

DEFENCE ANALYSIS

A PRIVATE CIRCULATION SUBSCRIPTION NEWSLETTER

VOL 14 NO 7

July 2011

European Defence & Defence/Industrial Relations When Two Tribes Go To War ...?

The language ratcheted up in the week prior to the Paris Air Show, and kept going during the event. The language was coming through megaphones from Germany, backed up by Italy and Spain, was being dealt with as well as possible from France, and was being ignored by the UK. At the heart of the growing dispute was the Franco-British accord on defence matters, at the heart of which was an agreement on the co-development of a MALE UAV. The outrage that erupted from – primarily – EADS was possibly to have been expected, and it was matched by some other industrial entities, though many of these seem to have been happy to let EADS make the running. The issue for EADS was simple: the Franco-British accord was a mistake as it would lead to a further, future split in Europe as regards defence industrial matters, and would result in duplication of efforts at a time when money is tight, and everyone should be looking to pull together, not apart.

Is EADS wrong? Well, money is tight; it *would* be an error to keep on running over-lapping and duplicating programmes and capabilities; it *does* make sense in the short, medium, and long terms for Europe to try to cooperate, properly, on defence matters, so that exports can be maximised. Is it sensible that Europe should have three different combat aircraft programmes? Wouldn't it have made sense for the progress made on Jaguar [sic], and then Tornado to be maximised in the next generation of aircraft? Of course it would have! Can Europe continue to support long term growth of two major support helicopters in NH90 and EH101? Possibly, but possibly not. Competing radars for all applications? Possibly not a good idea, either. So EADS, with its chief "voice" over this matter, the head of the Cassidian business unit, Stefan Zoller, has a case, no?

Well "yes", as far as the overall analysis goes. But a definite "no" as regards the cause on which EADS (and others ...), and Herr Zoller are fighting. The problem is that the EADS case is pinned firmly on the fact that France and the UK have decided to cooperate on their own MALE UAV, while Herr Zoller believes that they should buy the Talarion UAV which is at the heart of EADS's defence offerings in this area.

The problems surrounding Talarion are legion, but to focus on a few The potential core customers for Talarion, France, Germany, and Spain, have not bought Talarion,

despite the fact that it has been around and available for a few years, and has seen many hundreds of millions of Euros spent on it. Every time Talarion has been mentioned in France as a candidate for a MALE UAV, figures carefully released by the French MoD show that to fulfil the core tasks, it would be by far the most expensive option – not "a little bit more expensive", but orders of magnitude. It is also taking an inordinate amount of time to come to fruition with IOC possibly in 2017 – countries need capabilities sooner than that. There are serious concerns that German law is basically hostile to the arming of UAVs, which is a serious no-no for many people looking to expand current UAV capabilities, or even to entering the field. And as one comment from an RAF officer involved in UAVs said recently, "Talarion? If we were running a contest about a decade ago, it might get onto the shortlist".

These last two points are the vital ones to *Defence Analysis's* eyes, partly because they are linked tightly. Armed UAVs are no longer merely an option, an option such as what type of sensors you operate – if you are serious about UAVs, then your UAVs must be capable of being armed. Actually, when you think about it, taking the EADS argument about avoiding duplication into this field, can any serious country afford to operate both an armed and an unarmed MALE UAV? Precisely And taking the last point, Germany has no operational pedigree in the UAV

**"if it hadn't already
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more split"**

field worth the name – in many cases, Libya being the most recent, Germany is an operational non-player. So why would you buy a major asset such as a UAV off a country that has no operational experience of such assets? Just to recall: UK-operate Hermes 450 UAVs have topped 35,000 flight hours on operations, and that figure rises daily; and RAF-operated Predators have also clocked up 20,000 hours (and rising) as well. The UK operator knows what it wants, as it has the operational background to justify its needs. And there is no evidence that these needs can be satisfied by a company that cannot call upon a deep well of operational experiences.

Here is the potential crux of the current European melée: if it hadn't already been apparent, Europe is more and more split between "Those Who Can and Do", and "Those Who Can't and Won't". Libya is the most recent example: France and the UK are to the fore, but Germany is nowhere, Spain is about to pull out, and Italy, despite being present in a support role, is not leading in strike areas (although it is certain that the Italian Air Force would love to).

By the way, the split between the two sides is not an obvious one. After all, Norway, Denmark, and the Netherlands have been incredibly active players, with the first two nearly running out of bombs in Libya. And this "split" has been evident before now: the Danes and the Dutch have been deployed to the most dangerous parts of Afghanistan, and have been key allies for the other players in that area, whereas even the German media have pointed out that their troops have spent quite a lot of time in Afghanistan drinking beer on base.

To look at this issue from a different line, it is worth considering the harsh words, words which stung more than a few, from the US Secretary of Defense, Robert Gates. In his speech to NATO – and it is a speech which will arguably be regarded in the future as a seminal one as regards transatlantic relations – he made a very trenchant statement:

"In the past, I've worried openly about NATO turning into a two-tiered alliance: Between members who specialize in "soft" humanitarian, development, peacekeeping, and talking tasks, and those conducting the "hard" combat missions. Between those willing and able to pay the price and bear the burdens of alliance commitments, and those who enjoy the benefits of NATO membership – be they security guarantees or headquarters billets – but don't want to share the risks and the costs. This is no longer a hypothetical worry. We are there today. And it is unacceptable."

Well, to *Defence Analysis's* eyes, it is difficult to fault this as a description of the situation in Europe. Mr Gates meant his analysis to refer to – primarily – the split between operations and administration, but *Defence Analysis* thinks that one can extrapolate this towards defence industrial matters.

Those who want to, "... enjoy the benefits of NATO membership – be they security guarantees or headquarters billets – but don't want to share the risks and the costs" will also be those countries less likely to a) have serious operational needs, b) won't have the operational knowledge to draw up those capabilities and, c) won't have the money to purchase such capabilities. So why will they have the right products that other nations will want to buy? With one major exception that *Defence Analysis* can think about, the answer is an absolute "no". (The exception, by the way, is the main battle tank, where for some reason, perhaps buried deep in DNA, Germany makes absolutely cracking MBTS!).

So, the current rupture in Europe that seems to be opening up, that between France and the UK on one side, Germany, Italy, and Spain on the other, seems to be real, and *Defence Analysis* is sure that in the short term, it will grow. But it is likely that the "Alliance Of The Willing" could well expand, with the northern active partners joining in, and money will count. Even with weak budgets in France and the UK, there is still more spending power than in the opponents. ☺

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The rates:

- UK £350 ● ROW £400
- UK Via subscriptions agency £400
- ROW Via subscriptions agency £450

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Designed and printed by DL Graphics Ltd – info@dl-graphics.com

Aircraft Carrier How Long Will You Use It For?

The Chief of Naval Operations of the US Navy, Admiral Gary Roughead, was on a scheduled mid-June visit to the UK where he was also exposed [sic] to the press for an hour alongside the First Sea Lord. As was to be expected, the pairing of a fleet commander who has 11 large aircraft carriers under his command with one who has – notionally – a single deck, was bound to create a cause for comparison. But there was one comment from the CNO which caused *Defence Analysis* to think a little bit more than usual:

“The Enterprise, her first operation was the Cuban Missile Crisis, and she is on operations in support of Afghanistan today.”

He went on to say:

“Take your costs across that period, and you have a very cost effective asset and capability.”

Which did cause some deeper thought about the fact that the US Navy seems to have little trouble keeping a ship such as USS *Enterprise* in service for what will eventually be over 50 years, how do other navies match up?

Ship	ISD	Status	Years
USS <i>Enterprise</i>	Nov 1961	Active	49 years 7 months
USS <i>America</i>	Jan 1965	OSD Aug 1996	31 years 6 months
USS <i>John F Kennedy</i>	Sep 1968	OSD Mar 2007	38 years 6 months
HMS <i>Ark Royal (R09)</i>	Feb 1955	OSD Dec 1978	23 years 10 months
HMS <i>Invincible</i>	Jul 1980	OSD Aug 2005	25 years
HMS <i>Illustrious</i>	June 1982	Active	29 years
HMS <i>Ark Royal (R07)</i>	Nov 1985	OSD Mar 2011	25 years 3 months
<i>Foch (R99)</i>	Jul 1963	OSD Nov 2000	37 years 4 months
<i>Clemenceau (R98)</i>	Nov 1961	OSD Oct 1997	36 years*
<i>Principe d’Asturias</i>	May 1988	Active	23 years
<i>Giuseppe Garibaldi</i>	Sept 1985	Active	26 years

*Now in service with Brazilian Navy

Research suggests that there are no immediate out of service dates for the Italian and Spanish CVS platforms, even if larger vessels – *Cavour* and *Juan Carlos I* – have also been entered into their respective navies. In which case, one might expect the Italian CVS to see close to 30 years of service, if not more, the Spanish at least 28 years.

The point to make is that the UK, even with the current length of service of HMS *Illustrious*, seems to manage to get far less life out of its carriers. Even the old *Ark Royal* just about broke the quarter century mark, which looks not that impressive when compared with the roughly equivalent French carriers.

Is there a “problem” with the build of UK ships, that they have to be retired early? Does the UK “trade up” earlier than other navies, trying to save on running costs? In which case, why does no-one else seem to do this? One to be considered very carefully as the growing costs of CV(F) mount up: can the UK manage to amortise the procurement costs over a far more economic period? ☹

Anglo-French Naval Cooperation How I Can Help You...

Is there not a “way out” for both the UK and France as regards aircraft carriers? Well, from the UK side, consider the following:

- The UK *Queen Elizabeth*-class aircraft carrier programme is now set to cost £5.9-billion for the two vessels, up from an original forecast of £3.6-billion, and with an in-year cost rise 2009–10 of £767-million;
- These costs do not include either the design and development of the catapults and arrestor gear – those costs were taken out to save money sometime between 2005 and 2008;
- These costs do not, also, include the procurement of the physical catapult and arrestor gear systems. The US is paying around \$2–300-million (£120–180-million) per ship for such systems;

“Alors, m’sieu, est ce que je peux vous aider ...?” It is here that hardship might make good bedfellows of the UK and France. Consider:

- The UK is contractually committed to two aircraft carriers;
- To make any sense, operationally of a class of ships such as this, you need two so that one is available at all times, when the other is in refit;
- But in every Parliamentary PQ to date, the only commitment is that HMS *Queen Elizabeth* itself will have “cats and traps”, which makes a nonsense of having two platforms to stag on and off. It also makes a nonsense of the idea that HMS *Queen Elizabeth* would be the “operational ship”, and HMS *Prince of Wales* would be the training ship – how do you train carrier pilots if your training ship has no launch and recovery gear?
- The arguments about having two carriers apply equally to France – at the moment, whenever the *Charles de Gaulle* goes into refit, Paris takes a “Capability Holiday”, or, “*Vacance des capabilities*”.

So why can’t HMS *Prince of Wales*, or “*Prince des Galles*”, become the “flex ship” for both navies? In effect, why can’t you plan so that whenever *Charles de Gaulle* is due to be in refit, there is time to run up *Prince des Galles* for service in *La Royale*? And when *Charles de Gaulle* is back at sea, and HMS *Queen Elizabeth* needs to go in, the “spare ship” can be spun up for RN service. As far as *Defence Analysis* can see, this cannot be impossible to plan for.

