set out in paragraphs 4.135 to 4.137, gives support to this view. The uncertainties involved seem to us too great to reach any firm conclusion on the need then for closure or on which of the three yards might then close. Nor do we think the event or its timing will be much influenced by whether or not the VSEL and YSL yards are independently owned. Accordingly we do not consider the possible closure of either yard as a matter which may be expected to result from the proposed merger.

The future of YSL

2.99. We noted that the MoD, having selected a team led by GEC to provide the UK contribution to the design work for the CNGF, is anxious that this work should be carried out at YSL. The MoD, therefore, attaches importance to the assurance offered to it by GEC that, if GEC acquired VSEL, the CNGF first-of-class would as planned be built at YSL which would maintain the necessary capability to carry out the task. We considered whether in the light of this assurance the maintenance of capability at YSL should be regarded as a benefit arising from the merger.

2.100. The main influence on the immediate future of shipbuilding at YSL is whether the yard secures the forthcoming Type 23 order. If the MoD awards it to YSL the yard's future during the CNGF preparatory period looks assured. If all three ships went to VT (the only other contender if the proposed merger took place), YSL would have some work on its current orders until 1997. GEC has indicated that in the worst case, ie if no export orders were secured either, the capability could be maintained and the assurance fulfilled by the retention of perhaps 500 design engineers but with no employment for other skills. Against this background, and with the prospect of the order for the CNGF design and first-of-class being placed in 1997, we are not convinced that GEC would find it in its interests to close YSL completely, or to dispose of it, even if the assurance had not been given. We do not, therefore, see the retention of YSL's capability as a benefit that can be expected to arise from the merger.

2.101. We considered whether the merger might lead to efficiency gains even if, as seems likely, both yards continued to stay open. There would seem to be potential benefits from pooling design and computer facilities and experience and possible improvements in labour productivity by transferring some of the YSL experience to the VSEL yard. We consider, however, that the pressures of competition would be even more effective in securing changes in working practices and improved productivity.

Artillery

2.102. VSEL is a supplier to the MoD of naval guns and artillery. Over the last 25 years, as the sole supplier and design authority, it has supplied the Mark 8 4.5 Inch naval gun used on Royal Navy frigates.

2.103. VSEL also supplies towed and self-propelled artillery. It is currently in the final stages of completing a £300 million contract for 179 AS90 self-propelled tracked 155 mm howitzers. There are unlikely to be further UK orders for this gun but VSEL hopes that there are export prospects. VSEL has also been chosen as prime contractor for an upgrade contract to provide a new barrel for the AS90. VSEL's only other gun project is a lightweight towed 155 mm howitzer which has been designed to meet a US requirement and is currently under test there.

2.104. GEC does not own any gun-making interests and told us that it had not yet considered this aspect of the proposed merger in any detail. It does, however, build ships on which VSEL's naval guns are installed and provide software programs, for example the Battlefield Target Engagement System (BATES) which will support the AS90 update. Any potential adverse effects on competitors, or benefits from greater efficiency or co-ordination in fitting out, resulting from the proposed merger seem likely to be small and uncertain.

Conclusions

2.105. Our consideration of the public interest issues has been confined to those aspects of the proposed merger which relate to military activities. We have examined the effects of the proposed merger on competition between prime contractors for warship orders, taking account of recent changes in procedures for placing such orders. We have recognized the procedures available to the MoD to secure value for money but we do not think these can compensate for the potential loss of competition. We have concluded, therefore, in paragraphs 2.57 and 2.58 that the proposed merger can be expected to result in higher prices than would otherwise be paid by the MoD for the B2TC submarines currently out to tender and for the follow-on CNGF vessels, and in the loss of potential improvements to defence equipment in relation to these orders. This can be expected to result in a reduction in the resources applied to UK defence which would be adverse to the public interest. We have also identified similar effects adverse to the public interest in relation to the supply of systems and equipment by subcontractors (paragraphs 2.61 to 2.82). We noted that the merger would provide support for VSEL's export efforts but recognize that overseas markets are difficult and that it is uncertain whether or when firm orders might be secured. We think the proposed merger would lead to some benefits at VSEL from the pooling of design and other facilities and might improve productivity through the transfer of YSL experience to VSEL. We do not, however, consider that these relatively modest advantages of the proposed merger outweigh the serious detriments we have identified.

