



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

JOINT COMMITTEE OF PUBLIC ACCOUNTS AND AUDIT

**Reference: Financial management and equipment acquisition at the Department of
Defence and Defence Materiel Organisation**

THURSDAY, 7 DECEMBER 2006

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**JOINT STATUTORY COMMITTEE OF
PUBLIC ACCOUNTS AND AUDIT**

Thursday, 7 December 2006

Members: Mr Anthony Smith (*Chair*), Ms Grierson (*Deputy Chair*), Senators Mark Bishop, Hogg, Humphries, Murray, Nash and Watson and Mrs Bronwyn Bishop, Mr Broadbent, Dr Emerson, Dr Jensen, Miss Jackie Kelly, Ms King, Mr Laming and Mr Tanner

Members in attendance: Senator Mark Bishop and Mrs Bronwyn Bishop, Ms Grierson, Dr Jensen, Miss Jackie Kelly, Mr Anthony Smith and Mr Tanner

Terms of reference for the inquiry:

To inquire into and report on:

Progress in implementing systematic reforms in the areas of financial reporting and equipment acquisition at the Department of Defence and the Defence Materiel Organisation (DMO), as identified in ANAO financial and performance audits, the Defence Procurement Review 2003 (the Kinnaird Review) and the Senate Foreign Affairs, Defence and Trade References Committee's 2003 Report on the Inquiry into Materiel Acquisition and Management in Defence, including the following:

- Progress in implementing Defence's financial remediation plans, relative to international best practice in these areas, and recommend any further measures that can be adopted;
- Progress in implementing the Kinnaird Reforms, relative to international best practice in these areas, and recommend any further measures that can be adopted;
- Review Australia's relative achievements in procurement and financial reform relative to international best practice in these areas of defence administration; and
- Assess progress in Defence's adoption of international business accounting standards relative to international best practice in this area of defence administration.

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Committee met at 11.06 am

CHAPMAN, Mr Steve, Acting Auditor-General, Australian National Audit Office

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GUMLEY, Dr Steve, Chief Executive Officer, Defence Materiel Organisation, Department of Defence

McKINNIE, Commodore Drew, Director General, Major Surface Ships, Defence Materiel Organisation, Department of Defence

RUTING, Rear Admiral Trevor, Head, Maritime Systems Division, Defence Materiel Organisation, Department of Defence

CHAIR (Mr Anthony Smith)—We will make a start with our public hearing this morning for the committee's inquiry into the financial reporting and equipment acquisition at the Department of Defence and the Defence Materiel Organisation. Those of you who have been at the previous hearings will know we are examining several defence projects in detail as a focus on acquisitions and project management processes at Defence and the Defence Materiel Organisation. Today we are going to continue our examination of two acquisitions: the fast frigate upgrade project and the Tiger armed reconnaissance helicopter project. As you would be aware, both of those were the subject of National Audit Office reports and last month we heard from the contractors with respect to each of those projects. This morning we are going to hear from the Defence Materiel Organisation and from the Australian National Audit Office.

As usual, before we begin proceedings I advise witnesses that the hearings today are legal proceedings of the parliament and warrant the same respect as proceedings of the House itself. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. The evidence being given today is being recorded by Hansard and will attract parliamentary privilege.

Welcome, everybody. Dr Gumley, would you like to make an opening statement before we proceed to questions?

Dr Gumley—I understand the committee is looking for some of the systematic issues that go with projects and the committee has chosen two projects to examine. They are quite different in their genesis and we are very interested in answering the questions that you may have on that—in particular, the learning that we may all receive from both of those projects. For this to be a valuable process for DMO to lead to improvement in procurement and acquisition, getting those systematic issues out on the table and learning from them is very important for us as well. So we look forward to the questioning.

CHAIR—Dr Gumley, you would be aware of our focus on issues of contract management for some months now through this inquiry. I think it is fair to say on behalf of the committee that we are committed to seeing improvements going forward. I am not sure whether you are aware we unanimously agreed that the audit office should be provided with some additional dedicated funding so that it could conduct what would amount to continuous auditing of the top 30 projects Defence and DMO going forward so that we would be able to get some continuous disclosure. We felt, as a committee, that would be good for the taxpayer given the amounts of money involved in the contracts, but also very good for Defence and DMO and would certainly improve the capacity to pick up problems before they become large ones. What is your reaction to that sort of suggestion?

Dr Gumley—The response to your initiative is of course one for government to make, not for public officials to make.

CHAIR—But having laid that caveat.

Dr Gumley—I could see some value in it if we had an agreement with the audit office on the scope of work. Mr Chapman and I had a conversation about this yesterday as to a way it could be done that maximised value rather than just became some sort of bureaucratic impediment or whatever. I would very much like to put a small working group of one or two of our people and one or two of the audit office's people together in the next few weeks to discuss how it might happen to maximise the information flow with the minimum bureaucratic cost. If we did that it could be a very valuable contribution to public information.

CHAIR—That is good. We felt that if you had a mechanism to go forward, in addition to the audit office's conventional requirements at looking back at some of the projects, it would assist.

Dr Gumley—DMO already provides to the senior ministers each month what we call an acquisition overview report. One of the changes we made shortly after the Kinnaird recommendations were implemented was that we felt there had to be a higher quality reporting, so across the top 40 or 50 projects—and we had been here in Senate estimates hearings as well—we develop a report each month. Therefore, a lot of the foundation work for what you are seeking is already being done. I would imagine the audit office would like to review the accuracy of those reports, how they are compiled and whether they are complete or sufficiently complete. Then of course, if there is a discrepancy, they would have an ability to deep dive into that particular issue to get assurance.

CHAIR—Of course we also felt the audit office needed some additional specific targeted funding—

Dr Gumley—That is an issue for your committee and for government to make a decision on, but I can see some value in it if we do it within a scope that is efficient.

Ms GRIERSON—That is an excellent move forward, but it is, as you say, for government to decide. That DMO and ANAO are willing to find a model that suits that process—that would be time efficient and not an extra burden on everybody, but actually gets to some real management issues and contract management issues and procurement issues—is excellent. I can only think that the initiative taken by this committee hopefully will be supported and adopted by government.

You said in your very brief opening statement, Dr Gumley, that these are two very different projects. Do you want you outline the differences for us of those big issues—procurement management, contract management and outcomes?

Dr Gumley—There has been a constant evolution in procurement management in Australia since the late 80s. We characterise the FFG upgrade contract as roughly a mid-90s contract. It was done in a style that was a fixed price contract, high development component. The contracting templates were quite a bit different from where we are now, so there is a lot of history in the project. The Tiger project is half-way to where we are getting to now with the way we go about contracting at the moment. In some ways it has moved about 50 per cent of the way we have moved to into the post-Kinnaird environment. So we are actually looking at two snapshots in time.

Ms GRIERSON—Just before we go into the detail of both of those projects, do you think that there is one other project that you would put out now as the 2006 model?

Dr Gumley—If we are looking for a MOTS type purchase, I think the C17 would be a good one. From government's decision in about February to the first aeroplane on the ground on Monday is quite a remarkable achievement.

Miss JACKIE KELLY—Just for the record, could you go through your backgrounds as well—how long you have been in DMO, your previous postings with FFGs or any experience with FFGs.

Cdre McKinnie—I joined DMO in April 2005. I have a long background in combat system ships of a similar vintage to the FFGs, involvement with the Anzac Warfighting Improvement Program, engineering and support director of the old offshore patrol combatant project, extensive involvement with various FFG minor projects, helo modernisation program and DDG modernisation program.

Miss JACKIE KELLY—That was in terms of managing those projects, using the equipment, being at sea?

Cdre McKinnie—My seagoing experience has been in DDGs and not FFGs, but I have engineering experience with the Combat Data Systems Centre in Fyshwick. I was extensively

involved with support and upgrade of many elements of the FFG combat system during the 1990s. I have not served in Anzacs but I was extensively involved in the early scoping work for the Anzac Warfighting Improvement Program. I am now, as DG Major Surface Ships, responsible for Anzac build and delivery as well as the Anzac upgrades, and the Anti-Ship Missile Defence Project.