France can pay for the “cats and traps” for the second ship, as well as some of the sunk costs, and so will get a second carrier for a fraction of what it would cost to build one itself, the UK would make its programme affordable – Somewhere around £750-million seems like a good payment.

And if you take this relationship further, why can’t the E-2C Hawkeye AEW&C fleet be shared like HMS *Prince of Wales/Prince des Galles*? Wouldn’t this help solve the UK’s Maritime Airborne Surveillance and Control requirement, making the French need equally affordable? ☹

US-UK Naval Relations A Helping Hand Up

There was a public briefing between the UK's First Sea Lord, Admiral Sir Mark Stanhope, and his US counterpart, the Chief of Naval Operations, Admiral Gary Roughead, in mid-June. Not that many UK newspaper readers or television news watchers would have known: a few comments by FSL about the UK aircraft carrier issue ended up dominating the headlines. Only one newspaper, *The Times*, actually mentioned that Adm Roughead was at the meeting! But there were a number of really rather interesting issues that cropped up, which deserve attention.

"We've been flying a very good aircraft, the P3. It's over 4 decades old, but it has served us very well. We are transitioning to the P8 Poseidon I am very eager to see how we might seek to take advantage as we seek to go through our transition process. There is a terrific opportunity for us and the Royal Navy to benefit from the skills and competencies in the UK armed forces [in anti-submarine warfare] The UK is at the top of the [ASW] game ... P3/P8 co-manning? I've suggested it."

Thus said Adm Roughead Which raised more than a few thoughts and ideas

- Straight away, the US Navy is offering the Royal Navy the chance to keep its airborne ASW skills going with co-manning of MPAs. And yet to date, it has been the RAF which has been the MPA centre of excellence! Are we seeing here the end of the potentially artificial split in UK MPA/ASW whereby the provider and the user of wide area MPA/ASW data are different? *Defence Analysis* would say that this is not a difficult step to make for the RN: how different is it to be a Merlin sonar operator and a fixed wing sonar operator? Land grab!
- A deal here could see the UK not only retaining its skills in MPA, but getting back into the game faster than expected;
- There is one black cloud: it is difficult to believe that Uncle Sam will "give" P3s, let alone P8s to the UK for free. And where is the money to buy, or even lease new MPAs?

"We will grow other MoUs. The current MoU paces fixed wing pilots in USN squadrons to generate competency in naval aviation from the sea The particular purpose of the first MoU is not to train pilots to fill squadrons, but to get the competencies to fill the other roles – it is to generate the management jobs for carriers"

A comment from FSL, but one with which the CNO wholeheartedly agreed. But what was evident is that even if there will be a lot of cross training in the future between the RN and USN, the USN will also not have enough space to train all RN carrier personnel, so the UK will also train with the French Navy. But that's no big deal for the USN, either. ☺

SOUTH WEST ONE: An occasional column about Whitehall, Westminster, and their Distant Dominions.

THE PAIN CONTINUES ...

Defence Analysis has postulated the theory – a theory that has received greater amounts of proof over the past year or so – that one of the biggest problems with the UK MoD budget is that there is so much self-denial inside Main Building, that no-one actually knows what the level of imbalance is in the budget. Indeed, the previous Permanent Under Secretary, Sir Bill Jeffries, seemed to suggest in his valedictory appearance in front of the HCDC that he, and thus the permanent secretariat of the MoD, had a handle on the budget to within possibly a fifth – so they knew what was going on plus or minus £8-9-billion!

There has been the oft-quoted figure bandied around that when the incoming Coalition government took office, the gap between ambitions and funds inside the MoD was some £36-billion, made up of a £7.5-billion equipment procurement gap, a £13-billion equipment support shortfall, and a lack of around £16-billion elsewhere. Statements made by senior MoD officials, including the Secretary of State, Dr Liam Fox, have led people to believe that things – largely, but not totally – are getting under control.

But things might actually be getting worse as bright lights are shone into dark corners

Defence Analysis hears that the £36-billion figure was, perhaps at best, an estimate. "I don't know anyone who could point to exactly where the data came from", one source told us. *Quelle surprise!*

But as a result, there have been at least two uplifts to the budget shortfall. One occurred during the Strategic Defence and Security Review process, when a figure of £7–10-billion was added to the forecast shortfall. This has been followed by one, definite post-SDSR deficit uplift of a further £4–5-billion, as a result of "more realistic estimates of programme costs" – in other words, even when trying to calculate the deficit size, the MoD as falling prey to the "conspiracy of optimism"!

Defence Analysis also hears that the battle to resolve the single biggest element of the budget imbalance, the equipment support shortfall, is still causing headaches. One major issue is for the Army which faces the choices as follows:

- Try to find cash to buy FRES in any/all guises, but lose all of the protected mobility vehicles bought as UORs, as well as a raft of other equipment that has been thrashed in operations in Afghanistan;
- Try to bring protected mobility vehicles "into core budget", but recognise that these will need serious reset work, for which the money is not available at the moment;
- Fail to win the budget battle being fought at the Top Table, and face the possibility that the Army will get neither UOR

vehicles repaired, or new AFVs. This was the possibility held out by General Bill Moore in June when he argued that unless the army got FRES, then troops might have nothing to ride into action. *Defence Analysis* hears that because the Army's most senior leadership regard procurement politics as a nuisance, rather than as an essential, this is a realistic prospect.

MOUNTING FRUSTRATION

Senior defence chiefs are getting more and more frustrated that whatever they say to their political masters, it gets generally ignored. The best example of this trend was the on-the-record briefing by Admiral Sir Mark Stanhope in mid-June when he was extremely frank about what were his fears heading forward, namely funding, programmes, and troops-to-task. The not-too-subtle subtext was that he, and others, and not just in the RN, have raised a wide range of these issues with politicians, but understanding as there none.

Defence Analysis has been at background briefings with a large handful of other senior Service personnel across June, and the sentiments of Sir Mark are being echoed by other Services.

"I've told them that. ..."

"They've been told this countless times"

"It isn't getting through"

These are three expressions that have been nearly common across the various senior officers. It is plain – and there is no evidence that this is a centrally coordinated “campaign” of leaking – that all the Services, as well as the “joint” functions are facing very similar problems with ministers.

The question which *Defence Analysis* still doesn't have an answer to yet is whether these frustrations about “not getting through” are a result of political ignorance about military matters, or mistrust in the military, believing that all advice given to ministers is biased beyond belief. It is not impossible that there is a toxic mix of the two going on.

The next stage, as far as *Defence Analysis* can see, is that there is likely to be a series of possibly vicious counter-attacks from the government. After all, the military is subordinate to Parliament and the government of the day, and so the political head can give a sharp ticking off of the military anyway. But it is very likely that any counter-attack will see the politicians pointing out that the military have been very good at wasting money on a variety of projects. It is also, and for more vicious, that the “pampered lifestyles” of the senior chiefs will also get mentioned, although there is a risk that this could backfire – how many Service chiefs, even very senior ones, have grace-and-favour houses to match Chequers, Chevening and the like?

NOTE: this was written before the PM's 'you do the fighting and I'll do the talking' comments.

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FINGER POINTING – BUT IN THE RIGHT DIRECTION ...?

"The Ministry of Defence's Major Projects Review Board, designed to scrutinise and hold to account some of the Department's most expensive projects, has met for the first time today, 13 June 2011."

A fanfare, if ever there was, backed up by fighting talk from the SecDef, Liam Fox:

"I want to send a clear message across Defence: reckless spending stops here. Too often there has been too much reliance on industry's self-reporting of time delays and capability deficits, rather than a transparent process to track performance."

"I am tired of the National Audit Office reporting on projects that are running over time and over budget. Where projects are falling behind schedule or budget I will take immediate measures. I want shareholders to see where projects are underperforming so that the market can take action. Those responsible for poor project management must be brought to account."

Is it a bird? Is it a plane? No: it's Super SecDef, here to fight procurement crime! A few, slightly more sober, but not less acerbic comments:

- *"I am tired of the National Audit Office reporting on projects that are running over time and over budget"*. Physician, heal thyself. Be “tired” of the NAO reporting all of this stuff – but this statement seems to suggest that the NAO is responsible for the delays and overruns. Strange to tell, it isn't: the responsibility for such things tends to lie quite firmly at the MoD's doors;
- Looking at the NAO's worthy Major Projects Report 2009, the last one for which this type of data was readily laid out, the reasons for cost and time overruns/delays were listed as:
 - o Cost increases of £1.225-billion, of which £1.3-billion (there were some artificial programme cost reductions) were as a result of “Budgetary Factors”, and “Inflation”, both things in the hands of the MoD's management of programmes. These accounted 82% of all cost increases. “Accounting Adjustments” and “Budgetary Factors”, both MoD-led areas, amounted to 80% of all cost reductions;
 - o Delivery overruns of 38 months, 72% of all delays, resulted from “Changed Capability Requirement”, “Procurement Processes”, and “Budgetary Factors”, all MoD-caused issues. Interestingly, 75% of all reductions in delivery timetables resulted from “Technical Factors”, arguably an industry-led area!
- *"Too often there has been too much reliance on industry's self-reporting of time delays and capability deficits"*. And whose fault is that? If industry is the one reporting matters, it means that “The System” isn't making such reports Physician

- “Those responsible for poor project management must be brought to account”. And if these are MoD officials or Service personnel? Will this stern new regime treat them as toughly as a delinquent industry will be treated? If industry were to be “punished” with penalty payments for bad performance, what will the punishments be for the MoD?

Defence Analysis View: All mouth, no trousers, and a decided lack of reality about why procurement has been such a nightmare to date.

Defence Analysis Prediction: A good charter for lawyers, and an equally good opportunity to start to shine bright lights into dark corners of the MoD when industry protests, legally, MoD pronouncements.

DEFENCE REFORM UNIT: THE REPORT

Due to the late release in the month, *Defence Analysis* didn't have enough time to really go through the Defence Reform Unit report – that will come next month. But there are some comments to be made about the process of the report's release, and some of the comments that came from the Secretary of State, Dr Liam Fox, as the report came out.

First off, it has to be stated that there were some anomalies with the physical release of the report. For “unimportant documents”, such as the Strategic Defence and Security Review, there was a “lock in”: that is an embargoed chance to read the document, question senior MoD officials and the like, before any official statement in the House of Commons. For this report? Nowt. Indeed, it was under a degree of doubt at exactly what time the SecDef was actually going to give a statement to the House.

It has to be said that if this general degree of nervousness in putting a report's authors and commissioning powers is to be considered, then it suggests that no-one wants to have questions asked. That, in turn, suggests that either the MoD feels that the report is open to some serious criticism (*Defence Analysis* is going to proceed on this basis as we read it at leisure ...), and so wants no-one the chance to actively question those involved. Or, the report has not been able to address the key areas that it was meant to, and so, again, it could well be flawed.

Let us see ...

But in the meantime, it is worth examining, in the normal textual sense, some of the SecDef's comments in his speech prior to the actual release of the DRU report.

“What we could not know was that the highly committed nature of the budget, especially in the early years, meant that there was little room to deal with the problem without taking some very difficult decisions.”