2.106. We noted the arguments that further rationalization of the UK warship-building industry may be necessary if additional exports are not achieved. The existing yards have already contracted considerably and are currently viable. We do not think that further closures are likely to take place over the next couple of years if the proposed merger does not take place or that the proposed merger would significantly increase their likelihood during this period. For the period up to 2000 further UK orders are in prospect which, depending on how they were awarded, could provide work for all three yards and for which the maintenance of competition would bring valuable benefits. Beyond 2000 the expected flow of orders for CNGF follow-on vessels and possible substantial orders for aircraft carriers and attack submarines come into the picture but the uncertainties become too great to draw any firm conclusions. At that stage there may well be one or more yard closures but, as explained in paragraph 2.98, we do not think the evidence supports the view that at that stage demand is bound to fall sharply or that such closures are then inevitable. We think the substantial figures put forward by the two dissenting members of the Group for possible savings at that stage, for the industry and for the MoD, are highly speculative. Nor is the eventual realization of any such savings dependent on the proposed merger being allowed to proceed now. Any benefits for the MoD in the form of future lower-priced contracts and the major part of any gains to the industry could be expected in any case to accrue if closure took place as a result of competitive pressures.

2.107. We therefore see no immediate prospect of the `single well loaded source' to which the MoD referred. We think it would be wrong to sacrifice the immediate benefits of competition for the hope that, if and when closure of a yard became necessary, the MoD and the industry might gain extra financial benefits if the VSEL and YSL yards were already in common ownership. We think the greater part of such benefits would still be available if the yards were independently owned. We therefore see no benefits from the proposed merger to set against the detriments we have identified and conclude that the creation of the merger situation may be expected to operate against the public interest. Two members of the Group dissent from this conclusion for the reasons set out in the note that follows this chapter.

Recommendations

2.108. Under the provisions of the Act we are required to consider what action (if any) should be taken for the purpose of remedying or preventing the adverse effects of the merger we have identified above.

2.109. A number of suggestions for safeguards and undertakings, including assurances already offered to the MoD by GEC, have been put to us and we consider here only those relating to the detriments we have identified as being expected to arise if the merger takes place, relating to loss of competition amongst prime contractors for warship contracts and reduced competition among subcontractors.

2.110. We identified adverse effects from loss of competition between prime contractors for the prospective B2TC and CNGF warship orders. It was suggested to us that an undertaking embodying the assurances that have already been offered by GEC to the MoD to keep the two bid teams separate for six months, or for such longer period as seemed appropriate, would provide a suitable remedy for any detriment arising on the B2TC. For the reasons set out in paragraphs 2.43 and 2.44, we do not think the maintenance of the two teams for a period, even if it were possible, would provide effective competition or remedy the detriments we have identified.

2.111. We were unable to identify any other remedies for the adverse effects that we had identified arising from the loss of competition for warship contracts.

2.112. We have also identified adverse effects from the proposed merger in relation to subcontracts. We considered whether any undertakings could be framed to ensure the maintenance of competition by GEC for subcontracts for which a GEC company might bid. Any such undertakings would have to be monitored by the MoD and so would run counter to the present policy under which it is withdrawing from detailed oversight of subcontracts where the prime contract has been let competitively. Such a policy change would have considerable resource implications. Nor would such monitoring address the problem arising from the prime contractor's increased access to information about the subcontractors' business, which is inherent in the use of prime contractors. We have, therefore, been unable to identify a remedy for this detriment.

2.113. The nature of the detriments we have identified is essentially structural and we do not consider that in this case undertakings or safeguards relating to conduct can adequately remedy them.