Mr Adams—I joined the Navy in July 1967 and completed my service on 31 August 2003 at the rank of captain. During that period I undertook numerous jobs at sea, completed numerous refits and managed a number of minor projects within the refitting regime. I also had diplomatic appointments in Malaysia and a number of staff appointments, as you do as you go through. I joined the Public Service effective 1 September 2003, and I have been directly involved in maritime materiel support since 1993, specifically with ship maintenance contracting and materiel support. I hold trade paraprofessional and professional engineering qualifications. I have a masters in project management. I qualified as a project management professional in March 2001. I have completed advanced management programs and a number of other academics and the normal staff training within the RAN.

Miss JACKIE KELLY—You were age retired in 2003 and then they contracted you back to keep you there, or what was the scenario there—

Mr Adams—One would hope I was not age retired!

Miss JACKIE KELLY—Sorry. What was the reason for—

Mr Adams—I was medically discharged from the RAN. I had a hip replacement and I was no longer able to go to sea. So I applied for the appointment that I am in now—

Miss JACKIE KELLY—Did Navy approach you, or did you move that through personnel yourself?

Mr Adams—They were looking to civilianise the position and I was approached. I applied and, on merit, I won selection.

Miss JACKIE KELLY—So that gives you some longevity with DMO. Are you on a five-year, four-year or six-year contract?

Mr Adams—I am a continuing APS employee.

Miss JACKIE KELLY—Thank you.

Rear Adm. Ruting—I joined the Navy in January 1968 and completed studies in naval architecture and then I had marine engineering experience on various RAN ships. My specific experience is similar to that of Mal Adams. I have been involved in maintenance management of ship repair right across all classes of ship in the Navy. I have been in the Defence Acquisition Organisation and involved in acquisition projects since 1982 with the Fremantle class patrol boats and specifically involved with the FFGs from 2000 when I took over as Commodore Logistics Navy. That was merged into Defence Materiel Organisation when it was formed in late 2000. I was Director-General, Maritime Support, then Director-General, Major Surface Ships

and then Head of Maritime Systems. So, since March 2002, I have been involved as the director-general overseeing the FFG upgrade program and then, from August 2003, Head of Maritime Systems Division overseeing the FFG upgrade amongst many other programs and support in maritime systems.

Miss JACKIE KELLY—You would be the only one so far who was there when they did the changes to the contract master schedule in 2004?

Rear Adm. Ruting—No, Mr Adams was the project director from—

Miss JACKIE KELLY—In uniform.

Rear Adm. Ruting—In uniform, then as an APS civilian continuously from January 2002.

Mr Adams—January 2002.

Dr Gumley—I do not think the uniform versus civilian is a differentiator. It is the best person for the job. Certainly it is the way we have been running DMO in the last 2½ years.

Miss JACKIE KELLY—I think the civilian gives you some longevity in the spot. I think it would have been harder. It has been four years out of uniform, but statistically you have not actually managed that in the entire time DMO has been functional. You are averaging 2.6 years in uniform.

Dr Gumley—Yes, civilians though can move at level just as easily as military people move every two years. So if, for example, an EL2 project director—a civilian—wants to move to another project and they win it, then they can move. So this churn is an APS issue as much as an ADF issue. It is the same with private industry; if you do not like your job, you move somewhere else.

Mr Gillis—I worked in the Australian Customs Service for 20 years. I left the Customs Service after heading up the acquisition in the Customs Bay class patrol boats. I went to the private sector and I was the vice-president of Austal Ships and I was the project manager for the Armidale class patrol boats. Then I was the vice-president of Austal USA where I led the littoral combat ship project. I joined DMO in September 2004 as the project manager leading the LHD program. In April this year, I was appointed the deputy chief executive officer. My involvement with FFGs has only been to assist the project team during the recent negotiations in April.

Miss JACKIE KELLY—Those were the 2006 changes?

Mr Gillis—Yes.

Miss JACKIE KELLY—Sorry, when did you come to DMO?

Mr Gillis—September 2004.

Miss JACKIE KELLY—But you were not working on the FFG until—

Mr Gillis—Until the start of this year.

Miss JACKIE KELLY—So you had no knowledge of the changes in 2004?

Mr Gillis—No.

Miss JACKIE KELLY—So the contract was signed in 1997-98 by Gary Jones and Richard Cooper.

Mr Adams—It was by Gary Jones and out of ADI, that was reported at the last hearing.

Miss JACKIE KELLY—Kenneth Harris.

Mr Adams—Yes.

Miss JACKIE KELLY—At that stage, project management had cost \$142 million in 1997-98, and travel and legal advice was \$44 million. Can anyone go through with me that travel and legal advice—\$44 million in the year the contract is signed—and give me a breakdown the expenses when things are paid? Do you want to take these ones on notice maybe?

Mr Adams—Yes please.

Miss JACKIE KELLY—Okay. Over the course of the FFG project, travel and legal advice cost \$3.6 million overall, and yet it seems to have escalated at peak years. You see a trend. I will give you these figures. You seem to have had some major legal problems in 2001-2002, where \$0.7 million was spent on travel and legal. It would be interesting to know what of that was travel and what was legal. You see the coincidences when you realise it was \$0.9 million in 2003-2004. That is the ANAO breakdown of the costs to date. I am not sure what is travel and what is legal, but it would be good to have a breakdown of those figures and to find out whether that legal advice is a rejig of the master schedules—how do you go about it and come to that conclusion that we are going to change the master schedule and try and get the contract back on track?

Mr Adams—I will attempt to answer your question. I can talk from detail on 2003-2004 because I was actually there. It is not as clear for 2001-02. A lot of the development work in this program is with international contractors, and design reviews and other things are happening, so a significant amount of travel is required and was required early in the piece. In 2003-2004 we were experiencing significant delays within the program and there was significant debate on specifications and other things like that. I sought legal advice on numerous occasions to ensure that, firstly, I was abiding by the procurement and government regulations, and, secondly, it was achieving the best value for the customer and the taxpayer. I could not give you off the top of my head what the breakdown is there but I could get that for you.

Miss JACKIE KELLY—What were some of the delays that you felt were not acceptable under the contract?

Mr Adams—They were not so much not acceptable; we had a contract master schedule, and there was continual slippage in that. A lot of it was to do with delivery of software and the

changed approach that ADI had adopted back in 2001-2002. It was a significant thing for ADI to take on and change the architecture of the combat system and do that development work and take in house, if you like, the design authority responsibility for that.

Miss JACKIE KELLY—So you actually had a change of specifications from the 1997-98—

Mr Adams—No, I did not say that at all. I said ADI changed the architecture of how they were presenting the software. With their design, they went down a route and they got to a point and said, ‘We need to change our strategy here.’ They did change their strategy. The software development was happening in conjunction with the Americans, and the code development is happening in Western Australia. Australian industry is actually doing it, and doing a magnificent job.

Miss JACKIE KELLY—So in the 1997- 98 contract, where specifications were set in concrete as to what we wanted, government was told a price, government approved a price and those specifications were changed.

Mr Adams—No. I repeat: the specifications are not changed; it is how the contractor decided to deliver the product. He had embarked on a process. He got to a point. He obviously realised that that was not the most effective way of delivering the product. Therefore, he changed his strategy.

Miss JACKIE KELLY—In the year that he changed his strategy, \$93 million was handed over. Surely we would have had some rights under that contract for them to wear that cost. Did we exercise any of those rights?

Mr Adams—Sorry; could you enlighten me on the time frame you are talking about? You have the benefit of the numbers; I do not have them in front of me.

Miss JACKIE KELLY—In 2003-2004, looking at where payments are made, it is averaging between \$100 million and \$200 million a year. But In 2003-2004, there was a significant drop in what was paid, given that you were coming to the end of the contract. Was somebody exercising their legal rights to say, ‘We are not paying you unless you deliver.’