Note: Oh Pur-lease! So, despite shadowing for well over 5 years, despite the Gray Report, which did actually list many of these dubious practices inside the MoD, despite annual National Audit Office reports highlighting all of these

issues and more, “... we could not know was that the highly committed nature of the budget”. It is infrequently that *Defence Analysis* turns to less than civil language, but bollocks!

“In their final year in office alone Labour presided over an increase of reported cost by a staggering £3.3 billion in just two programmes.”

Note: Wasn't much of the £3.3-billion the contractual requirement to sign for Tranche 3A of Typhoon? In which case, is it not really that fair to use it as an example of Labour waste and inefficiency. And while one comes to think about it, who was in power when the umbrella Typhoon contract was drawn up? Yup, the current Conservative party!

“For example, with the budget in the first year already 90% contractually committed they were unavoidable constraints on the speed at which we could act to reduce the deficit.”

Note: Arguably the single most interesting fact in the entire speech. Most observers would have guessed that there was a serious degree of budget commitment, but possibly not this much.

“Despite the fact that Labour ministers knew the defence program was unsustainable they continued to add new elements to it knowing that there were no funds in the budget to finance them.”

Note: To return to a point made before, doesn't there need to be a realisation that politicians' hands, alone, are not the only ones that are dirty? To return to what *Defence Analysis* calls the “Dirty Little Secret”, it is those in uniform who are at as much to blame

“By 2020 the Royal Navy will have new aircraft carriers, a high readiness amphibious capability and a new fleet of Type 45 destroyers and Astute class submarines, and soon after, the Type 26 Global Combat Ship.”

Note: A commitment to an amphibious capability is good – it nearly was lost under SDSR. But note that in a comment about Force 2020, Type 26 arrives into service “soon after”, in other words post-2020. Now wasn't the TOBA between the MoD and the naval industry meant to see contracts for one complex warship coming every year from c2015-16? In which case, the SecDef is saying that this has gone for a burton. Or, with slips to the carriers, has the workload requirement for Type 26 now slipped into the decade after? In which case, how will BAES and others keep designers busy and capable to cope with life after CV(F).

“The Army, based on Multi-Role Brigades, will be powerful, flexible, fully equipped for the land environment and able to operate across the spectrum of conflict.”

Note: For the descriptions of the RN and RAF of the future, major programmes, equipment, capabilities got mentioned. It really struck *Defence Analysis* that the description of the bright uplands for the Army in a decade's time is remarkably

light on the same level of detail. With no wish to point out the obvious, but isn't there a shocking absence of a mention of FRES here? Isn't FRES, in whatever guise, meant to be the future for the Army? If so, why not mention it, even if in as simple a mention as "new armoured fighting vehicles"?

Conclusion: There's still more to cover, but as a whole, a great deal of the SecDef's speech prior to the formal release of the DRU document still comes over to *Defence Analysis* as a mixture of shrugging shoulders, *à la français*, denial that anything that is occurring at the MoD is anything to do with the current administration, and a degree of back covering in the belief that things could well go wrong. All-in-all, this is not very satisfactory or convincing

"Peter Luff: The Secretary of State for Defence, my right hon. Friend the Member for North Somerset (Dr Fox), has previously stated his intention to publish a list of "projects of concern" as an outcome of the Major Projects Review Board meetings. The purpose of the Board is to incentivise better performance in the management and delivery of major projects that are delayed or experiencing serious cost growth. Projects will be placed on the list of concern if once reviewed by the Board they continue to slip or increase in cost and fail to provide sufficient confidence in their recovery plan. It is not possible, therefore, to identify any specific "projects of concern" at this early stage in the process or to predict when such a report becomes appropriate."

When the first report of the MPRB came out, it listed, as commented upon in *Defence Analysis*, three programmes. What is interesting is that when pressed, the MoD has actually denied that any of these is actually "failing", despite the fact that there is the threat to "name and shame" failing programmes.

A few extra comments:

- Why, after a year, is it not possible to identify "projects of concern" at this stage? Surely a quick trawl around Abbeywood, let alone the offices of the National Audit Office, would provided some pretty robust evidence of which programmes weren't doing as well as expected. To *Defence Analysis's* eyes, this is obfuscation and diversion;
- The answer gives weight to the belief that the MoD is still keen to never set in stone any promises that MPRB reports, data or whatever will ever get released. Strange that the SecDef should be quoting chunks from Bernard Gray's report, which championed openness, and yet is still supporting secrecy and stealth, to what end.

ROTARY SPEND AWAITS

"Mr Robathan: We intend to upgrade and transfer our current fleet of Merlin Mk 3/3a helicopters to the Royal Navy: the first upgraded helicopters will enter service with the Commando Helicopter Force in time to replace the Sea King Mk 4 helicopters, which are planned to be withdrawn from service in 2016."

There have been on-going whispers and rumours that if the RAF doesn't get all of the Chinooks that it sees as necessary to maintain a decent level of rotary lift, then the

service might "refuse" to hand them over to the Fleet Air Arm. Well, this Written Answer seems to suggest that the RAF doesn't have that amount of pull. But there are some extra things to consider:

- "Upgrade" would seem to refer to some potential avionic modifications, but also to fitting a folding blade and tail mechanism on the Mark 3/3as to allow them to be used properly on assault ships and the like;
- How much will this cost? Looking at the cost different between a NH90 land-based utility, and a naval utility NH90, it is about €8-million or so (£7-million). Split the difference and say that mechanical changes alone will cost some £5-million, that would mean that the conversion programme for the whole Mark 3/3a fleet would be some £150-million – is there a "spare" £150-million knocking around?
- One thought: the fate of the extra Chinook order is still seemingly in the balance, with some saying that as few as 4 extra aircraft might be bought, as opposed to the previously expected 10+2 – might any cut in the Chinook order be used to find the funds to pay for the Merlin upgrade?

FIRE!

Consider the Written Answer from late May about the cost of weapons used on Operation Ellamy:

"Peter Luff: The gross book value, inclusive of VAT, of precision guided weapons fired in support of Operation Ellamy between 19 March and 8 May this year is £43.77 million."

OK, so that covered the 7 weeks between the two dates, an average of about £6-million per week, in effect £1-million per day, although this is going to be lop-sided as in the first days, well over a dozen each of TLAM and Storm Shadow were fired.

But then consider the late June release about the overall costs of the operation:

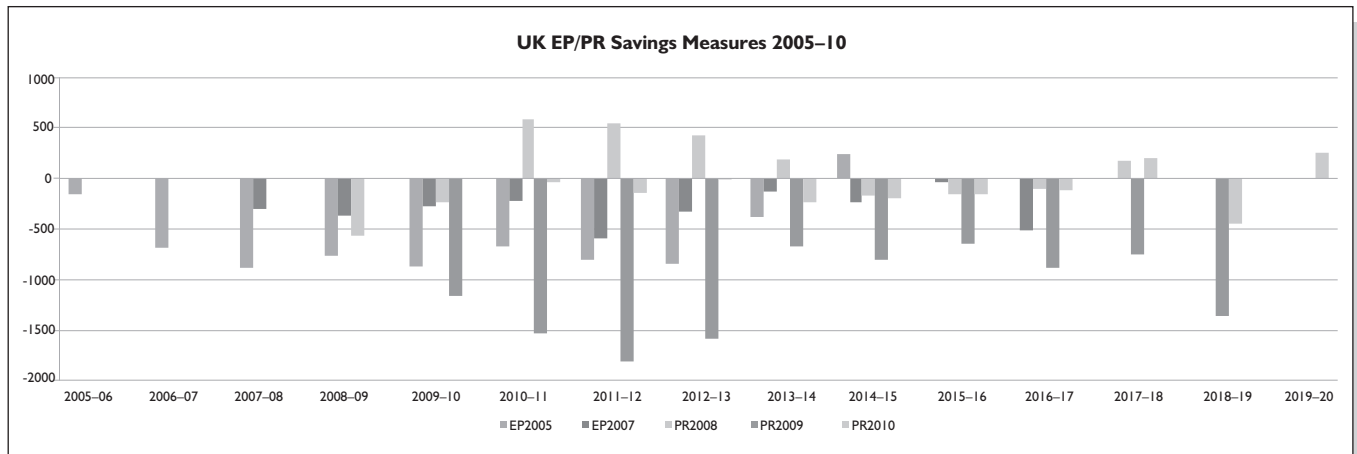
"Based upon current consumption rates we estimate the cost of replenishing munitions may be up to £140m."

So, between 8 May and 23 June (6 ½ weeks), the estimate on munitions usage basically trebled – and that £96-million represents some £14.75-million per week, or £2-million per day. Anyone need a sign of how intense operations have become? Or one might read the £140-million as a forecast, looking ahead, trying to work out what might be fired. But if the previous expenditure rates are any guide, there is a minimum of a further 7 weeks of combat from now, which would mean the end of August. Strange to tell, this is close to the end of the current NATO mandate, and around the time that service chiefs in the UK have said that the defence planning assumptions will become exceeded. But recalling that in the first week or so, a lot of Storm Shadows and TLAMs were fired – and there haven't been that many since, £96-million could easily be an estimate that the conflict will last into November or even later. ☹

National Audit Office Planning Round Data

What Can We Learn?

Defence Analysis said that we would return to the plethora of data released by the National Audit Office – Thank you, thank you! – as part of its armoured fighting vehicle report. There was simply so much stuff going on last month to do justice to the figures in the report, but Defence Analysis had more than a few observations to be made about the figures, as they act as both proof of what had been modelled before now, as well as pointers to the future.



The Miracle Of PR2008

What was immediately apparent from the data was the jaw dropping “fact” that in PR2008, money seemed to be flowing into the equipment spend area, rather than away from it. How on earth could this be? After all,

“Chairman: Is it different because it is worse or better? I have to ask that for clarity of the record.

“General Sir Kevin O’Donoghue: I think it is a greater challenge this year than it was in 2007.

“Chairman: Can you ever remember it being as much of a challenge as it is today?

“General Sir Kevin O’Donoghue: Yes. When I was an MA back in the late 1970s we had some pretty challenging times.”

House of Commons Defence Select Committee hearing,
29 January 2008

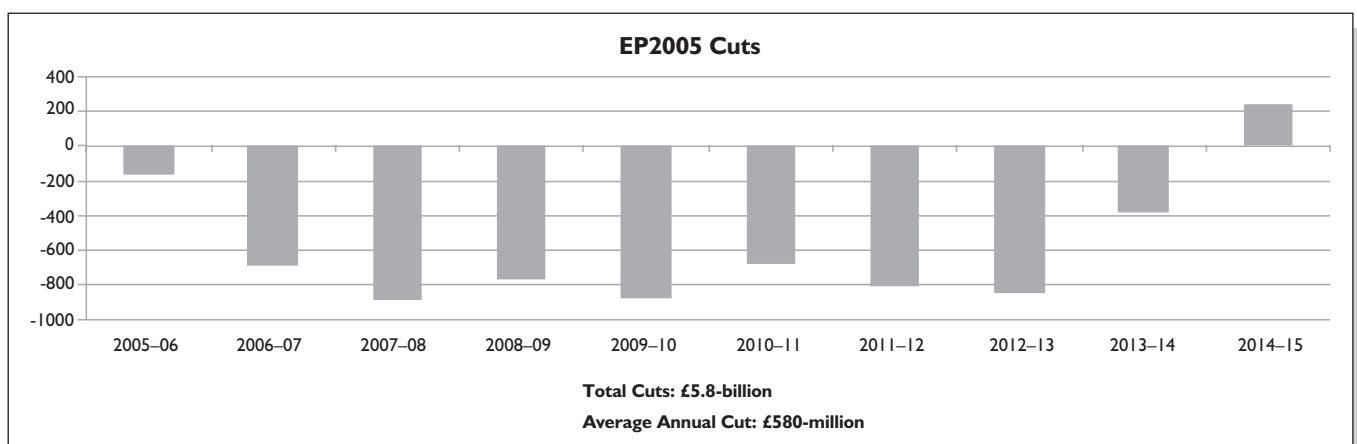
So PR2008 was “worse”, or rather, “a greater challenge” than EP2007, and according to the Chief of Defence Materiel, 2008 was seemingly the toughest time, give or take, since the late 1970s. And yet the data within the NAO’s report shows that rather than having to cut equipment spending overall, EP2008 saw a net increase in spending 2008–09 to 2017–18.