2.114. As we do not consider that the proposed merger will affect the likelihood or timing of the closure of any yards we have not considered whether the assurances provided by GEC to the MoD on the future of YSL or VSEL yards might be translated into undertakings.

2.115. We have, therefore, been unable to find any remedies for the detriments we have identified. Hence we recommend that the proposed merger should not be allowed to proceed.

Note of dissent

by Sir Archibald Forster and Professor A P L Minford

1. We dissent from our colleagues in our assessment of the probable detriments to competition from the proposed acquisition of VSEL by GEC, as well as in the gains from rationalization.

2. The industries involved in the warship market are three: the making of ship hulls and ship assembly; electronics; and prime contracting. The latter two are highly competitive international industries (to be seen as embracing many activities outside, as well as in, the defence field). The first, `warship-building', is mainly a domestic industry: exports are limited, apart from those of VT which is a strong world competitor in smaller warships such as minehunters. Up to now the Government has not opened warship-building to foreign firms; the one apparent exception has been the CNGF, a collaboration with the French and Italian Governments, in which, however, each country will build its own first-of-class ship-with no competition between each country's nominated supplier. This therefore has not altered the practice of no foreign competition in warship-building.

3. Facing these supplying industries is the MoD. This is the sole domestic buyer, with considerable bargaining power. It is a long-lived purchaser backed by the taxpayer; it faces firms bidding for the supply of complex and expensive items, of which only a few will be made. The MoD and these firms are involved in repeated bid and contract situations, in which the rules are entirely made and alterable as desired by the MoD. For warship-building, given the limited scope for exports, the MoD effectively has a monopsony.

4. Three competition issues have been raised in respect of GEC's proposed acquisition of VSEL, namely that:

(a) in the nearer term, contracts now being let out would be subject to less competition, with GEC involved in both bids for the B2TC submarine, and two out of three likely bids for the Type 23 frigates;

(b) in the longer term, the ownership of two shipyards-VSEL and YSL-by GEC would reduce competition for the building of frigates; and

(c) competition among naval subcontractors would be reduced because GEC would favour its own subsidiaries in subcontracting.

5. We consider these issues in turn. But we begin with an assessment of the role and powers of the MoD, crucial in the analysis of this unusual market structure.

The role and credibility of the MoD

6. The MoD throughout this inquiry has taken the view that it can create competition and, in its absence, impose other pressures on its suppliers. An important example where it has created competition is the second B2TC submarine bid. Examples of other pressures that are or could be used are: the threat of foreign competition (a credible one, since increasingly foreign competition and collaboration is used across most of the defence field); post-contract audit and cost clawback; the threat of withdrawing future contracts from a poorly-performing supplier; and access to outside (possibly foreign) firms in bench-marking domestic suppliers, as well as

in helping to police subcontract competitions carried out by prime contractors. The MoD has firmly rejected the idea that the proposed merger would undermine its ability to achieve value for money.

7. This view appears to us to be entirely logical and persuasive. For a company like GEC, with a huge value of current and prospective contracts with the MoD, to risk endangering its relationship with the Government by failing to make its best endeavours, including that of ensuring that `Chinese walls' work as intended, would in our view amount to little less than commercial lunacy.

Competition issues

8. We now turn to each competition issue in the light of this basic assessment.

(a) The nearer term

9. There are three large orders in the process of being bid for: the last batch of Type 23 frigates, the B2TC submarines, and the LPD. The MoD told us that no competitive bid could be established for the LPD, and that it is therefore proceeding with VSEL under single tender. The proposed merger does not affect it in consequence. As for the order for the first-of-class CNGF, we understand that the UK yard involved will be YSL, subject to price and the overall contract go-ahead; so again the proposed merger does not affect the matter.

Type 23 frigates

10. Bids are expected from YSL, VSEL and VT by June, with a prompt decision as to the winner since these ships are the last of a long line, with a well-defined specification. The bidding is expected to be highly competitive, with significant effects on both winning and losing yards. Both YSL and VSEL have substantial spare capacity which they wish to devote to the order.