Mr Adams—No. You only pay under the contract against a furnished invoice, which is verified and authorised—you go through a process of doing that. That has certainly happened since I have been there. The reason that you will find the drop there is that, I guess, the project got to a point where the development work had been done, we were into some of the installation and there were delays in then implementing some of the activities in the development work in the installation. The contractor only claimed that amount of money, which was authorised and paid.

Miss JACKIE KELLY—So no penalties were imposed by Defence for any delays or any frustrations you were experiencing with the contract?

Mr Adams—Under Australian contracting you can not impose penalties, for a start. There are liquidated damages in the contract. They have not been exercised.

Miss JACKIE KELLY—Has the triggering factor for the exercise occurred in terms of these delays or was it not a significant enough delay to trigger?

Mr Adams—In actual fact, liquidated damages have not been triggered. Actions have been activated prior to any liquidated damages—

Miss JACKIE KELLY—So Defence has waived their rights under the contract to try and get an outcome on the contract?

Mr Adams—No. In my experience with the project, we have worked in consultation with the contractor and, with knowledge of the broader hierarchy within Defence, we have made decisions to the best benefit of both parties and the outcome of the project.

Miss JACKIE KELLY—But you know that since 1998 there was a budget that government was expecting to be met, and clearly you were getting too close to that budget and you have not got the ship.

Mr Adams—I do not think that is factual. We have not expended our budget and I do not believe we will expend our budget with this project.

Miss JACKIE KELLY—The ANAO report is basically that you have had an 80 per cent spend.

Mr Adams—That is slightly different than expending your budget. There were strategies in this program, as in many big programs. What you were looking at at the start was the six-ship program. Assuming you get through the first, if not the second, it is almost then rolling it along, and it is replication of what you have done before. The risk is in the front end. It is in the development and rolling that out. As well as that, you look for economies of scale when you procure equipment. Through the contractor we bought the prime equipment for the six ships upfront in the earlier dollars. So we were realising benefits there alone in the time value of the money and also we had the equipment sitting there ready for installation so there would be no delays. They were intentional strategies.

Dr Gumley—I noticed in the questioning last time that there was a line of thought that we are wrong in making payments as we go through the contracts. When you have a billion-dollar contract and the size of the contract is larger than the market capitalisation of the companies doing the contracts, the only way the contracts can be completed is with constant payments. So I am very comfortable—

CHAIR—Is that what happens in the private sector?

Dr Gumley—Yes, absolutely.

CHAIR—Are you sure about that?

Dr Gumley—Yes.

Miss JACKIE KELLY—That 80 per cent can be paid and not one single ship delivered.

Dr Gumley—I do not think the private sector most times take on development contracts anything like the size of this. Look at, say, Leighton doing Spencer Street Station in Melbourne. That became public knowledge on the front page of the *Age* when that was delayed. There were progress payments being made there.

Miss JACKIE KELLY—What do you think of something like, say, Qantas purchasing the A380s?

Dr Gumley—I do not know what Qantas's—

Miss JACKIE KELLY—Do you think it would be quite acceptable for them to pay out 80 per cent before they got a plane on the ground?

Dr Gumley—I do not know what their terms were, but in my career I worked at Boeing previously and prepayments from the airlines were very common.

Miss JACKIE KELLY—Up to what value would you say?

Dr Gumley—Typical numbers would be a third of the money being paid on deposit, a third being paid when it rolls off the production line and a third being paid when they take delivery. I am not saying that is the exact number, but significant amounts of money are paid as progress payments on big contracts.

Miss JACKIE KELLY—I want to come back to all these payments made, Mr Adams. Twice the master schedule of the contract had to be rejigged. There has been significant money spent on legal advice saying clearly that Defence was not happy with how this was progressing. There have been issues. Did you ever at any stage use any kind of big stick from within that contract to save government money? Often in a lot of contracts there will be penalty payments for late deliveries and all those sorts of things. Was there something in the contract that you could have exercised?

Mr Adams—I exercised the contract continuously while I was there and that is the reason why we have embarked on obtaining professional legal help outside of Defence. You seek that advice, you seek contracting advice, you look at the business decisions and you look at the engineering implications. You also look at where the company is and how you want the company to deliver the program.

Miss JACKIE KELLY—In your time in 2003-04, was the nearly one million dollars spent on legal advice from a particular outside firm or was it the same firm you have been dealing with throughout the process? Was it the same firm that helped you design the original contract?

Mr Adams—Across that time I dealt with two legal firms. I dealt with the Australian Government Solicitor in 2001-02 and then we used Blake Dawson Waldron. I have used Blake continuously since that time simply because of the advice provided and to keep the continuity of that advice.

Miss JACKIE KELLY—Who were the lawyers? Was Blake in the original contract?

Mr Adams—The Australian Government Solicitor was involved in the original contract, as I understand it.

Miss JACKIE KELLY—I think they contracted that out. If we can get advice on too, Mr Gumley, as to where the money on legal advice was spent and who helped to design the original contract and subsequently assisted you through a few issues. Mr Adams was there in 2004 for the changes to the master schedule. Was it all on software?

Mr Adams—No, it was not all on software. Software was a driver but, under the contract, progressive delivery of the capability is allowed. I think that has been explained to you before and I will not go into that in detail. ADI opted in 2001-02 to go to multiple base lines of the software. The reason for that is that, if you break down the technical complexity, you get the problems in manageable chunks and you have a high level of success at the outcome. Under the contract you can have four base lines. They have opted to go for three base lines and for the product to move forward with that. In addition to that there was installation happening on the lead ship. That took longer than was anticipated and you can only claim moneys when you have completed the work.

Miss JACKIE KELLY—There was not any extra money paid to the contractor—

Mr Adams—I am sorry, I do not understand what you are saying. What extra money?

Miss JACKIE KELLY—to get it back on line? In the changes in 2004, was there any extra money undertaken to be paid to the contractor on the basis of those changes?

Mr Adams—A CCP86 happened in the May time frame and with that came an act of prevention. The Commonwealth's contribution to that act of prevention and global settlement was \$16 million in base date dollars which equated to \$21 million in current day dollars at that time.

Miss JACKIE KELLY—Can you run through that for me again?

Mr Adams—Under the contract there are clauses that provide safety mechanisms for the contractor if the Commonwealth is not delivering on certain things. That was exercised by the contractor and they put a claim on the table for excusable delay and acts of prevention that related back to early parts of the contract. That was worked through and there was a global settlement which equated to \$16 million dollars in base date dollars and, when you aggregate that with price variation across the time, it worked out at \$21 million dollars.

Miss JACKIE KELLY—What were the delays the Commonwealth caused which activated that clause?

Mr Adams—It is integral to the lessons learned in this whole program. I think Dr Gumley touched on it at the start. It was a fixed price contract. It had high levels of development—particularly with software.

Miss JACKIE KELLY—Defence was not doing any software development. They just had to finish some government material. What were the delays that the Commonwealth—

Mr Adams—I was trying to explain that. It comes under the lesson learned. There was a fixed price contract for a high development program. There was lots of software development. Specifications were not locked down at contract signature. The requirements were not locked down at contract signature. The government furnished material, and some of the information was less than ideal. Because you are doing an upgrade and it is not a new acquisition, you have to baseline the ships and actually give a baseline so the contractor can design from that baseline. The supporting documentation with that information was less than ideal. They were the sorts of things that were incorporated in that delay claim.

Miss JACKIE KELLY—How does the specifications not being locked down at contract signature contribute to your delays?

Mr Adams—You are getting to a point where the contractor goes into design. He then may come and ask because he is unsure—it is not black and white what the requirement is.

Miss JACKIE KELLY—So he has documentation of what he thinks Defence wants and he is going to deliver according to that, and then Defence keeps changing its mind.

