

Paris Air Show preview

Ready for take-off or grounded by uncertainty?

Aerospace and defence

June 2011



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Ready for take-off or grounded by uncertainty?

Although the Paris Air Show is predominantly a civil aerospace event, we feel the impact of global political and security issues could also play its part this year. We highlight issues that could affect news flow and assess the potential impact on orders and sentiment. We also look at developments in defence since our *Sensors for investors* report to provide a relative view of the strength of the UK A&D sub-sectors.

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Uncertainty and global instability

A number of issues during early 2011 have raised questions about the enduring effect of the economic recovery, the political environment in the Middle East and the reality of high fuel prices. While this has created a potential near-term slowing in air traffic growth, the underlying global demand from regions such as Asia continue to paint a long-term view of continued global growth.

Offset by rising production rates and new aircraft

This long-term demand is supported by a large jet backlog of c 7,000 aircraft, with production rates set to enter a period of rising rates driven not just by new aircraft such as the 787 and A350, but also by increases in the existing narrow body fleet. How the supply chain copes with this ramp-up will be a key feature in the success of the industry's ability to deliver over the coming years.

Defence remains subdued

With Western defence budgets remaining under pressure, despite additional tasks in support of NATO activities in Libya, we feel sentiment will remain muted. However, we continue to believe specific opportunities remain: 1) Babcock – defence outsourcing; 2) Chemring – sustained growth and upgrades; 3) BAE Systems – long-term value; and 4) Cobham – positive restructuring.

Focus on civils for now; quality in this environment

With short-term newsflow from Paris and near-term results from the smaller names, focus will be firmly on the civil space in the coming weeks. While higher risk trades are possible in Hampson and to a lesser extent Umeco, we feel the quality of Rolls-Royce and Meggitt will provide sustained opportunity over the longer-term.

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Key themes for the Paris Air Show

Below we discuss the top-level themes that are key areas of interest and that are likely to affect news flow. We outline questions we will be asking at the air show.

Economic outlook

We will be looking for signals from across the show for views on economic outlook, air traffic impact and whether capacity has got ahead of underlying demand. These signals will indicate likely future capacity moves and feed through to the supply chain through aftermarket revenues. In addition, we will be seeking further evidence of the growing base of new entrants into the market from developing countries and any evidence of international appetite.

Key questions/potential newsflow:

- *Will air traffic demand return to the long-running annual rate of 5-6% in H2?*
- *Will orders demonstrate that the original equipment market and long-term views of the economic recovery remain healthy?*
- *What will be the nature of orders in terms of aircraft and customers?*

Rising fuel costs

Fuel is set to account for over 30% of airlines' operating costs in 2011; will the consequent impact be negative from a capacity viewpoint or provide further opportunities for more fuel efficient aircraft? With the B787 and Airbus A350-XWB due to enter production, and the successful market entry of the A320 neo, we believe the latter to be the case.

Key questions/potential newsflow:

- *Indications from Boeing regarding a potential response to the neo – current indications are for a new single aisle aircraft with a decision by year end.*
- *Newsflow regarding future engine and airframe developments, along with potential new fuel sources.*
- *Evidence of greater optimisation of fleets and aircraft capabilities? Impact on existing development programmes?*

Programme schedules

With 2011 exhibiting the start of what appears to be a strong period of growth in aircraft deliveries, focus will be on whether the much delayed programmes are on track and whether current development programmes are progressing to plan. In addition, with recent increases in production rates of existing programmes, we will be garnering views on the robustness of the supply chain and any areas of strain.

Key questions/potential newsflow:

- *Newsflow regarding first deliveries of the Boeing 787 and expected entry-into-service date of the A350-XWB.*
- *Progress on the Bombardier C-Series and the impact that will have on the smaller end of the 737/A320 market.*

- *Indications regarding potential changes to the A350-1000 engine requirements and the potential impact on Rolls-Royce.*
- *Progress on the new entrants from China, Russia and Japan.*

Government austerity

The recession and long road to recovery has left many western governments identifying areas of cuts and changing defence structures and acquisition policies. We will be looking for the impact of this, both in terms of companies in attendance and overall sentiment. One area we will be paying particular attention to is whether the shift in economic fortunes from west to east will be mirrored by defence orders at the show.