And even if in-year, some £560-million was cut for 2008–09, this is far from being the largest single in-year cut in the EP/PR rounds under examination – excluding SDSR, the largest in-year budget cut was £1.8-billion for 2011–12, and there are 16 years with higher in-year spending cuts.

Drivers In The Other Years

PR2008 is an absolute enigma as regards what was undertaken, bearing in mind what was said publicly elsewhere about it. But what might one infer from the shape of the cuts in other years?

Equipment Plan 2005

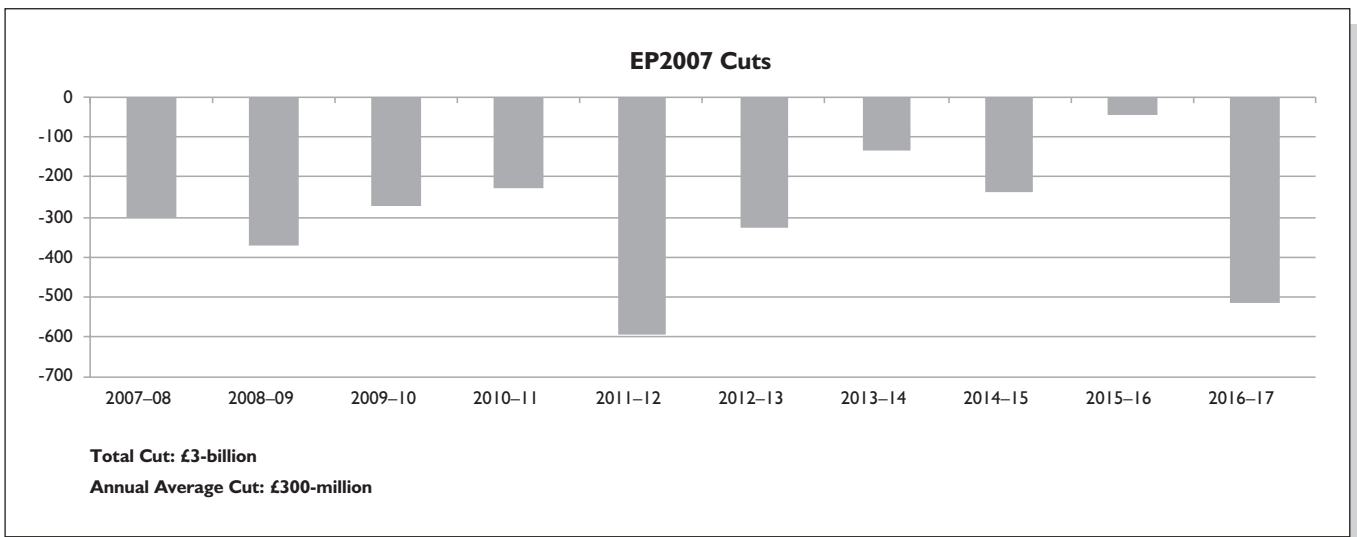


- The second highest set of cuts in the series at £5.839-billion across 10 years – something worth considering when all the talk might be about the years 2008–10;
- It is evident that the key imperative was to get spending out of the early years, and well into the second half of the current decade. After all, over half the total cuts are in the first 5 years (£3.4-billion), and over £5-billion in the first 8 years;
- EP2005 could well have been the first year in which the true scale of the equipment bow wave was recognised. Is it also any mere coincidence that this was the year in which the *Defence Industrial Strategy* was published?
- *Defence Analysis* would suggest that the need to cut heavily into the procurement programmes partly was required as this was the period when some key programmes kicked into their peak spend period:

- Astute SSN £415-million
- Bowman £568-million
- Type 45 AAW Cruiser £581-million
- Typhoon £1.1-billion

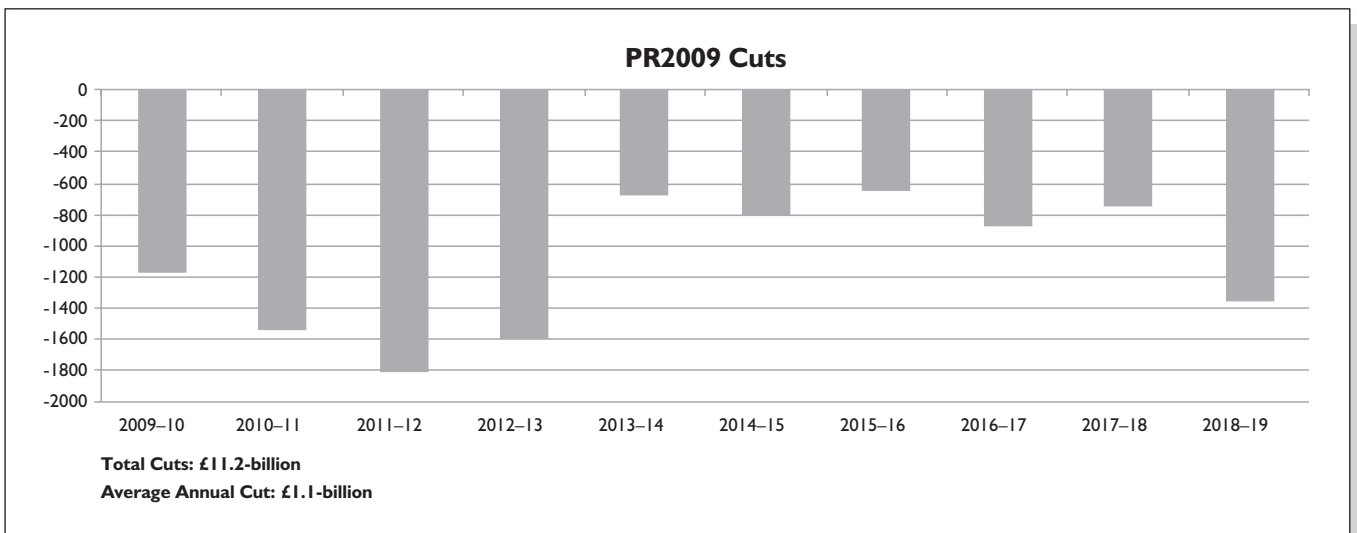
As three of these (all except Bowman) were certain to be key spend programmes into the current decade, it would seem likely that this could well have been a driver in trying to get the bow wave down. At a time when the “green” procurement spend was around £6-billion, that £2.75–3-billion could go on 4–5 programmes annually is a signpost to the strains on the procurement budget.

Equipment Plan 2007



- Far less savage than EP2005 – so had the two year template for EP2005 “worked”? had that planning round managed to push the bow wave down enough?
- Still evident that spending in 2011–12 needed a serious trim – signs, yet further, that the impact of the big programmes (Typhoon, Type 45, Astute SSN etc) would all hit heavily in this year, requiring extra action to balance the budget?
- Is the 2016–17 peak for the year one of the first signs that the tactic of pushing everything outside of the relevant planning period, and into the next 10 year one was starting to come home to roost? Is the 2016–17 spike a sign that so much had been pushed into this period, the post-2015 one, that the books were already out of balance?

Planning Round 2009



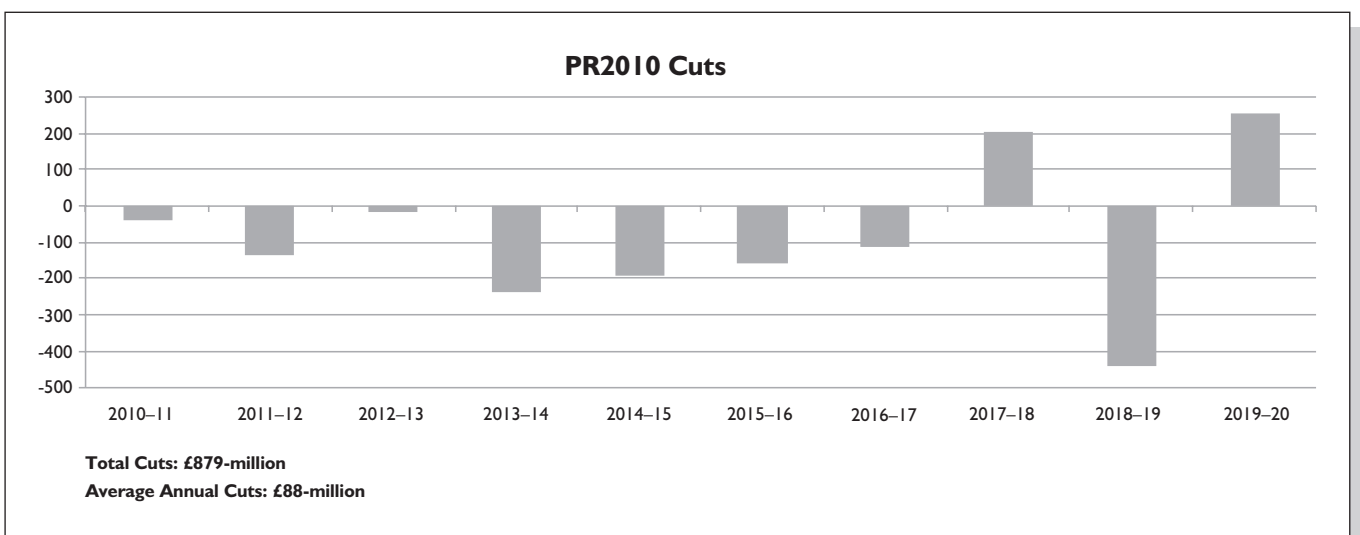
- Oops! Any hope that previous planning rounds would have managed to balance the books now look to have been supremely wrong. The PR2009 cuts from 2009–10 to 2014–15, a period where one can compare the plans for all of the three previous rounds, were massively higher than any of the other years, even with the anomaly of PR2008:

o EP2005 2009-15	-£3.3-billion
o EP2007 2009-15	-£1.8-billion
o PR2008 2009-15	+£1.3-billion
o PR2009 2009-15	-£7.6-billion

In other words, the PR2009 cuts for these 6 years were three times higher than the aggregate of the previous three planning rounds. Excluding the PR2008 data, PR2009 is still £2.5-billion higher for the same period as PR2005 and 2007 – this has to be a sign that some rather ugly chickens were coming home to roost;

- *Defence Analysis* feels that the figures for PR2009 probably are the first that show the real pressures from the inevitable UK signature for the Typhoon Tranche 3 contract – in previous years, it is highly likely that the planning assumption had been that the UK would be able to slope its national shoulders over this programme, but the contract was signed late in 2009, a £3.5-billion that was not planned for, as the ever-helpful NAO tells us;
- As with EP2007, further signs that pushing things into the latter part of this decade is already showing that it won't work, and so planners are having to pencil in cuts – in the case of PR2009, some pretty massive ones – for those programmes that were shunted to later years;

Planning Round 2010



- A small-ish series of cuts. *Defence Analysis* takes this budget round as yet a further sign that the MoD believes the propaganda – largely self-promulgated – that the defence budget will rise above inflation post-2015. As commented upon before now, budget planners and senior officers are in a delusional spiral that as long as they can hold things until 2015, the flood of money that will appear after that time will solve everything.