Mr Adams—No, I did not say that.

Miss JACKIE KELLY—Okay. Shoot—what are you saying?

Mr Adams—I am saying the requirements and specifications were not documented and agreed at contract signature. That provides a level of uncertainty to the contractor, in particular when he gets into his detailed design.

Miss JACKIE KELLY—And the Commonwealth delayed in terms of locking up exactly what they wanted? Where was the delay for which we were responsible for \$22 million, given that—

Mr Adams—It was across a number of those things. Each contributed to the delay in the program. ADI was not responsible for the full delays that we were dealing with. The Commonwealth contributed to them. That was what we were paying for.

Miss JACKIE KELLY—So any penalty payments that were triggered under this contract were generally triggered by the Commonwealth and actioned by the contractor. Was there any situation in which the Commonwealth was in a position where they could have activated a trigger and maybe made a global claim back for \$21 million, or did that just never occur?

Mr Adams—Liquidated damages were not triggered in the contract.

Rear Adm. Ruting—The liquidated damages in the contract were aligned with the major deliverables of ships and training systems. They may trigger at the date at which that milestone was supposed to have been achieved but they are not claimable until that event is actually achieved. Most of those liquidated damages claims were related to activities that occurred in the later part of the overall delivery program, whereas the conditions in the contract allowed the contractor, as Mr Adams explained, to claim for excusable delay and acts of prevention at any point in time through the contract.

Senator MARK BISHOP—Dr Gumley, I do not want to rework the history of this project. We have done it in a number of forms and we are all familiar with it. I just want to cut to the chase on this issue. The ANAO provided a costing. The contract price is now \$979 million for the four ships, reduced from six. We know that one has been sent out for trial. There have been capacity problems and force projection problems. They have been identified and they have to be rectified. In that context, the issue for me is to do with 80 per cent of the cost having been paid. I do accept your arguments on development costs, risk and those sorts of things. The question for me in terms of the milestone payments is: with hindsight, were the triggers that kicked off the milestone payments leading to payment of 80 per cent of cost before the first was ship signed, sealed and delivered appropriate triggers in the contract as amended; if not, why not; and how have you changed methods of milestone payments in extant and future projects?

Dr Gumley—That is a very deep and complicated question you have asked. If we were to apply it across all the DMO projects, it would become a series of checks and balances and compromises that need to be made. We have earned value management payments, which is a way of paying as you go. That is a way of making sure cash flow goes to the contractor. They are not in a position to borrow a billion dollars and then you just pay them a billion dollars when four ships turn up. They do not have the capacity to do that. There has to be a way—either through milestone payments or earned value management payments—which gives them the cash flow they require. One of the things we might have learned is to have a higher retention payment for when the ships actually turn up because then there is an incentive to deliver.

Senator MARK BISHOP—A higher—

Dr Gumley—Retention payment. For example, when the ship finally turns up, the last 10 per cent—or some number—of the contract gets paid, and so there is a greater financial incentive to finish the contracts. It becomes a compromise: if you pay too little, the company does not have the cash flow to do the work; if you pay too much, there are not sufficient incentives to finish the contract on time. It does become a balancing act and it depends very much on the size of the contract. Small contracts, where the value of the contract is well within the resources of the company, we can do on a fixed price basis and pay at the end of the contract. You go to the supermarket and buy a can of peaches, and it costs you \$2; that is a fixed price contract. If you get to one where you have a contract much bigger than the size of the company doing the work, then you obviously have to find a way to do it with the cash flow. All these checks and balances have to come into the contract negotiation. Every contract is different.

One of the things we have learned is that the earned value management technique works very well while a contract is on schedule. Once a contract drifts more than about 10 per cent off schedule, the technique starts to fail and you start getting unfortunate outcomes. A contract that has drifted off schedule is actually better structured with more milestone payments than earned value payments. One of the things that we did in this FFG project in the April negotiation was we changed the ratio of the earned value to the milestone payments.

Mr Gillis—We almost reversed it. The original ratios were that approximately 70 per cent of the contract was on an earned value scheme and that was not working because the schedule was being delayed.

Dr Gumley—It slipped.

Mr Gillis—We have reversed that so the bulk of the payments for the remainder of the project are based on fixed milestones. As you saw, the negotiation took nearly four months to complete because it is a rebaselining of the total financials of the project. Because we knew that the schedule had slipped and we had to rebase the schedule, the remainder of the project is going to be on milestones.

Senator MARK BISHOP—Your response was quite interesting, Dr Gumley, because essentially you argued that the earned value payment system is an assistance to cash flow to a company that is either undercapitalised or inadequately capitalised for such a significant contract. In that context, is it still considered appropriate to be awarding such significant contracts—billion dollar contracts—to companies that we now understand to be inadequately or undercapitalised?

Dr Gumley—I think it is wrong to characterise it as inadequately capitalised because that is unfair to the company. A contract is between two parties and you ask yourself the questions: who else could do the work and who else is interested in doing the work? We are getting a lot of pressure from companies to not have any liquidated damages in contracts. Companies, for their natural interest, want softer contracting; the tone of the questioning here is we should have tougher contracting. It becomes almost a social contract between Defence and industry as to what is the appropriate balance. If we come up with totally draconian contract terms, I will have nobody to contract with.

Senator MARK BISHOP—Others may be, but I am not advocating regulation for regulation's sake or a tougher contract just to be hairy-chested; I am just intrigued by the proposition that you advance that it was necessary to provide significant cashflow to the company on the earned value payment system for them to carry out the contract, which in the final analysis they still have not been able to do.

Dr Gumley—I do not know of any alternative to making progress payments in contracts for very large contracts. I am not aware of any company in the world which puts its whole balance sheet at risk against a contract where 100 per cent is paid on the last day of the contract.

Senator MARK BISHOP—Is your advice that the issue really is about what the ratio, the mix, is of payment at the end for suitable delivery and payment of—

Dr Gumley—Yes, and it becomes a judgement call, and two parties meet as adults to try and reach a consensus on that. That is how the contract is formed. It becomes a risk balancing issue, so that if more risk is transferred to the contractor—

Senator MARK BISHOP—A higher cost.

Dr Gumley—Yes, it is a higher cost. The contractor will say, 'I'm taking on the risk, I'm going to charge more.'

Senator MARK BISHOP—Chair, can I ask the ANAO to comment—probably you, Mr Cronin—on Dr Gumley's remarks?

Mr Cronin—We can only comment on the reports that we look at, but with respect to the FFG, if you look at page 89, paragraph 7.75, you will find that between June 1999 and July 2000, the department paid \$254.8 million to ADI, which was a combination of milestone payments and earned value payments. As of when the GST came into effect on 1 July 2000, the company recorded that they wished a further payment of GST because the payments had been made pre-GST and they requested that \$8.36 million of GST be paid. That would indicate that there is \$83.6 million of funds remaining unexpended at that point in time when that claim was made, and that is covered in paragraph 7.75. That gives you an indication of the significant amount of cash sitting there that has been there for a period of time.

Senator MARK BISHOP—What is the point you are making?

Mr Cronin—There is a large amount of cash retained by the company that was made in a pre-GST period. In July 2000, when GST became payable, the company requested the Commonwealth to pay GST on that amount that had been paid in the past, and that would indicate there was something like \$83.6 million being retained by ADI that they had not spent.

Senator MARK BISHOP—Does that go to the argument that perhaps the need for cashflow at that stage was not as urgent as the conclusion we might have come to from Dr Gumley's remarks?

Mr Cronin—All I am saying is that, in the 13-month initial period, the Commonwealth paid out \$254 million to ADI, which was a combination of milestone payments; and that the \$126 million mobilisation payment was made to get the company going ahead of certification of their earned value system. Their earned value system payments commenced prior to that system being approved, so essentially 13 months after you had \$254 million paid out, there was at least \$83.6 million that had not been expended, even though we had paid. It is a very large amount of money. That is in terms of paragraph 7.75 of the report.