Key questions/potential newsflow:

- *Programme updates on the Lockheed Martin F-35 JSF.*
- *Indications of orders from those governments where economic growth continues. In particular any newsflow regarding the Indian MMRCA fighter competition (Eurofighter/Rafale).*

Defence priorities

Despite budgets being under pressure there are still certain areas of growth within the defence market, although cuts and slow decision making has hampered these choices and delayed other major programmes. The industry as a whole is reshaping itself to meet rapidly changing requirements, more flexible operations and non-conventional warfare in areas such as cyber security.

Key questions/potential newsflow:

- *Impact of defence budget slowdowns and delays in the major air weapons platforms, along with the implications of activities in Libya and changes across the Middle East.*
- *Identifying those companies for which the priority areas (UAVs, cyber security, counter-IED and Intelligence Surveillance & Reconnaissance [ISR]) will have a meaningful effect. Also seeking indications of how companies are responding further to the changing nature of warfare.*
- *Newsflow regarding joint development and closer co-operation across Europe and the A&D industry.*

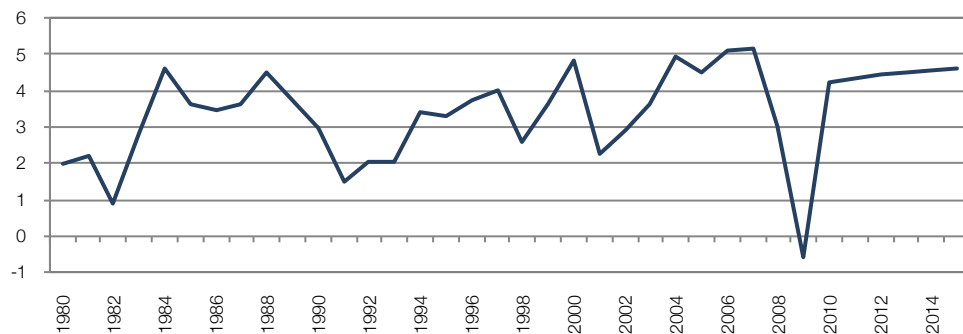
Shifting power bases – impact across the sector

In our view, the recession has simply accelerated the shift in global economic power from west to east and, with such a divergence, the drivers for air travel and aircraft demand. As the global economy rebounds, distinct variations in the pace and prospects of various regions of the world are having a profound effect not only locally, but on a global scale. Whether this is on the demand side or, increasingly, the desire of emerging economies to participate more strongly in the supply-side of aerospace, the established players are attempting to ensure that developments support this shift. The showcasing of the emerging aircraft options on offer at the Paris Air Show are likely to further substantiate this trend.

Economic recovery – impact on air traffic

Following the economic struggles of the past few years, a real divergence has emerged in forecast recovery across the globe. Exhibit 1 below shows the IMF’s projections for global growth. While the rebound has been strong, some concerns remain around the endurance of the recovery and, as the past few months have shown, shocks and uncertainty can quickly dent confidence.

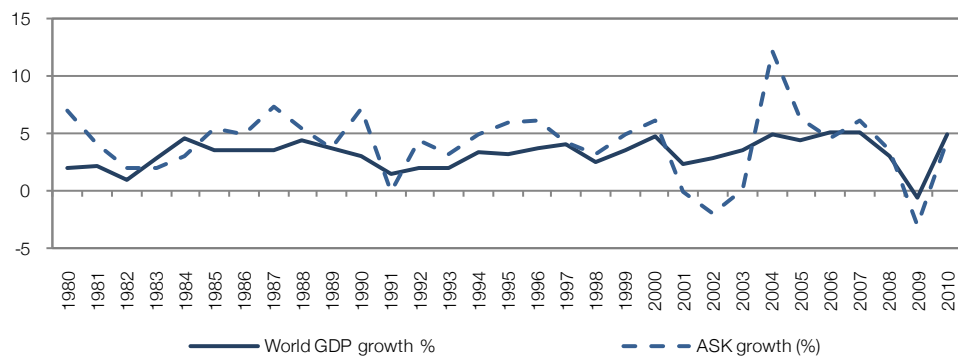
Exhibit 1: Global GDP growth forecast



Source: IMF

One of the main indicators we will be looking for at the air show is the mix between established airlines, newcomers and signals from the lessors. Overall, we believe this will give an indication of the global perspective on economic growth and the travel demand that it is likely to drive. Exhibit 2 below shows the strong correlation between global GDP growth and air travel (ASKs).