11. The bids will very probably have been submitted to the MoD before any VSEL take-over can have occurred-on the assumption, relevant here, that both take-over bids go ahead.

12. We regard the idea that GEC might act unreasonably in respect of VSEL's bid terms as fanciful, for the reasons set out above concerning its relationship with the MoD. GEC told us that it had given assurances to the MoD that GEC would honour any reasonable bid, on the understanding that if it took over VSEL it would wish YSL to build the frigates, at the bid price. (GEC had reserved the right to withdraw or renegotiate an unreasonable bid-ie one that involved a large loss-but this we, like the MoD, accept. VSEL said that it is well behind YSL's `learning curve' and will have to use reserves merely to match YSL, so the chances that VSEL's bid would cause GEC a large loss, if carried out at YSL, are remote.)

B2TC submarines

13. Here there are expected to be two bids, one of which is the result of the MoD's actions to ensure a competition for this very large order.

14. VSEL is one bidder, teamed (at the MoD's urging) with Loral ASIC in order to

strengthen its prime contractor skills. This bid will be based on a conventional approach, using VSEL's experience, skills and facilities as the only current submarine-builder in the UK.

15. The other bid will be from a GEC/Rolls-Royce team, using unconventional building techniques, based on modular construction and design. These have been developed and proved by AMEC and other similar yards for the North Sea offshore oil industry. This bid has been created and encouraged by the MoD, which expects it to be technically credible. The MoD view is supported by much other significant evidence to the inquiry, and we accept it, in spite of doubts expressed by VSEL and BAe (competitors) and another government department less close to the matter.

16. Not only would this bid, if successful, break the monopoly hitherto held by VSEL in the construction of nuclear submarines. It would also in any case, even if unsuccessful overall, both put pressure on VSEL in its own bid and give the MoD the opportunity to use the best ideas in both bids to achieve better value for money than offered by the VSEL bid alone.

17. The bids for the B2TC are due for submission by the end of June. A long evaluation and negotiating process will then begin, continuing for at least 12 months. However, both bids will very probably be in before any VSEL take-over has been agreed. Having the details of both bids the MoD will then be in a strong position to control the final outcome.

18. GEC has undertaken, should it acquire VSEL, not to withdraw its own alternative bid unless and until the MoD released it from that undertaking, and to maintain the rival teams involved in both bids behind `Chinese walls' for up to six months. It sees no difficulty in extending the period if this is required.

19. Following our earlier reasoning, we believe GEC would find it strongly in its interests to honour these undertakings both in the letter and the spirit.

20. We do not consider that there is any detriment to competition therefore in respect of these two major current bidding processes, because commitments of various sorts ensure that GEC would adhere to the terms of the competitions under way.

(b) Longer-term competition-and rationalization-in warship-building

21. The forward programme of the MoD includes a requirement for 11 follow-on CNGFs. Outside the programme there may also be orders for replacement Trafalgar class submarines and further aircraft carriers. If GEC acquires VSEL, it will have under its control two of the three yards bidding for the CNGFs, including the hitherto monopolist supplier of nuclear submarines.

22. In the case of submarines, we pointed out above that the degree of competition will depend entirely on the success of the new techniques proposed in the GEC/Rolls-Royce bid. But whether successful or not, GEC's ownership of VSEL does not affect that degree of competition and therefore cannot create a detriment.

23. In the case of frigates, two aspects are material:

(a) The first is the credibility of VT as a competitor, as always with the MoD in the background with means to assist it. Eleven CNGF orders are planned between the years 2000 and 2005, with three batches of three, and one of two, being delivered every two years. VT could, with its present capacity, deliver a maximum of one vessel every

16 months-for a total of about six. If it were to gain orders for these, only five would be left for VSEL and YSL; yet these two yards have a severe shortage of future domestic orders and will be extremely anxious to gain more. This would create sharp competition with the GEC combine. Furthermore, if the time-scale of the planned orders were stretched out, VT could bid for more. Should the MoD feel that VT's competition would be insufficient, it could either stretch out the time-scale in this way, or encourage some expansion in VT's capacity, perhaps involving collaboration with another firm. It could also consider opening up this follow-on CNGF competition to firms in foreign collaborating countries: it was argued to us by the MoD that the main strategic requirement of foreign defence supply was that the foreign country was bound into reliable supply by mutual dependence. In view of the CNGF collaboration, such mutual dependence appears to exist in this case.