Senator MARK BISHOP—It is almost eight per cent of the total net value of the contract.

Dr Gumley—I think we accept that, because that is the data; they are the facts. The amount of prepayments was probably excessive in the period, and I think we accept that. It is not a mistake we will be making again. It is not money lost; it is just money paid early.

Senator MARK BISHOP—It is money paid early, they had it sitting there. Dr Gumley, is it your basic proposition that the system that we have had in place for the payments for FFGs is, by and large, adequate, although there have been some lessons learned, except in terms of the ratios?

Dr Gumley—Yes. I would like a better balance in milestones and earned value payments. The optimum economic position is to have neutral cashflow for the company. The reason for that is the cost of borrowing; the Commonwealth has the cheapest cost of borrowing of any organisation in the country. Therefore, if anyone is going to borrow or use taxpayers' equity or whatever, the cheapest party to do that is the Commonwealth; otherwise if the company has got to borrow money to do a project which we end up paying for, it is at a much higher interest rate. The optimal situation is to have some form of cashflow neutrality. The profit component of the

contract should, as far as possible, be the final payment made when the item is delivered, so the company always has a big incentive to finish the project to get their profit.

Senator MARK BISHOP—If you were rejigging the contract, you would have a bigger payment.

Dr Gumley—A bigger payment at the end.

Senator MARK BISHOP—Do you define ‘end’ as when the navy signs off on the first ship?

Dr Gumley—I think in this particular contract there are four ends, are there not? Each ship is really an end in itself.

Senator MARK BISHOP—Once the navy has signed, sealed and delivered the first ship.

Dr Gumley—That would trigger a significant milestone payment; that would be the optimum. That is a major chunk of work that has been done to the satisfaction of the customer.

Senator MARK BISHOP—Understood. Thank you, Dr Gumley.

CHAIR—Dr Jensen, we will move on to you. We need to cover some of the other project if time permits. I do not want to cut people off, but we will certainly roll through for the next 45 minutes or so. I know others have other commitments. If we need to cover another project, or finish the coverage of that on another day, we will do that. I think it is important that we get the questions and answers.

Dr JENSEN—Dr Gumley, you made a comment a couple of minutes ago that I found extraordinary—that by paying money early you are not losing the money you are just paying it early. If, for instance, I pay off half of my housing loan immediately, I expect some sort of reduction in the amount of the total amount of money that I pay.

Dr Gumley—You are absolutely right. I have already accepted that, under the formulas which were set up at the time of contract with the EVM and the milestones, the formulas resulted in an excessive amount of money being paid early. The contract was deficient in not having some form of interest recovery as you suggest.

Dr JENSEN—There is something else that I am curious about. Not just with this contract but as a general position it seems that Defence tends to take the view—when I say Defence, obviously DMO is the organisation that actually acquires equipment—that, if the requirements of the contract are not met, for instance, let us say there was a timeliness issue, we go to negotiation instead of litigation. Would that be a fair characterisation?

Dr Gumley—Yes, because it is nearly always cheaper and more efficient.

Dr JENSEN—Although would you not say that, in effect, the message that you are sending out to industry is that ‘If the timelines slip and if you negotiate a contract where you are being way too optimistic with your timelines, do not worry about it too much because the penalty clauses will not be invoked; there will just be some form of negotiation.’

Dr Gumley—You are raising an interesting question because there is a debate going on at the moment, as you know, about the form of contracting that is most suitable. We use a variety in Defence; it depends upon how you allocate the risks between the two contracting parties. I would prefer not to go to litigation; courts are very uncertain vehicles. You can spend a heck of a lot of money on lawyers and get an outcome you do not always expect. In nearly all occasions you get the evidence, you get the data, you present the data and mature and experienced project managers sit down, work out where the evidence lies and reach an arrangement with money transfers one way or the other, depending on what the data says.

Dr JENSEN—With this one, it appears to me that you do not have just a slight slippage of the program; you have a massive slippage of the program. What sort of offsets have we negotiated due to not having the piece of equipment that we require in time—which, let us face it, means that you are missing out on capability?

Dr Gumley—Yes.

Rear Adm. Ruting—In the case of the negotiation that Mr Adams was referring to earlier, where the Commonwealth paid \$16 million in base date dollars, the contractor had to pick up almost two-thirds of that total claim. The contractor had to fund a much higher proportion of that at that particular point. Yes, our focus is very much on getting the capability out there, and that is why, in the more recent contract negotiation, we looked very seriously at how we could get the capability out there to the operational Navy more rapidly. We negotiated a new hand-back arrangement whereby we obtained access to HMAS *Sydney* at the end of April this year so that we could actually operate the ship and do a range of roles and tasks with that ship earlier than if we had just left it there waiting until ADI had met the provisional acceptance requirement for delivery of the ship, which was the previous arrangement in the contract. So we did negotiate an arrangement whereby we got earlier access to use the ship for the sorts of things it could do, even though not all of the systems were up to the required level of performance for provisional acceptance.

Dr JENSEN—What I would be interested in here—and obviously this is something to take on notice—in terms of the overall contract is what sort of savings Defence has negotiated to counteract those slippages. It would be quite interesting, for instance, to balance those offsets that have been negotiated against, let us say, what would have happened with a loss of capability if the money had been put on the short-term money market. Basically, what I am after here is this: the contract was a fixed price contract; how much money have we actually saved on that as an offset to the significant slippages in time line?

Mr Adams—The response that would come back through the ANAO would clearly identify that there is \$40 million that comes back with the reduction of two ships out of that and aligned with the schedule. ADI now has to deliver the four ships within the six-ship program and there is a further 12-month extension going out to 2009 when we get the final capability. That is fixed price. ADI needs to fund that under the contract price. That is happening at the moment, and I imagine that is only happening through their board approving and drawing down on their margin and aligning their budget at completion and their estimate at completion to align. We are not paying for that. I could go away and do some sums and come back, if that was beneficial.

Dr JENSEN—If you would not mind.

CHAIR—Yes, take it on notice.

Dr Gumley—Dr Jensen, having been on the other side of this and having been a contractor, I can assure you that the contractor loses as much as the customer does when there are delays. You have a standing army of fixed overheads that have to be paid for and you are not being paid any more money under a fixed price contract. One way or another, you end up losing.

Dr JENSEN—I appreciate that, but from Defence's perspective, Defence theoretically has a fixed price contract but the thing is slipping, which is actually costing Defence. The fact that the party that is, for want of better terminology, causing the delay and therefore the additional expense to Defence is also incurring some penalty as a result of that—

Dr Gumley—Liquidated damages is a technique well known in contracting to try and get a reasonable pre-estimate of what those delay costs are. In the Australian legal environment, you can measure certain things but it is a bit at variance to look at the cost of lost capability. I am not aware of any formula that shows what it is worth to you not to have a ship there when you most need it. We nearly always get project costs back through liquidated damages, extra travel costs, extra legal costs. There are a number of things you can get back but there are some things in what are called pure capability that it is very hard to put a formula on.

Ms GRIERSON—In the purchase of jets by Qantas, they did get liquidated damages, and they quantified that by loss of revenue. Defence cannot always quantify it by loss of revenue but loss of capacity can have huge implications.

Dr Gumley—Yes, it does, and it does become an interesting area of the law, the law of damages and so on, as to what you can or cannot claim.

Dr JENSEN—Consider sailors that are sitting around effectively because they are not able to do training, and you have your engineers—

Mr Gillis—There were a couple of issues that complicated this in respect of actioning the liquidated damages. One was that in the process of upgrading the vessels we found that there was a major structural fault in the double plates, and I would get Admiral Ruting to go to the technical aspects of that. That was not something that was required by ADI to fix. It was unknown to anybody until we undertook the upgrade.

Dr JENSEN—That is fair enough.