EVIDENCE ELSEWHERE

As ever with the UK defence budget, it is necessary to look at a series of incomplete mosaics to try to arrive at a composite picture of what has happened – wouldn't it be nice to be given an honest, simple picture? In this case, delving into the annual NAO's *Major Projects Report* does provide an analyst with some extra data to play with.

“During 2005–06, the Department undertook a review of the post Main Gate projects to control costs better. This Review has reduced the costs of these 20 projects as recorded by the Major Projects Report by £781 million, some three per cent overall and equivalent to a 21 per cent reduction in the overall cost increases on projects since Main Gate.”

MPR 2006, p5

- So the in-year review saved £781-million. But it has to be remembered that this wasn't necessarily saved in-year, but runs across the largest programmes' lives;
- £781-million as a 3% cut of the overall programme cost means that the cumulative total would have been some £26-billion;
- The same figure equates to a cost overrun across the major programmes of £7.2-billion, which means that the EP was facing a 27% overspend;

<i>In-year programme cost rises</i>	+£337-million
<i>In-year programme cost falls</i>	-£441-million
<i>In-year balance</i>	-£104-million

“As in the Major Projects Report 2006 the Department has reduced the forecast costs of its projects by reducing quantities of equipments and re-assessing requirements (£81 million; £226 million over two years) and by re-allocating expenditure to other

projects or budget lines (£609 million, making a total of over £1-billion over two years). The Department's rationale for continuing to re-allocate budgets and expenditure is to better measure the performance of individual teams in controlling their project costs and to distinguish the costs of maintaining defence-critical industrial capability in accordance with the Defence Industrial Strategy, which are more appropriately overseen at a corporate level. This year, the largest component (£305 million)

relates to maintaining industrial capacity and capability in line with the Maritime Industrial Strategy.”

MPR 2007, p5

- Slightly clearer: the in-year savings studies have produced programme savings for 2005–06 and 2006–07 of:
 - o just over £1-billion for the two years in the biannual budget process;
 - o a minimum of some £300-million refers to 2005–06;
 - o £690-million refer to cuts in the 2006–07;
 - o EP2005 saw cuts of £845-million in the two budget years, which is quite close to the total, at least within a stone’s throw.

In-year programme cost rises	+£509-million
In-year programme cost falls	-£470-million
In-year balance	+£39-million

Major Projects Report 2008:

- £3-billion extra cost of major programmes, which represents a 12% rise in the whole, valued at £28-billion;
- No extra evidence of specific cuts as evinced in the previous two MPRs.

In-year programme cost rises	+£259-million
In-year programme cost falls	-£54-million
In-year balance	+£205-million

“Two-thirds of the gross cost increases reported in the Major Projects Report 2009 reflect deliberate decisions to slip projects, taken corporately by the Department as part of a wider package designed to address a gap between estimated funding and the cost of the Defence budget over the next ten years. The size of the gap is highly sensitive to the budget growth assumptions used. If the Defence budget remained constant in real terms, and using the Department’s forecast for defence inflation of 2.7%, the gap would now be £6-billion over the ten years. If, as is possible given the general economic position, there was no increase in the defence budget in cash terms over the same ten year period, the gap would rise to £36-billion. In both cases these figures involve inevitably uncertain assumptions about the outcome of future Spending Reviews over a long period. In recent planning rounds, the Department concentrated its efforts on ensuring that the Equipment Programme was affordable in the early years, and on creating room in the budget for improvements in capability that were relevant to current operations... The decisions did not (and could not) resolve the underlying issue of affordability which will need to be addressed by the Department, working with Treasury, as part of the Strategic Defence Review which is expected after the General Election.”

MPR 2009, p4

“On the Queen Elizabeth Class aircraft carriers, the Department decided to slow the rate of manufacture to reduce forecast expenditure by £450 million in the next four years. After this time, costs are forecast to increase by a total of £1,124 million, giving a net increase in costs of £674 million. The decision causes the entry into service of the first aircraft carrier to slip by one year and the second by two years.

“On Astute Class submarines, the Department decided to slow the production of boats 2–7, which will lead to a net increase in forecast costs of £400 million, arising as a result of reducing expenditure by £139 million up to 2013/14.”

MPR 2009, p6

- The first public recognition of a massive affordability issue with the Equipment Programme. So how come was the MoD’s own PR2008 – the year 1 April 2008 to 31 March 2009, so the same reporting period as MPR2009 – seemingly so buoyant and optimistic?
- Matters were being made tight today so as to make them affordable for tomorrow OK, so some £800-million of cuts 2008–09 and 2009–10 looks as if it matches this desire. But does sloshing £1.5-billion in the next three years look as if there was the same commitment to managing the programme? Obviously not, and another sign of corporate madness inside the MoD;
- The carrier cuts represent 56% of the total cuts in the first 2 years of PR2008, but the average annual overspend of £187-million would mean that the planned expenditure surplus in 2010–14 would actually have either not been taken into account, or would mean that someone thought that there was even more money around!

In-year programme cost rises	+£1582-million
In-year programme cost falls	-£1010-million
A400M – cost separated out	+£653-million
In-year balance	+£1225-million

Major Projects Report 2010:

- No mention of specific cost reduction efforts being made in the overall programme

In-year programme cost rises	+£3477-million
In-year programme cost falls	-£217-million
In-year balance	+£3260-million
In-year balance excluding Typhoon	+£595-million

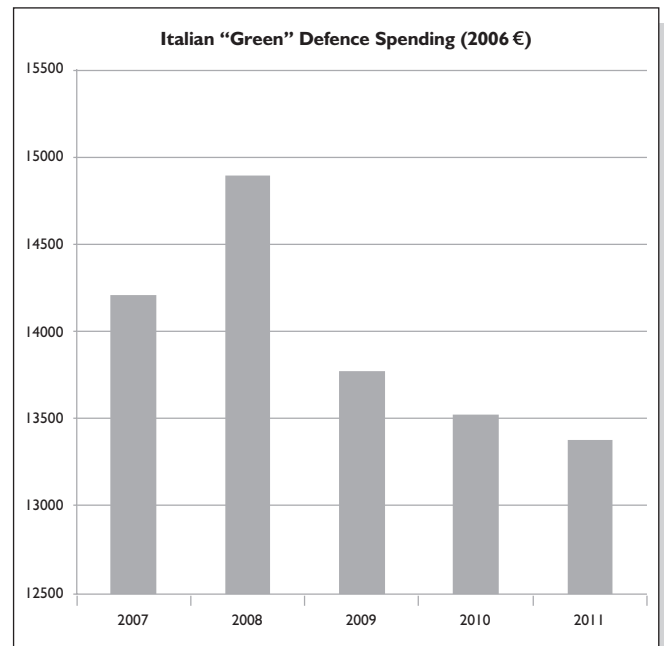
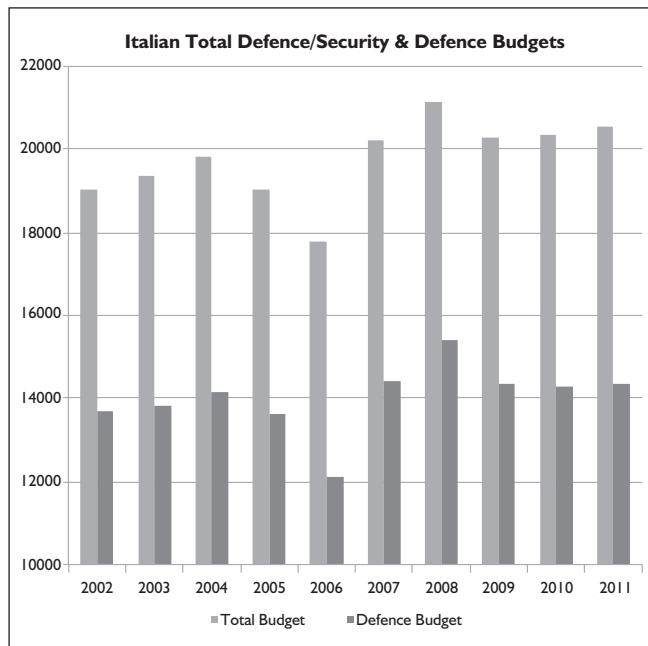
Overall Analysis of NAO MPR Data:

- For the relevant reports 2005–10, in-year programme data were:
 - o Rises +£6.82-billion
 - o Falls -£2.2-billion
 - o **Balance +£4.62-billion**
 - o **Balance excluding A400M and Typhoon +1.3-billion**
- So over five years, the EP rose (excluding A400M and Typhoon, although why should exclude the latter is open to debate) by £1.3-billion;
- Over the same period, cuts were made in the EP of some £6.2-billion;
- And as seen in the NAO’s 2009 report, at the time of the PR2008, there was already a minimum affordability gap of £6-billion, and possibly one as high as £36-billion;
- Putting these factors together, from 2005–10, the cumulative affordability gap was £13.5–47-billion. ☹

Italian 2011 Defence Budget

Still Walking The Tightrope

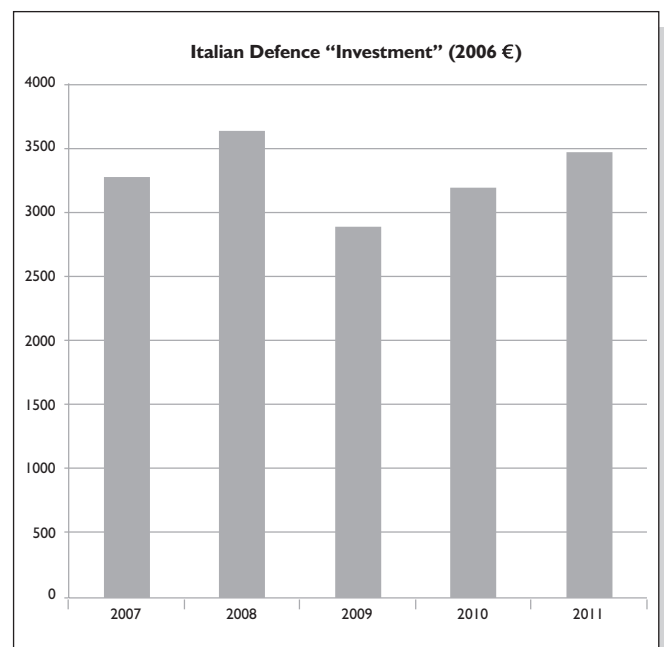
Italy is classified as being among the larger European players as regards defence spending, along with the UK, France, and Germany. Though there will be many who will wonder whether this is actually not just a historical hangover, rather than an assessment based on fact, as Italy's defence spending has been on a downward trend, and will hardly get stronger at a time when Rome is still in the gunights of those aiming for the weaker players inside the Euro.