(b) The second aspect is the export market. Clearly the volume of exports from warship yards will affect the competitive pressures. But here there is general agreement between us and our colleagues that export volumes are likely to be small, at best only slightly above recent levels (around £150 million per year in 1994/95 prices against MoD offtake of warship hulls of around £700 million per year).

24. The export market for warships is small because it is politically protected in other Western countries, as here, and where it is open-as in the Middle and Far East-there is sharp competition from excess capacity in other Western shipyards-often heavily subsidized. Furthermore, were this not so, other Far Eastern competitors might well, as in merchant ships, be serious potential competitors for the hull-building (in partnership no doubt with multinational electronic firms and prime contractors); their wage costs per man in merchant shipbuilding are documented by the US Bureau of Labour Statistics as about half those of the UK (see Table 1) and, as in many other industries, this disparity could presumably be carried over into warships should that market prove attractive. (The DTI refers to unpublished figures from private sources on unit labour costs contradicting these, but we have not been shown them and the Bureau's figures are widely used in similar industrial comparisons internationally; furthermore, the comparative figures for this industry are consistent with those of other manufacturing industries common to the UK and these Far Eastern producers.) Though both GEC and BAe have argued that they can make a success of developing the export market for warships from VSEL and YSL, these considerations suggest that their chances of such success (even under the new, more focused, DESO policies) are extremely limited. Even VT, with its success as a specialized producer of smaller warships, is likely to meet increasingly intense competition internationally.

TABLE 1 **Hourly wage costs (total compensation including employer costs such as taxes, social insurance and holidays) in ship- and boat-building and repairing, US SIC 373**

	production workers, $ per hour, 1992
USA	17.65
Hong Kong	4.85
Japan	19.68
Korea	8.03
Taiwan	9.70
Belgium	23.48
France	18.30
Germany	27.89
Norway	24.43
Sweden	24.62
UK	16.40

Source: Bureau of Labour Statistics, Washington, DC, January 1995.

25. If so, then not only is there already large-scale excess capacity in UK warship-building but by the early part of the next century when the CNGF frigates are needed it is likely to be greater-and this assumes that even these orders will not slip or be reduced. This excess warship capacity can be roughly gauged by considering manpower use. VT and VSEL estimates agree (and appear to be broadly in line with those of the MoD) that by the end of the century manpower requirements for MoD orders alone will be down to about 5,000 from the present 6,500. VT expects export manpower needs to fall to about 1,000 from their present 2,500-VSEL has no estimate. This would imply a drop in manpower needs overall from 9,000 today to some 6,000 by then. And of course a manning level of 9,000 today already implies a significant degree of excess capacity, as measured by the yards' plant; this can be seen by comparing it with the 1990 manning level in the three yards of some 16,000. In the first decade of the next century, when MoD orders are projected to fall off further, the excess capacity problem will worsen. Even if exports were quite improbably to double from their present rate, the problem would remain a massive one. The evidence we have suggests that this excess capacity is largely concentrated in VSEL and YSL, which are accordingly likely to be the main focus of rationalization. It seems overwhelmingly probable that regardless of who owns VSEL this excess capacity will be eliminated as far as possible around that time (after a period in which attempts are made by both yards to find more exports): illustrative calculations shown in the annex to this note suggest that, for example, closing YSL by around 2003 would at that time produce a substantial saving, jointly to the industry and the MoD, amounting possibly to around £260 million in present value terms at that time, or £176 million in 1995 present value.