Mr Gillis—There were aspects of that, and there were also aspects in respect to redrafting the schedule. The maritime commander with four vessels wanted to make sure that he met the government requirements of having a minimum of vessels at sea so he redrafted and required us to work with a revised schedule of availability to ADI. It becomes very complex when we are trying to work out who is at fault and the cost when we want upgrades or repairs done to a vessel. We are also providing restrictions because the government made the decision to go from six to four, and at four ships we had to work out a structure so that we had the right capability at sea. It is not a simple process. As I said, this renegotiation took in excess of four months of detailed—

Dr JENSEN—I am sort of going to be jumping projects here. There is a similar thing with the ARH. What offsets have we got there versus the slippage of time line? You can take that on notice.

Dr Gumley—It would add to the debate.

Dr JENSEN—I would like to ask some high-level, generalised sort of questions. ANAO in their report indicate that, with the projects that DMO is involved in, 30 per cent of projects have permanent slippage—in other words, irretrievable slippage. They say that 20 per cent require intensive maintenance in order to keep to the time line. Do you believe that is a fair characterisation?

Dr Gumley—I gave those figures to the ANAO, yes.

Dr JENSEN—Fair enough—so, yes, you do. Something that I find interesting as well is that you talk about the FFG as being indicative of the way things were done, a sort of a mid-term capability, and the C17 as the way it is done now.

Dr Gumley—No, the C17 is an FMS case, which really transfers to the American procurement system in government.

Dr JENSEN—The foreign military side of it.

Dr Gumley—The contracting mechanisms.

Senator MARK BISHOP—What is FMS?

Dr Gumley—Foreign military sales. Effectively, it is like a government-to-government transaction. We pay the US government; the US government negotiated in this case with Boeing under their contractual arrangements with Boeing. The FMS system works very well when you are at the middle or the end of a production run because the scheduled problems have already been derisked, and for things like C17 it is a good way to go. Of course it does not do much for the establishment of Australian industry, it does not do much for employment in our country and it does not necessarily do much for how we maintain, sustain and upgrade those platforms into the future and build in the core capability skills in our country. There is no one magic bullet here to say, 'This is the way you go.' We have a number of policy things we want to do for capability for the ADF.

Dr JENSEN—I was going to say that I would not characterise C17 as a good indication of capability acquisition. In effect it is slightly different but not significantly different from buying an airliner, whereas with some of these others—particularly where it is not off the shelf, even if, as in the case of the ARH, it was ostensibly off the shelf—you have some very inherent risks that are associated.

Dr Gumley—It is absolutely true that the defence procurement is probably the riskiest business activity in this country. Anyone who thinks we are going to go about procurement and take no risks is just kidding themselves. What we have to do in defence procurement is recognise that it is impossible to transfer all the risk. It is impossible to evade it. Similarly, we should,

through our contracting formulas, not attempt to take on excessive risk. There is an optimum amount of risk and then you manage it intensively. That is why you have a DMO with 7,000 people, with over 1,000 engineers and 500 project managers; our prime job is to manage risk.

Dr JENSEN—I will come to ARH here because clearly a way of mitigating risk in that regard is through test and evaluation. Yet, as of the middle of last year, some \$310,000 had been spent on T and E for the ARH project despite us being the lead customer.

Dr Gumley—Most of the T and E was done by the French government and the DGA but Major General Fraser might be able to give you a bit more detail.

Major Gen. Fraser—I am the head of Helicopter Systems Division, a newly established organisation by Dr Gumley and the minister to address helicopter issues. Dr Jensen, in answer to your question we had a test crew—a flight test engineer and a test pilot—embedded within Eurocopter for 3 years at no cost to us. They accepted all those costs. So the data you see does not show those costs that we would normally be charged. Eurocopter accepted our crews so that we could develop the aircraft. The limited amount you see there in the budget for test and evaluation, the majority of it will be used once we field the aircraft to the operational units for operational test and evaluation.

Dr JENSEN—There is a little bit of concern on this. What was the original budget for T and E?

Major Gen. Fraser—\$22.7 million.

Dr JENSEN—It was \$22.71 million. There have been problems that we found with the ARH. It is a proud boast really by Defence that we will be the first nation with this capability which clearly indicates that we are the lead customer. It also clearly indicates that it is not an off the shelf item which was contrary to the evidence given by the contractor in evidence to this committee a couple of months ago. It just strikes me that, even with that amount that you mentioned of free test and evaluation, it is still nowhere near what would be required for a lead customer.

Major Gen. Fraser—I need to clarify our situation. At the time of compiling the ANAO report we had certainly compressed the time and caught up with France and Germany with their program in delivery of aircraft. The aeronautical organisation in France—equivalent to Defence Materiel Organisation—which does the acceptance of aircraft, the development of the aircraft and engineering work is also providing the engineering work to Australia. We are not the lead nation. It is a perception that has been created, but we are not the lead nation.

Dr JENSEN—It is a perception that Defence has created, with all due respect.

Major Gen. Fraser—I certainly agree. But that was created at a time when we were compiling the ANAO report. We have six aircraft, France has six aircraft, Germany has five and Spain has three. They have accrued 2,200 flight hours for the European program. We have 1,170, so we think we have made a reasonable achievement but we are still behind the European program. We are still reliant on the engineering work from DGA, which is the French organisation. They accepted some schedule delay in their own program by going into the

engineering work for the whole Tiger fleet. What they did for Australia, because they provided us with significant assistance, was to take each of those issues and hand them to us independently and progressively as they conducted the engineering work. What they did was to batch them all up for the French and German programs, delay some time and then provide them to the French and German program. So that is where you get the perceived delay, because they have batched all their engineering work into one lot whereas we did it progressively to make our 2004 acceptance.

We are still using DGA engineering work for the introduction of Tiger and we are still reliant upon them for that engineering work. The test and evaluation that we need to do is to take it beyond the French system. The ARH Hellfire that we integrated was extremely successful; we have fired eight missiles out to an eight-kilometre range by day and by night with extremely precise accuracy. It went exceptionally well. Much of that engineering work and flight test work were sponsored by Eurocopter, and we provided some test crews to check it. The other sort of work is the helmet mounted sight and display that the crew wear for targeting purposes. We are taking it to a level beyond the French program; therefore we will do some flight testing associated with that.

Dr JENSEN—I did not actually want to kick in to the ARH program in detail here. It is just the way the question—

CHAIR—You gave them the opening!

Dr JENSEN—I agree with you, Chair. I think we should stick to the higher level stuff and also the FFG stuff, and we can come back to ARH later. Another issue that I have is that in Defence generally—and DMO is certainly in this—there seems to be this culture which is shown just about every time you have an inquiry. There is an acknowledgement of errors in the past: ‘Yes, we had a problem then but everything is going great now.’ You will come back in a year’s time and they will say: ‘No, there were problems then but guess what? We’ve fixed it all now.’

Dr Gumley—No, I would not make that statement. Everything is not great now. That is why we have a very dedicated and hard-working staff trying to improve things. We are dealing with some very complex technology. We have program slips. On the public record on many occasions we have said we have very significant problems with schedule on these projects throughout the country. We do not have a problem with project cost. When you look right across all the projects we are closing, they come within a few per cent. I am on the public record there; that can be checked. We do have major problems, though, with the schedule. Let us get this clear in this contracting environment: most of the contracts are taken on with people being reasonably optimistic and saying, ‘We think we can achieve that by then.’ Because of the technical risks involved in the projects, schedule slippage is inevitable. So we are getting schedule slippage. There are lots of different ways of measuring it. I think in Australia we are running at about 17 or 18 per cent. We have checked with the British and we have checked with the Americans; they are running at a similar sort of percentage. I think it goes with the territory. We are not the only people out there.

Senator MARK BISHOP—Did you say 17 or 18?

Dr Gumley—I would like to do a lot better than that, but that is the problem that we are concentrating on—trying to get the schedule improved across all of our projects. You get some like this one, the FFG, where the schedule slippage is approaching 100 per cent. You get other projects which come in ahead of time. The average is still our biggest problem.