As has been commented upon previously, the 2006 defence budget was a real piece of accountancy freakery, and so should be seen as a total anomaly – that is why there is such a huge dip in reported credits. If there had really been such a cut in funding, the Italian military might very well have exploded under the pressure! A few comments to be made about the whole:

- The 2011 total defence budget is 0.9% up on that of 2010, so with Eurozone inflation at some 2.5%, and inferred defence inflation at a higher rate than that, the budget is not keeping up with inflation;
- The 2011 defence budget, that is stripped of the homeland security/Carabinieri budget, is lower at €14.36-billion (£12.8-billion, \$21-billion);
- The "green" defence budget is 0.45% up on 2010, again, not keeping pace with inflation;
- The 2011 headline figure is 2.7% lower than the peak in the range in 2008, so the trend is far from encouraging. The "green" defence budget is 7% below the 2008 peak, so has been declining faster than the overall defence/security combined budget.

The budget is also worth looking at from the point of view of constant 2006 Euros, to get an extra idea of how it has survived, or not:



The picture is varied from these two charts:

- The 2008 defence spending peak is still in place, but the 2011 figure is 10% below the 2008 peak in constant terms, and 2011 is also 1% below the 2010 figure, so the overall trend is not looking good;

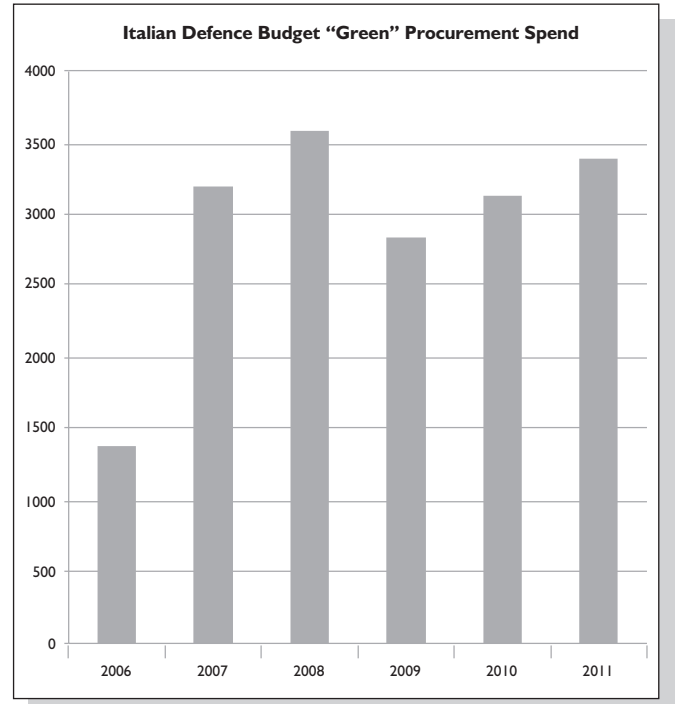
- But the picture for procurement (“investment”) spending is far better, with an 8% rise year-on-year 2010 to 2011, and the procurement spend is now not that far below the 2008 peak;
- When talking about a “peak”, one must recall that at €3.4–3.5-billion, Italy spends far less on procurement than, say, France (€10-billion “green”, €14–15-billion complete), or the UK (£10.75-billion “green”, £12.2-billion). However, there is the “off balance sheet funding of a wide range of programmes by the Ministry for Economic Development. The list for 2011 is:

Programme	Description	2011 MoD Outlay	Programme Cost
SICRAL 2	Communications satellite	€2-million	N/A
MUSIS	Observation satellite	€7.6-million	€229-million
Freccia VBM	8x8 AFV	€17-million	€1.5-billion
FREMM	Multirole frigate	0	€5.67-billion
Typhoon	Combat aircraft	€51.6-million	€18-billion
M-346	Trainer aircraft	0	N/A
EHI01 CSAR	Combat SAR helicopter	0	€630-million
Force NEC	SoliderQ digitisation	0	€324-million
C-27J EW	Self-protection system	0	N/A

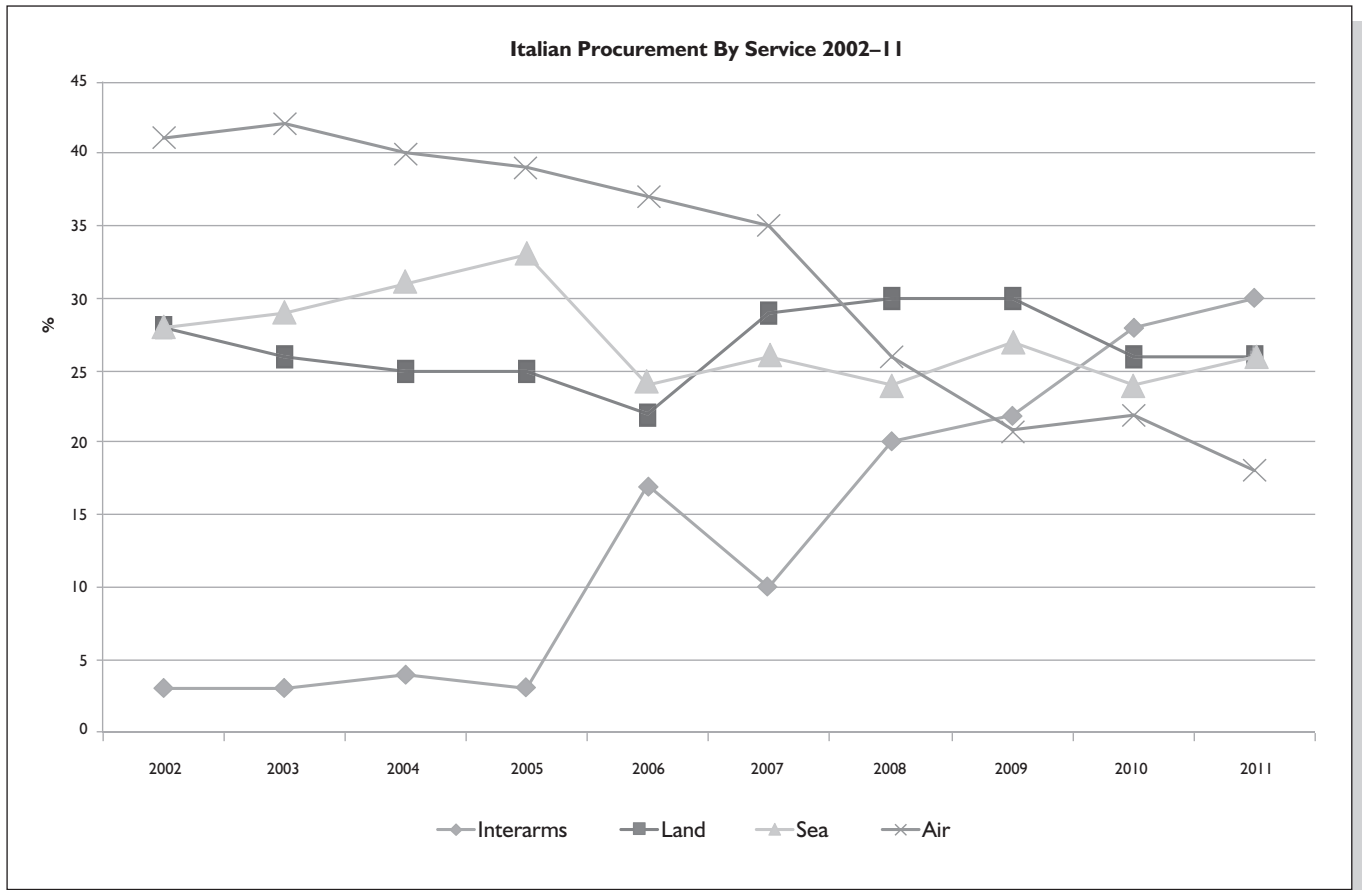
- The point to make is that all of these programmes are moving ahead, and yet the 2011 outlay to the Italian MoD is “merely” €79-million, against a forecast programme cost for all of these of some €26.5-billion;
- To put the impact of the MED into some perspective, the sums spent on major programmes before the ministry stepped into the breach were:
 - Typhoon €400–500-million annually
 - EHI01 €50-million annually
 - FREMM (*Defence Analysis* estimate) €150–200-million
- Extrapolating data from the French and UK defence budgets produces a “true cost” of the programmes covered by the MED of some €750–800-million annually higher than the figures listed (or not ...) in the Italian defence budget;
- There are signs, too, that extra sums are also derived from other budgets so as to cover programme costs, which are rather difficult to accurately calculate. But some investigation provides a range of €300–400-million coming from these dispersed sources;
- This eventually “inflates” the Italian procurement budget by up to €1–1.2-billion. As the headline budget is some

€3.45-billion, some 30% or so is “hidden” in other departmental budgets. The result is a more respectable figure for procurement, although the outturn is still substantially lower than the UK and France. US SecDef Robert Gates would still have a case that Italy is shirking its defence responsibilities

However, there is some good news to report as regards procurement spending, as the money is spent on actual kit, as opposed to organisations concerned with the process and the like:



- The interesting thing to see is that Rome is, even with certain programmes being supported by other ministries, managing to devote more of the defence cashflow into defence procurement;
- 2008, as is apparent from most other Italian defence data, was a peak year in practically all sense, but after the dip in 2009, the system is managing to devote more money to procurement – 2011 is 19.75% up on 2009, which is not a bad showing;
- If one were to be “nasty”, it has to be stated that the weight of spending on “Infrastructure” and “Operational Support/Logistics” have both seen serious rises: the former was €160-million 2006, €320-million in 2011, the latter €20-million in 2006, €396-million in 2011, both of which represent major changes in spending. Dare one say that these changes represent as much as anything else, changes in accountancy practice?
- Together, “Infrastructure” and “Operational Support/Logistics” represent some 21% of all procurement spending reported in the 12011 budget.

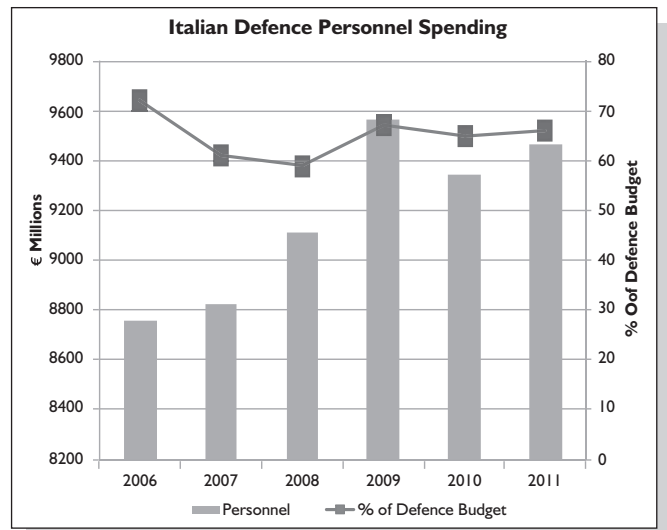


Italy is yet another European nation that seems to find it perfectly easy to publish the split in procurement between the relevant services, as well as for the “Joint” function. In fact it is only the UK that claims that it is “too difficult”

One thing, which comes from the previous section’s analysis, has to be re-stated: the share of “Air” spending in the Italian defence budget has been falling, but there is a major reason for this: the corralling of a great deal of spending into non-defence budgets. As seen above, one could add somewhere in the region of €5–600-million to air spending annually, which would rise the Air share to possibly the largest element of the group. But, equally, one has to remember than this analysis concerns which Service is receiving cash, so some large helicopter programmes – NH90 as a very good example – would be split between the Army and the Navy, with little Air Force input.