26. If VSEL were not owned by GEC then this elimination would occur by either VSEL or YSL being closed through cost pressures arising from the lack of available work. If VSEL were owned by GEC the same would occur through internal rationalization. Which yard was closed would importantly depend on whether VSEL still commanded a monopoly in building nuclear submarines (ie the new technology was not competitive); if so, then its future would be guaranteed and YSL would close. But otherwise its relatively high costs seem likely to put it at greater risk than YSL.

27. On this, most likely, outlook, GEC's bid would therefore make no difference to competition. We note in the annex that it would produce a gain, however, in rationalization, in that GEC would quickly eliminate duplicate activities between its two yards; this gain is estimated at £34 million in 1995 present value.

28. In the most unlikely event that, in spite of this excess capacity, three competing warship yards were kept open (either as a result of a BAe take-over of VSEL or as a result of VSEL remaining independent), then a GEC take-over would in joining together the VSEL and YSL yards imply a reduction in competition. In this event, however, there would also be a gain from the rationalization that GEC would put in hand of these two yards (most probably including closure of YSL in 2003). The gain involved is estimated in the annex-as noted above-at £176 million in 1995 present value, plus the gain noted in paragraph 27 (from eliminating duplication earlier) making a total of £210 million in 1995 present value. Given that competition with VT would still prevail and could be strengthened, as discussed in paragraph 23, we would regard this as a benefit to be taken into account.

29. In sum, we judge that the MoD has ample scope to achieve competitive pressure in the supply of CNGFs; and that if GEC acquires VSEL while also yielding a gain in rationalization this scope is retained. In the unlikely case that GEC's take-over reduces competition, it would also bring a further large gain in rationalization.

30. Other possible orders are for very large ships-AOs (25,000 tonnes) and replacement aircraft carriers. VSEL is the only warship yard capable of building these. The AOs should be able to be built at a commercial yard such as KG or H&W. With the aircraft carriers the MoD could exercise its ingenuity in creating a competitive bid from a rival to VSEL rather similar to that in the B2TC submarine case, using either other, merchant, shipbuilders or firms such as AMEC producing for the North Sea oil industry. But whatever the competitive situation it would not be affected by a take-over of VSEL by GEC.

(c) Competition among subcontractors

31. Subcontractors have expressed concern that GEC would use its position as prime contractor to favour its own subsidiaries. But the MoD has argued strongly in response that it will not permit this to happen; its methods involve both direct supervision of certain crucial subcontracting competitions and, for the competitions dealt with by the prime contractor, the use of outside (as well as in-house) experts to set the terms of subspecifications and to check on the subcontract bid procedures. The majority report notes that only a limited proportion of presently known contracts would contain subcontracting work dealt with by GEC as prime contractor-about 5 per cent of the B2TC, in effect; and that in these areas there is generally sharp competition. GEC has given three reasons why it would be against its interests and its practices to favour its own subsidiaries in the sophisticated and competitive domestic market for electronic components, even in the unlikely event that it could do so undetected by the MoD:

(a) it wishes its own subsidiaries to be exposed to competition to ensure highest performance;

(b) it must ensure that its bid contains the highest value for money in components in order to win the overall contract; and

(c) repeat relationships with suppliers in other collaborative projects (BAe and GEC are regular collaborators, as both have emphasized) imply the need for fairness in dealing with them in own-subsidiary competitions.

32. We accept these arguments and believe they reflect widespread commercial practice in similar situations involving global corporations.

Conclusion

33. In the context of a shrinking defence order book, in naval programmes as elsewhere, there is unlikely to be an alternative to rationalization and contraction. Increased exports may somewhat improve the situation but since it is common to the Western defence industry, all of which is attempting to increase its exports, not much hope in our view can realistically be placed on that alleviation. We stress that the MoD is in a supremely powerful position as a long-lived monopsony buyer backed by the taxpayer facing an industry in contraction. Two parts of that industry-electronics and prime contracting-are highly competitive, drawing on, and producing for, world markets.