Dr JENSEN—As an example, at estimates senators were assured by Defence that there would be no requirement for an interim new air combat capability. They were very confident that the Joint Strike Fighter would be arriving on time, there would be no requirement for an interim capability and also we would not have a capability gap. Now I see that the F-18E/F is being looked at as an interim capability. I believe that Boeing, for instance, is fairly confident that that will ultimately become a permanent solution. There is this confidence expressed, and then in short order, suddenly, we are looking at more expenditure—an interim capability is still an acquisition.

Dr Gumley—Chair, do you want to expand the terms of reference of this committee to the Joint Strike Fighter?

CHAIR—Not at this stage, but I do not—

Dr JENSEN—It is just a general point that I want to make on this—the inquiry is fairly broad—with specific case studies.

CHAIR—The terms of reference are broad, but if Dr Jensen wants to use another example for illustrative purposes he is perfectly entitled to.

Dr Gumley—That is basically what that was.

Mr Gillis—Dr Jensen, just going back to the FFG process here, one of the things that we emphasised during the renegotiation with ADI was that we wanted an executable schedule from them. We wanted them to give us a schedule that was deliverable, because one of the things that we have to provide to our major stakeholder, the Navy, is certainty about when they are going to get their capability. I know of at least three or four times when we had to ask ADI to re-baseline their schedule so that it was deliverable. There were lots of negotiations that went on. But there is a natural process in business whereby companies do not want to extend their schedule because it costs them money—because they have to go back to their boards to say this thing is going on and on and on. Sometimes they are trying to be overly optimistic or as optimistic as they can be about delivering a capability as early as they possibly can. One of the processes in which I think we had a successful negotiation was in getting something that was executable, that was deliverable within a certain time frame. It ended up costing ADI significantly more than I think they wanted to pay because they are going to have to invest their own money into getting on schedule. They wanted to deliver it earlier, but what we wanted is actually an executable program.

CHAIR—I know Senator Bishop had one or two questions, the deputy chair has one or two and I know Mr Tanner has some. As I said, we will not rule out coming back on this issue and some of the others. It is important that we deal with it.

Senator MARK BISHOP—I want to go back to the earlier discussion on risk, Dr Gumley. Qantas buys planes to generate revenue. Navy buys platforms to project capability. Delayed capability involves an opportunity cost and supplementation of capability from elsewhere. You said earlier that defence procurement is the riskiest in this country. It is impossible to transfer or evade all risk, and your prime job is to manage risk. I quarrel with none of that. Has your organisation done any work on quantifying capability loss or capability delay? Because we can quantify late delivery of a plane to Qantas through revenue loss and it can be offset. Is there any work being done to attempt to quantify capability loss or capability life which goes out by two, four, five years?

Dr Gumley—Clearly, you cannot put a value on the ability to fire a missile off a ship at somebody when you do not know if there is going to be an event that requires you to fire a missile. As previous Secretary Smith said on many occasions, we are a ‘just-in-case’ organisation; we are not a profit making organisation. So for the courts, if you ever got into a dispute with a contractor about what is the opportunity cost of not being able to fire a missile, I think a lot of people would have a difficulty putting a quantum on that.

Mr Gillis—Having sat on the other side of this industry and actually been a shipbuilder in Australia, I know that the associated risk of the dollars for with that capability lost would be such that you would end up passing that cost straight back onto the Commonwealth. If in fact you were taking on the risk of not the pre-agreed liquidated damages but a very open cost, it would cost the Commonwealth a significant amount of money. I would traditionally have passed that on in its entirety. The only way I could have done that was to get insurance against it and I do not think I could have got insurance against a loss or a potential loss of capability in a military sense. It would have been almost impossible to achieve. It is a very difficult thing to even—

Dr Gumley—As an example of where we can go with liquidated damages, you can get daily operational costs for a ship—the cost of the crew, the food, the fuel. That can be quantified, and we could normally claim that sort of liquidated combat. But the contingency cost is something which might be a step too far.

Senator MARK BISHOP—Thank you for that.

Ms GRIERSON—There have been significant platform changes as part of the FFG Upgrade Project, and there have been many people who say it is going to be leading-edge Australian technology. What has been the upside of that for the project? Is it a significant upside?

Rear Adm. Ruting—The upside, to a large extent, as Mr Adams mentioned, is that it is an Australian company that is developing the software over in Western Australia.

Ms GRIERSON—I mean for the Navy—for the project.

Rear Adm. Ruting—The benefit the Navy obtains out of this is similar to that which comes from developing a number of solutions in Australia—that is, we have intellectual property information held—

Ms GRIERSON—If it is commercially viable and going to benefit ADI in other applications, who owns the IP?

Rear Adm. Ruting—In most cases, IP is either jointly owned where we have paid for it or it is in fact owned by the company. We have acquired a licence to use that intellectual property through the rest of the life of that ship. That then allows the company to use that IP to generate revenue in other areas—for example, you mentioned sales to other potential customers. In this case, that may be somewhat limited; but, in a number of other cases of IP, that is a significant benefit to Australian companies.

Ms GRIERSON—So, in this specific contract, what is the IP ownership ratio?

Mr Adams—There are rules for foreground and background IP. Because the software development mat is through US sources and foreign military sale input, the major of that IP will come to the Commonwealth.

Ms GRIERSON—Okay.

Mr TANNER—Apologies for having had to sneak out to another commitment for a short period. Senator Bishop has been updating me on the proceedings in my absence, so I will try to avoid going directly over the areas that have been touched on. There is really only one area that I want to deal with in respect of the frigates contract, and that is the lessons learned from the actual contracting process and, in particular, what changes you have made or will make with respect to the use of the earned value payments system, or the milestones system—such as underpayments or interim payments for part performance of the contract. Understanding that, as with a domestic building project, it is unavoidable that you will have some kind of interim payment system for these big procurement contracts, I wonder first if DMO could explain what lessons you have learned from the experience of that contract—just quickly, because obviously some of this may go over previous ground—and whether you have taken steps to alter practice with respect to those lessons. It seems to me that a lot of these problems ultimately go back to the initial contracting and to the ongoing management of the contract.

Mr Gillis—We have got a substantive body of knowledge with respect to the lessons learnt. As the program manager responsible—along with Admiral Ruting and Mal Adams—for the next shipbuilding program, the LHDs, one of the reasons I took on the role of lead negotiator in this was that I wanted to learn what went wrong and what we needed to do to improve in the future. I did learn a lot about the EVMS process—what effect it had on both the customer at the DMO end and the actual shipbuilder, and the move towards more focus on milestones. In the structure of the LHD program we have moved very much away from that traditional EVMS focus to a more of a focus on milestones, and that is what we have requested in the LHD responses.

In the air warfare destroyer program, both Warren King, who is the project manager, and I have sat down over a number of days with the previous shipbuilding programs and actually had days where we have discussed lessons learnt. We produced quite an extensive list of lessons learnt out of the FFG projects. If you want us to go through them, there are a lot.

Mr TANNER—If you can clarify that you have previously indicated those lessons learnt, at least in headline terms, to the committee in my absence, I do not think that is necessary. We do

need on the record an indication of DMO's response to what I interpret as the ANAO critique of this contract which, to me, goes back to the original terms of the contract. By all means, if the DMO response is, 'That was all fine,' please assert it. If not, and it has not been put on the record yet, then I think—

Mr Gillis—I am quite happy to go through the list of the major headings of areas—

Mr TANNER—Assuming there are not that many, that would be helpful. The alternative would be if you could give us an exhibit.

CHAIR—It does not have to be today.

Mr TANNER—It does not have to be today. I would be quite happy with that. What I am genuinely trying to do is to get to the nub of the difficulty of the contracting task and find out where the real difficulties are. Some kind of written exhibit saying, 'Here is where we have changed our approach subsequently as a result of this experience,' would be helpful.