However, what is evident is that in more general terms, there is a far more “equal” split between the three services, a trend which is mirrored in many of the other European players, although not in the UK, where the Land spend has been (excluding UORs), the smallest of the 3–4 sectors ever since 2003–04.

Defence Analysis has to move away from the ever-fruitful area of defence procurement matters to look at an area that could show a real Achilles Heel for Italian defence spending, that of personnel:



The major concern has to be that although overall personnel numbers have stayed the same across the five years under consideration, the overall cost of those people is rising. It has to be said that at some two thirds of the defence budget, personnel costs at this level are some of the highest in Europe, and represent a degree of imbalance that is – arguably – unsupportable into the future without extra funding being provided. Cutting 2006 out of the equation – again, it is a rogue year as far as even this data is concerned, personnel costs have been on a rise from around 50% in the early 2000s, to its current level. Part of this is as a result of professionalisation of the armed forces, but it is obviously coming at a price – money is not as available for procurement. ☹

FIGHTER WATCH:

The Cosmopolitan Cousin of “JSF Watch”

CROSSED FINGERS ...?

From an East Coast-based correspondent of *Defence Analysis* comes the following missive:

“I spent ... [the other day] with Lockheed Martin chatting about a few bits and bobs and a few interesting tidbits about the F-35 came up.

“If I remember rightly the SDSR said the UK would cut its order for 138 F-35 jets and although the report didn't give any numbers, the expectation was that the cuts would be substantial.

“But the team at Lockheed is convinced that the Brits are planning to take all 138 even though the price keeps going up and up.

Apparently Bernard Gray was in the US just last month and reaffirmed that the UK would buy all of the aircraft it had ordered.”

What to make of this little stream of information ...?

- Isn't it interesting that to this correspondent, Lockheed Martin hasn't been denying that the cost of the JSF has been rising – in a lot of other fora, the company has been fighting a stubborn battle against reality, keeping to the line that the aircraft's price is either stable or falling. *Defence Analysis* was very struck by the phrasing, “... up and up” in this respect;
- As regards the SDSR and the position of the UK towards JSF, it is worth recalling what a very senior LM JSF leader told a group of UK hacks in December last year when asked when he had heard of the UK's decision to change its potential buy from the ASTOVL to the CV variant of JSF: “I heard about it the same time as you guys did”. In effect, he heard about it when the British Prime Minister, David Cameron, announced this to the House of Commons. Dare one suggest that this shows that LM's intelligence gathering exercises in the UK might not be as robust as one might have expected?;
- *Defence Analysis* believes that apart from the snippet of evidence as to LM's intell capabilities in the UK, it can add extra proof to our assertion. Note the phrase, “... reaffirmed that the UK would buy all of the aircraft it had ordered”. So what? Well, the UK hasn't actually ordered any aircraft beyond the three IOT&E models (all “redundant” ASTOVL aircraft ...), so there is no “order” for 138 aircraft from the UK. So either LM has shown a degree of naivety about how the UK's procurement process works, or it is admitting that the UK will only buy 3 JSFs – take your pick;

- *Defence Analysis* has checked with UK sources about the Chief of Defence Materiel's visit to the USA, and what he might have said about JSF. Strange to tell, word comes back that LM executives could well have – no, actually, they have – misheard what CDM said. He didn't state in any categorical way that the UK would buy all 138 JSFs, rather he seems to have expressed a general vague opinion that the UK would hope to buy a sufficient number of aircraft.

The point to take away from here is that LM is now fighting a new line of defence, namely that of shrinking probable JSF orders from the international partner nations. With Denmark pretty certainly out (48 aircraft), Norway's offtake probably down on the basis of the last Parliamentary statements (40 as opposed to 48), Italy also reducing its planned offtake (some/all of the 40 Air Force ASTOVL aircraft being cut), the Netherlands also looking far from certain to buy all the JSF that it planned (the current F-16 fleet will be 68 aircraft – why would the Hague buy 85 JSF to replace these?), and the UK already looking at a seriously smaller JSF fleet, there could well be 90–200 fewer international orders. And anyone who thinks that this will not have an effect on UPC is almost certainly kidding themselves. After all, look how reductions in near term US offtake have affected the price.

AND COMING FROM LEFT FIELD ...

If anyone wanted some hard evidence that the UK is far from certain to proceed with a major JSF buy, consider the following:

“Saab is to recruit a small team of engineers to staff a new design centre for its Sea Gripen concept in the UK, in an effort that could eventually lead to the construction of a flight demonstrator.

“The Swedish company announced its plan following a 24 May meeting with Ministry of Defence officials in London, where it is also to open a new headquarters to accommodate the project team.

“The move comes as Saab chief executive Håkan Buskhe has revealed a strategy to significantly expand the company's presence in the UK by pursuing fresh business opportunities. ‘The MoD is looking for competition,’ he said.

“To open within the next few months following the recruitment of around 10 personnel, the design centre ‘will capitalise on the UK's maritime jet engineering expertise,’ Saab said. ‘Its first project will be to design the carrier-based version of the Gripen new-generation multi-role fighter aircraft based on studies completed by Saab in Sweden.’

“A concept-design phase lasting roughly 12–18 months will follow, after which Saab could choose to prepare a flight demonstrator, most likely at its Linköping site in Sweden. It hopes to work in partnership with selected UK companies to advance the project, as the nation's industry already provides 28% of the content for the Gripen NG.”

Flight International 24 May 2011

So, if one is to believe the official line, the UK is utterly committed to the JSF, to the nth degree, but is discussing with Saab about a carrier-capable version of the Gripen, which would see Saab opening an office *inside* the MoD. One has to assume that talk of a 12–18 month concept design phase means that Saab actually has contract from the MoD for such work – one really hopes that the company has, as the MoD has a long history in leading people up the garden path on matters such as this.

Even if the UK is still “committed” to the JSF, why is the MoD in a position of committing scarce funding to the development of what can only be seen as a competing product? It has to show that the decision to change the UK's orders from the ASTOVL to the CV variant under SDSR reduced the perceived programme risk somewhat, but was not deemed to have reduced the risk totally.

Defence Analysis is still digging to see whether there is extra, paid work on Navalised Typhoon – the presentation of such a design at Aero India shows that the consortium has put work in, and that it is deemed to still be an option. Dare one suggest that if the UK were to opt for a non-JSF naval aircraft, it would make more sense on a through life basis to opt for a largely common aircraft type?

There is one argument that is put forward to prove – yes, hard, fast, concrete “prove” – that the UK will not be pulling out from JSF: that some £1.8-billion has already been spent on JSF in the SDD and PSFD phases, so it would be absolutely impossible to pull the plug now. And yet, and yet

There is one very good argument to shoot this view down, and it is summed up with one word: “Nimrod”. When the MRA4 was cancelled under the UK's SDSR, some £3.4-billion had been spent on Nimrod MRA4, and even with its inflated final outturn cost of £3.6-billion, all of the heavy lifting of

payments had been done, so the argument that, “we have gone too far to stop”, was not strong enough to stop this. It is an example that JSF proponents, as well as LM executives, need to keep to the forefront of their minds.

A second “reason” why the UK could pull out of JSF: there is officially no linkage between programme offtake and industrial participation, or at least that was the message throughout the late 1990s and 2000s, so the UK could withdraw with no real damage to the industrial position.

A QUESTION OF MATHS

There was no room for *Defence Analysis* to consider the Selected Acquisition Report (SAR) for the F-35 Joint Strike Fighter – India, National Audit Office reports and the like all intervened! But going through this worthy body of facts and figures, there's more than a little bit to mull over as regards how this programme will pan out.

(See table below)

Engine

What struck *Defence Analysis* was that the programme costs for the Pratt and Whitney F-135 engine are listed separately from those for the rest of the aircraft. Which means, surely, that this means that engine costs come on top of the aircraft costs. This is actually the case with all except one aircraft in the US DoD budget, the C-17. Which then leads one to state that if this is the case, one has to add engine costs to the aircraft costs to arrive at a “true” flyaway cost. This leads one to the following costs for the various batches:

- LRIP2 \$250-million
- LRIP3 \$247-million

The figures receive some extra evidence from a UK House of Lords answer of February 2011 which stated, “... we are committed to procuring three F-35B aircraft, at a total of \$632 million”, which suggests that if these exclude the engine costs, the UPC would be some \$211, which is pretty much on the money when compared to the SAR data.

Both the DoD and Lockheed Martin state that even if the early LRIP batches have high UPCs, those for later batches will be lower. OK, there is a history of programmes managing

	Target Cost (\$ Million)	Current Cost (\$ Million)	Estimated Cost (\$ Million)	% Change Target to Estimate	Number	UPC (\$ Million)
LRIP 2 Aircraft	2208	2586	2586	+17%	12	216
LRIP2 Engine	392	496	544	+39%	16	34
LRIP3 Aircraft	2775	2795	3613	+30%	17	213
LRIP3 Engine	649	673	706	+9%	21	34
LRIP4 Aircraft	3783–4026		3783		31	122–130

to bring costs under control across the course of a production programme, although there are enough sceptics around about whether the is, or will occur with the F-35. But something to consider: what happens if the LRIP4 UPC sees cost growth similar to that of previous batches, what would this mean for the UPC for these aircraft?

	Aircraft UPC (\$ millions)	UPC + engine (\$ millions)
LRIP4 current cost range	122–130	156–164
LRIP4 baseline + 17% growth	143	177
LRIP4 upper end + 17% growth	152	186
LRIP4 baseline + 30% growth	159	193
LRIP4 upper end + 30% growth	169	203

Defence Analysis puts these calculations forward as a set of potential ceilings that the programme might hit in the future, unless things come under serious control. They are, it has to be stated, maxima and upper limits – the Programme Office already says that UPC costs are falling, so – obviously – everything is starting to smell of roses. But looking at things from a UK point of view, it is going to be difficult to arrive at a UPC for JSF that doesn't look to be of the order of £100-million – and with the budget the way it is, there won't be that much money for too many aircraft

SHARING IT ALL OUT

Very late May saw a series of articles in the Indian press to the effect that the long-pending deal to upgrade India's 52 Mirage 2000s was on the verge of being signed. The deal, valued at some \$2.4-billion, would see a major avionics and electronics upgrade, as well as extra weapons. The deal has been on/off for at least three years, so a signature would bring blessed relief to French companies that have been keen to see everything done and dusted.

The cost looks slightly high to Defence Analysis's eyes: some \$46-million per aircraft is pretty amazing, even if it does include 450 Mica air-to-air missiles, which would cost some \$900-million. Subtracting these missiles from the total would make the aircraft's UPC down to \$29-million, although this still looks quite high.