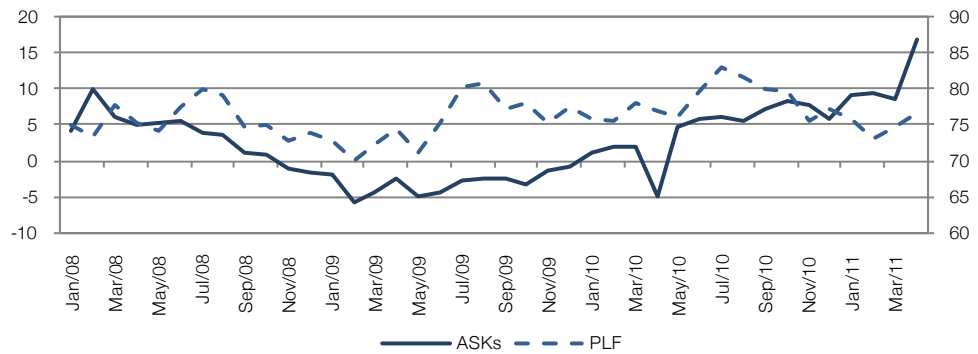
Exhibit 2: Historic link between global GDP and available seat kilometres (ASKs)



Source: IMF

Current indications are that the monthly ASKs are continuing their growth trajectory, as show in Exhibit 3 below. Note the significant drop in traffic in April 2010 that was due to the impact of the Icelandic ash cloud and the corresponding jump in April 2011 due to the weak comparator.

Exhibit 3: International monthly ASKs and passenger load factors (% actual change)



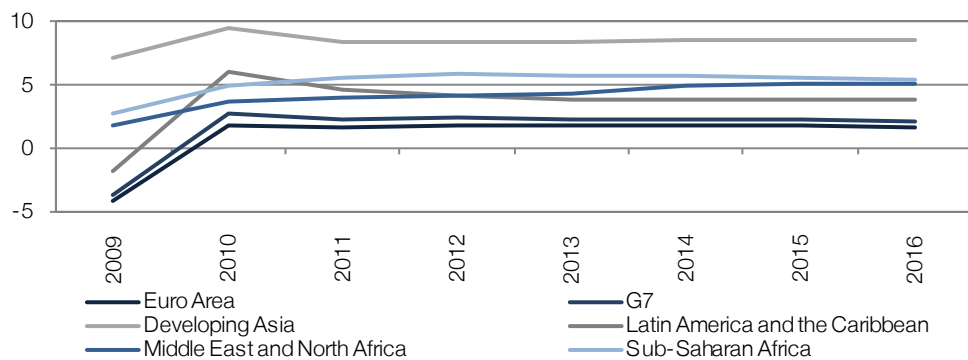
Source: IATA and Edison Investment Research

The international figures appear strong, but we would highlight that, as a result of an increase in capacity, load factors have weakened since a high in July 2010. While this may be an early indication of capacity oversupply, we believe it reflects a return to more normal load factors following a very cautious reintroduction by airlines post-recession. This is something we will be monitoring closely.

Mature economies slowly rebounding, emerging market engine

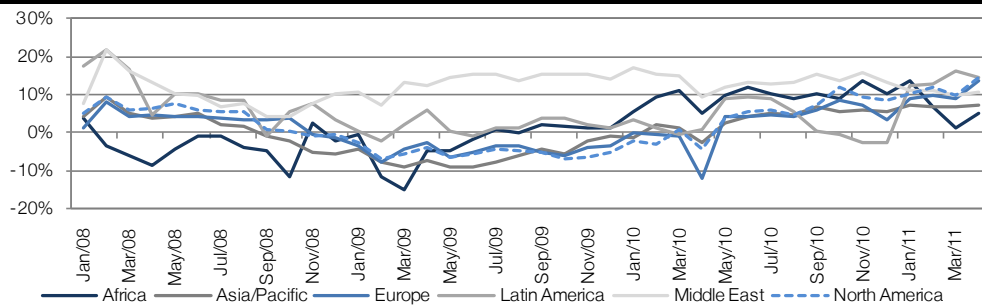
The divergence of the post-recession recovery has been witnessed throughout the past 12 months with many western economies rebounding slowly, while many developing economies have continued their rapid growth. Exhibits 4 and 5 below show the relative growth forecasts for various regions and regional air traffic trends.