34. It is the building and assembly of warship hulls that has traditionally been a protected domestic industry; and the building of nuclear submarines has in recent years been a monopoly of VSEL. With the closure of SH the building of large warships such as aircraft carriers has also become a monopoly of VSEL. The MoD has reacted to the industry's increasing

concentration by creating a new competition for nuclear submarines, and by forming a collaboration in frigate-building with Italy and France (so far stopping short of free competition with foreign yards), and should it require replacement aircraft carriers in a decade it may use similar techniques. It has argued throughout our inquiry that it has the tools to achieve value for the taxpayer's money in spite of the warship-building industry's contraction.

35. This is the broad background against which the GEC merger is to be judged. We have argued that the proposed acquisition would make no significant difference to the degree of competition in the industries involved in warship-making, and that it will contribute to the ease of industrial rationalization. We can see no detriment therefore in the proposed merger and accordingly would not wish to prevent financial market forces from taking their course.

A FORSTER A P L MINFORD
12 April 1995

ANNEX TO THE NOTE OF DISSENT

1. Adapting and developing the figures provided by GEC in relation to the closure of the YSL yard (paragraphs 4.138 to 4.149) we have analysed the position if the yard were to be closed at the completion of existing orders and the construction of the first-of-class CNGF. This would be in approximately 2003. In this case many of the up-front costs identified by GEC would be avoided although none of the benefits would be achieved until the yard was closed.

2. If we assume that GEC, rather than completely close the YSL yard, chose to `mothball' the facilities in the hope (no matter how remote) that future orders might be forthcoming, the costs to GEC would comprise only the costs of site maintenance and security. The workforce would have declined naturally as orders were completed and therefore redundancy costs would be minimal. On this basis we believe the costs of mothballing the facility would be no more than £2 million per annum.

3. Turning to the benefits that would be achieved by closing the yard, these fall into two categories:

(a) overhead cost savings; and

(b) efficiency improvements at VSEL as a result of the closure.

GEC provided evidence that the fixed costs of YSL in the year to 31 March 1994 were approximately £14 million of a total overhead cost of £26 million. This amount would be eliminated by closure. However, the timing of its elimination would be different should GEC take VSEL over: that part of it due to duplication of activities (eg purchasing) between VSEL and YSL would be eliminated soon, whereas otherwise it would not go until YSL's closure. We estimate that the elimination of duplicate activities would amount to a saving of, say, £7 million per annum from 1997. The 1995 present value of bringing this saving forward would be some £34 million (assuming a real discount rate of 5 per cent).

4. By 2003 it is likely that the VSEL yard would already have benefited from many of the efficiency improvements that GEC plans to introduce should the merger proceed (we assume that these would also be introduced by BAe or an independent VSEL). Therefore the additional benefits that might arise directly from the closure of the YSL yard through the transfer of equipment or expertise from it to VSEL would be minimal, say £1 million per annum.

5. Therefore the net benefit of closure (after deducting the costs of mothballing the YSL yard) would be around £13 million per annum from 2003 onwards in cash terms. Treating the cash flows as a perpetuity the benefit can be expressed in present value terms in 2003 as £260 million. In 1995 monetary terms this becomes £176 million. Thus there would be a clear economic benefit to GEC from closing YSL under a scenario such as this where existing orders had been completed and no further work was available. The benefit to GEC might be even greater were it able to successfully dispose of the YSL yard to a third party or develop it for an alternative use.

6. Under this scenario GEC could still choose to compete for follow-on CNGF orders to be built by VSEL.

7. For single tender contracts the benefits achieved by GEC would be passed directly to the MoD in the form of lower cost tenders, although the benefit may be partially shared with the contractor by means of a form of shareline agreement such as that in place for the Trident submarines. In the case of contracts subject to competitive tendering the savings achieved by the contractor (ie GEC/VSEL) would presumably allow the contractor to submit lower tenders, also leading to cost savings for the MoD. Either way a sizeable proportion of the benefit calculated in paragraph 5 would be passed on to the MoD in the form of future lower-priced contracts. It is this consideration that undoubtedly lies behind the MoD's broad preference for one fully-loaded, as opposed to two partially-loaded, yards.