As a mark of comparison, the Mirage 2000D upgrade programme in France is intended to see the aircraft upgraded with the following:

- Fire Mica IR missiles for self-defence;
- Carry the ASTAC electronic recce pod;
- New radar;

- New EW systems;
- New avionics to use the new systems.

Strangely enough, these look very similar to the capabilities being talked about in the Indian Mirage 2000 upgrade! However, the French programme is costed at between \$1–1.5-billion, giving a UPC between \$13–19-million, an order of magnitude smaller than the Indian programme. There are some possible explanations for this:

- The Indian Mirage upgrade is going to be more expansive than the already down-scaled French one;
- The Indian programme will cost more as there will be a requirement to integrate different, Indian-only weapons and systems;
- The cost difference is simply the extra cost of wanting the work and technology to be transferred to India.

But there could be some good news for France here, aside from the simple revenue going to industry from this deal. It might well be possible to launch the delayed Mirage 2000D upgrade on the back of the Indian deal, and with lower costs. It could well be possible, as part of the deal, to get Indian design bureaux to do some of the work, and some of the manufacturing, which is going to be all transferred to India anyway, might also be undertaken for the French upgrade in India, at lower costs.

However, is there not a "bad side" to the Mirage upgrade deal for France? If Paris gets this \$2.4-billion contract, and also gets the Indian Army's 197 light utility helicopter programme as well, and manages, too, to win a further order for Scorpene SSK submarines, and possibly for nuclear SSNs too, why would New Delhi opt for the Rafale? Is there not evidence, already, the India is following along the lines of countries such as Saudi Arabia in diversifying its weapons suppliers? After all:

- 5th Generation Aircraft \$25-billion Russia
- Interim Naval Combat Aircraft \$2-billion Russia
- Maritime Patrol Aircraft \$2.1-billion USA
- Transport Aircraft \$5-billion USA
- Future Medium Helicopter \$1-2-billion ?USA
- Submarines \$4-billion France (also Russia)
- Naval auxiliaries \$500-million Italy

With what is already being funnelled to France, is there not reason for New Delhi to share out the rewards of the current aircraft contest to a different suitor? One might, in this regard, see Typhoon as benefitting Germany, Italy, and the UK, so manages to kill three birds with one stone. Defence Analysis won't say that this is a certainty, but splitting orders up is a very common practice. ☹



PARIS DIVERSITY



Yawn ... I Suppose We All Knew That Paris Wasn't A Defence Show ...

It was chastening to open, in error, *Defence Analysis's* coverage of the 2009 Paris air show, to see the following opening paragraphs:

"This Le Bourget was the lowest, slowest, quietest show that Defence Analysis has ever seen, ever! Even on Monday and Tuesday, which normally would have been the busiest show days, in the run-up to lunch, you could have fired a cannon down the chalet line, and probably would only have winged one or two people"

Well, who would have thunk it that overall, things, as regards Paris as a defence show, could get even slower? Some smaller companies said that they had quite a good show; others say that, when compared to previous years, the delegations were at least more visible, and were less corralled by the French industry.

But overall, no-one could have much doubt that Le Bourget is *not* a defence aerospace show, not now! It doesn't help that none of the regional countries in Europe have two brass farthings to rub together, so there's no dosh in Europe. If there is a worry for Le Bourget (and Farnborough), it will be if the commercial aerospace companies follow their defence counterparts in wanting to "do" business at their own, regional defence shows

SMALLER AND SMALLER

EADS' presence was 40% smaller than in 2009 – for that year, the company found out that Airbus sent well over 800 people to the show, and for what reason? EADS had serious presence controls in place.

Thales, under the tight control of Luc Vigneron, also had a chalet and stand space at least 40% smaller, and several within the company said that there could have been more cuts. Very noticeably, the normal Paris Air Show Thales reception was noticeable by its absence.

Boeing had a cost target to cut their Le Bourget expenses by 50%, only breaking that target when it was decided to take both the 787 and the 747-8 to the show. But the company did slash back on numbers, with less than a dozen defence salesmen present in their assembly.

Two further signs that large presences at air shows might no longer be a pre-requisite:

Finmeccanica had also cut back its presence, although some still found it difficult to tell, as there was still a band of red chalets across the middle of the chalet line;

And Lockheed Martin was reported to have said well over \$5-million by slashing its chalet/stand space, and cutting numbers by somewhere between 150-200. One LM exec, partly admitting the numbers said, "this kind of money shows up on the bottom line" Strange to tell, but a lot of people were talking about this sort of cash saving

WINE REVIEW

Considering the rather austere atmosphere at the show, it was a pretty good year for wine, with some real surprises as regards both wines and locations.

EADS had a potential advantage in that they had a Media Seminar for a whole day before the show which produced a *Vacqueyras, Jean-Marie Arnoux, Arnoux et Fils, 2007* – what's not to like about this lower price Rhone red? – as well as a *Domaine de St Julien-les-Vignes, Coteaux de Provence 2010* rosé which was incredibly pale. Actually, practically all this year's rosés (that is 2009 and 2010) were incredibly pale, without being tasteless. At the show, there were a *Brumont, Gros Manseng Sauvignon 2010, Alain Brumont* – anyone who hasn't "found" the varietals of the Deep South West, well, you are missing something! – as well as a *Crozes Hermitage, les Meysonniers, M Chapoutier 2008*.

Thales produced a *Menetou Salon Morogues, Domaine Pelle 2010*, a white from an area which should also be sought out by those who haven't tasted the produce yet. The Burgundy – Blackberry wasn't behaving, so notes garbled! – at lunch was excellent!

MBDA continues tradition for kooky wines with a *Corse Calvi, Vignola Domaine Renucci 2007* white, very pleasant, and a more traditional *Le Sillage de Malartic, Pessac Leognan, Graves, 2006* red, also very quaffable.

Boeing was the real eye opener, especially as the company is American, so – obviously – dry. On tap were a *Sancerre la Guiberte 2008, Alain Gueneau, a Prosecco Le Dolci Colline*, and a *Corail Cotes de Provence 2010, Chateau de Roquefort* rosé. Other reds and whites also turned up – in quantity – at the media reception.

BAES produced a *Nuovo Quadro, Gavi di Gavi La Battistina 2010*, which drunk very well, **Eurofighter** also continued tradition by coming up with different wines from the partner countries, top of which was a *Vina Esmeralda, Familia Torres, 2010*.

By the way, does anyone notice anything missing from this list? Come on, wake up at the back! No? No-one notice any company missing at all? Aah! Now you're starting to think, aren't you! Well, those of an agile mind might well have noticed that there is no mention of a normal runner in this review, Finmeccanica. And the reason for this omission? Well, most companies do have a split between the "Adult Chalet" and the "Media Chalet", so no real gripe that Finmeccanica had just such a split. But on Day Two, pop into Finmeccanica's Media Chalet for, well, what? A cheeky Prosecco? They had a good one at Farnborough. Possibly a Pinot Grigio? Fat chance! Water, orange juice, or coke! *Nul points!*

Anyhow, so what conclusions?

White: Joint award to **BAES's** Gavi and **MBDA's** Corse, with a very noble mention to **EADS's** Gros Manseng.

Red: Another joint (and showing off *Defence Analysis's* bias to wines from certain regions) award to **Thales' Burgundy** – the notes said it as great – and **EADS's** Rhone.

Rosé: **Boeing's** Sancerre – a cracker, with a noble mention to **BAES's** rosé, whose details we couldn't get.

Sparkling: **Thales** for sheer availability of champagne! ☺

DEFENCE DIVERSITY

OUT OF THE MOUTHS OF BABES ...

From the UK MoD's "Defence News Blog" for 3 June 2011:

"Civil Service employee numbers: The Metro this morning claims that the MoD is to double the number of civil servants it makes redundant this year to 8,000, but that the overall number of job cuts over four years will not change. It is correct that the overall number of civil servants being reduced has not changed and remains at 25,000 over four years. However, owing to the very high number of applications received for the voluntary early release scheme, we are looking at whether we can release more people earlier than originally intended. This will not adversely affect the work of the Department."

Obviously all fair, right, shipshape and dandy! However, one can see how a tradition of spin has slipped into this press release, prompting the question that if one can actually make more civil servants redundant this year without adversely affecting the work of the department, what on earth were these 8000 people doing in the first place? And if they can be made redundant early, why has it taken so long to get the civil service redundancy process underway?

HOSPITALITY "THANK YOU'S" ...

Paris is dealt with elsewhere in this edition, but June was, anyway, a busy month, to say the least.

And so to the Durbar Court of the Foreign and Commonwealth Office. As regards UK receptions, Finmeccanica arguably has made the pre-Christmas one at the National Portrait Gallery its own, EADS has bagged that place for the New Year reception, and **General Dynamics UK** has claimed the spot for the "Early Summer Do". An excellent display of the great and the good, some *lovely Prosecco* – "Prosecco is the new champagne" – and all enjoyed by the throng!

KBR's cocktail reception at Pearl on High Holborn saw a good collection of rogues, mainly from Her Majesty's Fourth Estate – who wine and dined on good NV champagne (never got to see the label, as the waiters kept an extremely tight hold of it!), before the cocktail list was opened up. From previous experiences, *good martinis!*



XC2V

And an excellent day out to Lord's with **BAE Systems Maritime** – especially so as the weather was good, veering towards bloody boiling, and the result, which even though England's first two wickets were gone within 40 minutes, there was some excellent batting still to watch thereafter!

OUT OF THE MOUTHS OF COMPUTERS ...

Googling a few things over the past month, one such caused much hilarity The search was for things to do with "logistics", and required a search to hunt down the UK's Joint Force Logistic Component, as one does. Funnily enough, the first four search results all provided pretty much what was desired as regards JFLogC, but it was the fifth result that caused the amusement. It was a link to the UK's Defence Supply Chain Manual, and the address breakdown, via an online document website was categorised as:

"Art & Literature > Children's Literature"

Not sure that the hard-working Loggies will be too happy with this categorisation

OUT OF THE MOUTHS OF BABES (REDUX) ...

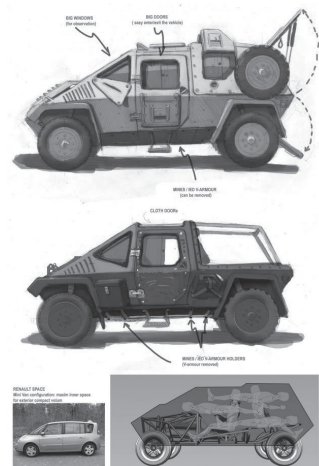
From a US Department of Defense press release from early June about the Joint Strike Fighter programme, and the progress reports that it is meant to go through:

"The review had been scheduled for late May, then was rescheduled for mid-June. Now, senior leaders have decided to wait until more real-world data is gathered"

So, there seems to be a realisation that, to date, very little "real world data" has actually been collected, no?

"HE SAID WHAT ...?"

"You wanted me to get you what, exactly?" One can almost hear the slightly worried and shocked tones of someone who could well have misheard an instruction from someone at the US Department of the Army, when asked for a new series of protected patrol vehicle. Certainly, typing the designation for this into some search engines produced a very different result. For those not in the know, the new "XC2V" is the one on the right: ☺



2CV