Mr Gillis—We are placing a significant emphasis on lessons learnt to make sure that future shipbuilding programs do not make some of the mistakes of the past. It is a combination of the lessons learnt that are drafted, the Audit Office responses and also getting people who are practitioners on those programs to come back and work and assist in the new shipbuilding programs. I am more than happy to draft an exhibit and place it on the record.

Mr TANNER—I have one supplementary question, one substantive question and then I will finish. The supplementary question is: if it is not dealt with in that material I would be interested in your view as to whether there is an experience and expertise question with respect to this contract. Is that an issue?

Mr Gillis—Skills of personnel and contracting would be one of the lessons learnt in here.

Mr TANNER—That is fine. My final substantive question is this: I gather from the earlier discussion when I was absent that you talked about risk assessment. You may need to answer this in a slightly elliptical way, but I am interested to know to what extent decision makers up the scale were involved in detailed consideration of the risks associated with this project. In other words, these are obviously highly complex issues, but to what extent were the decision makers, both departmental and political, walked through the complexities of the risks involved in making a decision to approve this project?

Dr Gumley—Are you talking about the mid-90s when it was first approved?

Mr TANNER—Yes.

CHAIR—Do you want to take that on notice?

Dr Gumley—I think I would have to. I do not know how to answer.

Mr TANNER—It may be that you are not able to answer and it may well be that it is better if I ask the same question in a more contemporary environment, because what I am trying to get to

is a particular possibility—that is, that you have decision makers at the top level of the process signing off on decisions without sufficient detailed consideration of the highly complex risks involved. That is what I am trying to establish.

Mr Gillis—Probably the response to the Kinnaird review of defence acquisitions was such that those issues were identified. The two-pass system, the level of committees, the exposure of risk and the level of discussion at cabinet are all examples of where those types of things have now been addressed and why the process is far more disciplined than it has ever been in the past.

Dr Gumley—Supporting what Senator Bishop said a little while ago, in our annual report this year I wrote a section on the risk environment in which we work. I commend that to your committee because it sets the framework for the job we are trying to do. It is in my preface and also on page 12.

CHAIR—We will—

Mr TANNER—I think the Rear Admiral was going to say something as well.

Rear Adm. Ruting—I think that, as Mr Gillis has commented, the arrangements that are now in place take a whole range of independent advice coming up to both senior defence committees and then further up in the much more expansive cabinet submissions to go forward for project approvals now. That includes the Defence, Science and Technology Organisation providing independent advice on the technology readiness levels, the technology risk assessments and the various mitigations which are part of the main body of the cabinet submission and then are much more detailed in what is called the acquisition business case for each of the options that has been put to government. Those acquisition business cases for something like a ship acquisition or an upgrade of the size of the FFG run typically to the order of 50-plus pages and summarise a lot of this information, with major sections addressing cost, schedule, technical and performance risks in the main body so that the senior decision-making body, our national security subcommittee of cabinet, is provided with much more extensive information. Embodied in that is independent advice from the Defence Science and Technology Organisation, which subsequently gets actively involved in observing the risk management arrangements during the life of the project as well.

That was the case in the FFG upgrade in the period in early 2002 when we looked very seriously at some of the challenges that ADI was facing at that point in time. A range of independent reviews were conducted on the capability maturity of ADI to deliver what they had stated they would and by the Defence Science and Technology Organisation on the actual solutions, the new architecture that Mr Adams mentioned earlier. So we engage those sort of independent advisers through that process. Also, post contract—even, for example, in Mr Gillis' LHD program—we have material assurance boards within the DMO itself providing effectively independent advice to the CEO on the risks, mitigation programs, development techniques and project management processes and techniques that are going to be used so that the CEO receives this advice independent of the line management who is managing a particular project. In the case of the FFG, we also have a board of review arrangement that has been reviewing this program for the last two years or so that involves the Maritime Commander of Australia, me as the head of Maritime Systems Division and Mr Ali Baghaei from ADI who runs all of the naval programs. That reviews progress, issues and looks at solutions at not regular intervals but as required by the

development activities we are going through. We have met quite a number of times in the last 18 months or so on the FFG.

CHAIR—We are going to wrap up in a second but we are not going to conclude this issue. We feel we have made some progress but we would really like to spend a bit more time on some of the detail. I know Ms Kelly has one quick question, but we will submit some questions on notice. We will conclude the hearing for the purposes of Hansard, but we will resume where we are now in February and Jackie will kick off the questioning then. We would like answers to the question on notice and the exhibits and everything ahead of time so that we can address those points with you.

Mr TANNER—Do we have a rough idea of how quickly we could get the proposed exhibit with respect to lessons learned?

Mr Gillis—We have a draft already.

Mr TANNER—Some time next week would be good, if it is achievable.

Dr Gumley—It has to be cleared through the minister.

Mr TANNER—Sure.

Miss JACKIE KELLY—At the moment final acceptance by DMO will probably be in 2010, and nothing in this contract has given any confidence that it could be any earlier. The likelihood is that it will be even later, by which stage the original life of three of these frigates will be gone. No. 2 is gone, so by the time you get to final acceptance by DMO, you are going to get half. You are only going to have three ships upgraded. It is fair enough that you go to cabinet now with your specifications as to what you are going to tick off; but, at any point during the term of the contract, is there any mechanism to refer it to cabinet when clearly the price for what you are getting has completely changed?

Rear Adm. Ruting—A couple of points there. Certainly, with respect to the major schedule challenges and the change in architecture that was being addressed in 2002-03, we did go back to the NSC with a business case that identified the cost and schedule risks and where it stood at that time, and the purpose of that review was in fact to determine whether it was still value for money for the Commonwealth to continue with the upgrade. With respect to the earlier part of your statement, because the FFGs are effectively being progressively upgraded and delivered to the different baselines, we will have had significant operational use of, for example, HMAS *Sydney* for quite some time. So, even though final contract acceptance may not occur until 2009-10, we will actually have had the earlier ships out operating with quite substantial increases in capability and we will be allowing their operational use with that additional capability over much of the time.

Miss JACKIE KELLY—Is that the time between hand-back and provisional acceptance, or between provisional acceptance and final acceptance?

Rear Adm. Ruting—Particularly the latter period, being provisional acceptance and final completion of the contract.

Miss JACKIE KELLY—There is six months on this schedule.

Rear Adm. Ruting—For HMAS *Sydney*, for example, provisional acceptance—

Miss JACKIE KELLY—15 December 2006.

Rear Adm. Ruting—Yes. So, well before final contract acceptance in 2009, we will have had—

Miss JACKIE KELLY—31 December 2009 is really 2010, isn't it?

Rear Adm. Ruting—Call it the financial year 2009-2010.

CHAIR—What time on the 31st!

Rear Adm. Ruting—We will have had use of HMAS *Sydney* on that argument for some three years, with fairly substantial capability improvement.

CHAIR—This is an important area. It sounds like a good area for you to kick off next time.

Senator MARK BISHOP—That is not quite right, is it, because the trials of HMAS *Sydney* identified major capability problems in three specific areas and they have yet to be remedied? That is my recollection of your evidence at estimates, Admiral.

Rear Adm. Ruting—It is yet to be demonstrated that the solutions have been achieved. A lot of substantial work has been done over the last five months or so on all three of those areas. But, because *Sydney* is separately going through a routine maintenance period, she will not be going to sea until approximately February next year and will then go through further trials and demonstrations as part of her normal working-up activities after her routine maintenance, and during that time will be able to show whether we have achieved all of those capability improvements that ADI have been working hard on.

CHAIR—As I said, we are not concluding this matter today, we are just concluding this hearing. We will resume it in February. Can I thank you for coming before us again today. We will see you in early February and we will be aiming for the Thursday of the first week of sitting. I declare this public hearing closed.

Resolved (on motion by **Mr Tanner**):

That this committee authorises publication, including publication on the parliamentary database, of the transcript of the evidence given before it at public hearing this day.

Committee adjourned at 12.44 pm