Exhibit 4: Regional GDP (% forecast change)



Source: IMF and Edison Investment Research

Exhibit 5: Monthly ASKs (actual)



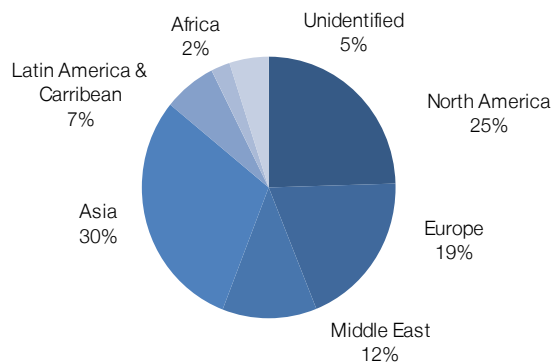
Source: IATA and Edison Investment Research

The higher economic growth in emerging economies is driving air travel and, with relatively underdeveloped fleets compared to the mature markets of Europe and North America, the potential for considerable expansion remains. In the Asia-Pacific region alone, Boeing forecasts that over 10,000 new aircraft will be required over the next 20 years.

Implications for the backlog profile

With traffic demand remaining high in the developing economies, it is no surprise to see those regions figuring substantially more than in the past in the large jet backlog of Airbus and Boeing.

Exhibit 6: Current structure of large jet backlog



Source: Airbus, Boeing and Edison Investment Research

With the divergence in growth, we anticipate that the emerging economies will feature heavily again in the order flow at this year’s air show. We note some additional points:

- Over the past 12 months there have been a number of notable cancellations from Middle Eastern lessors such as Dubai Aerospace Enterprises, as the boom that occurred before the recession subsided. However, we feel that this is likely to reverse in the medium term.
- North American carriers require a substantial re-fleet, with the average age of aircraft substantially higher than most other regions. Although there have been some signs of a pick-up in orders from the region, several airlines still require an extensive fleet overhaul.
- We wait to see how active lessors are in the market and, in particular, which type of aircraft they favour. Last year’s Farnborough Airshow saw the return of lessors following a lean period of orders from that segment. However, with capacity largely reinstated and load factors in decline, we expect a targeted approach from these customers.

Global shocks driving uncertainty; impact of fuel

2011 has so far been a year of many events that have provided shocks and strains. We have witnessed the collapse of the established order in the Middle East, the divergence of global economies, the tsunami and nuclear disaster in Japan, and the initial impact of government austerity measures in the West. Due to this rise in uncertainty and the threat of contagion in the oil-rich nations of the gulf, the threat of an oil price spike placing a dampener on economic recovery has increased and could in turn reduce demand for air travel and ultimately demand for aircraft. However, we feel that this price escalation in fuel also provides a reminder to airlines of the need for fuel-efficient aircraft, as fuel becomes an increasing proportion of their operating costs.

Uncertainty driving oil prices higher, but volatility remains

Through the combination of a threat to Middle East oil production and risk of contagion in the region, we have seen jet kerosene prices spike to \$140/bbl. As can be seen in Exhibit 7, this is its highest level since the spike of 2008.

Exhibit 7: Jet kerosene price (US\$/bbl)



Source: Datastream

This has a potential dampening effect on both economic recovery and airline profitability, as shown in Exhibit 8 below. With IATA now forecasting the average oil price for Brent to be \$110 per barrel compared to its previous forecast of \$96 per barrel, airline industry profitability is forecast to be \$4bn, versus IATA's previous expectation of \$8.6bn in March. However, we feel that unless oil maintains its elevated levels for a considerable period of time, airlines will continue to take deliveries largely in line with planned schedules, driven by more fuel efficient aircraft entering production.

Exhibit 8: Airline operating profits over the past decade

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011e
Revenue (\$bn)	307	306	322	379	413	465	510	564	482	554	598
Expenses (\$bn)	319	311	323	376	409	450	490	573	486	524	586
Fuel as a % of expenses	13	13	14	17	22	26	28	33	26	26	30
Operating profit	(11.8)	(4.8)	(1.4)	3.3	4.4	15	19.9	(8.9)	(3.4)	30.2	11.7
% margin	(3.8)	(1.6)	(0.4)	0.9	1.1	3.2	3.9	(1.6)	(0.7)	5.5	2.0
Net profit (\$bn)	(13)	(11.3)	(7.5)	(5.6)	(4.1)	5	14.7	(16)	(9.9)	18	4
% margin	(4.2)	(3.7)	(2.3)	(1.5)	(1.0)	1.1	2.9	(2.8)	(2.1)	3.2	0.7

Source: IATA and Edison Investment Research

We could see a potential impact in the aftermarket, as airlines look to reduce the use of older aircraft and seek to service routes with younger aircraft. This would be a repeat of what happened during the last price spike and would affect those companies exposed to the aftermarket of older models and business aircraft in particular.

New aircraft developments driven by fuel efficiency

With forecasts of 30% of an airline's operating costs accounted for by fuel at these levels, we believe that the focus on fuel-efficient aircraft will once again dominate at Paris. Orders and developments that we are keeping a keen eye on include:

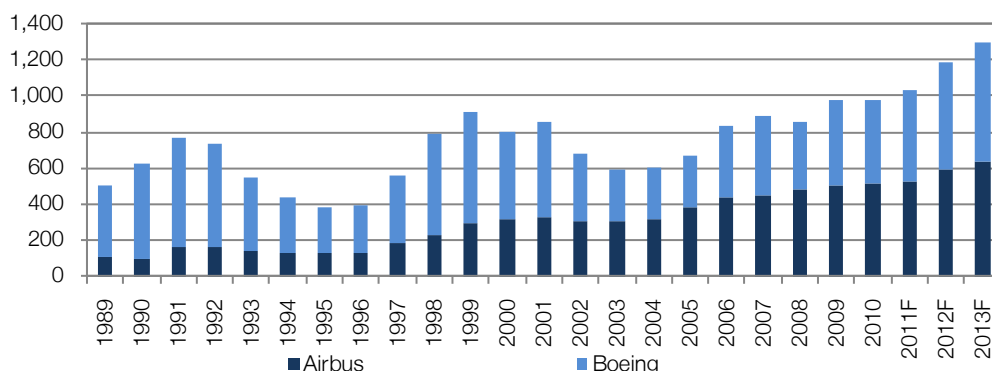
- **Boeing 787/Airbus A350-XWB.** With the 787 due to enter production by the end of the year and the A350-XWB progressing through development, we will be looking for confirmation of programme and production timescales, along with any indications that further slippage may be possible.
- **Airbus A320 neo.** Following Airbus's launch of the re-engined A320, the neo has secured over 330 commitments already. We will be closely watching comments from Boeing regarding its response, with the decision expected by the end of the year.
- **Bombardier C-Series.** Although Farnborough was poor for Bombardier's C-Series, there have been a number of small recent orders. While still relatively small, this is at least showing some signs of life in this end of the market for Bombardier. Further orders may signal customers are willing to start to commit following Airbus's decision on the neo.

In addition we will continue to watch with interest the ongoing development of regional jets from Russia, China and Japan. While we anticipate much support in the home markets, we wait to see how quickly these jets can break through on the international stage.

OEM deliveries set to increase

Through the combination of conservative ramp-ups during the boom years and new aircraft such as the B787 and A350-XWB due to enter production, we believe that aircraft deliveries will see a steady increase over the next few years. Exhibit 9 below shows our forecasts for deliveries based on current planned rates and entry into service dates. 2011 has already seen Airbus announce that its single-aisle rate will increase again to 42 a month from Q412. With the backlog still remaining at c six years' production and the drive for greater fuel efficiency, we feel that the civil OEM market will remain healthy for the foreseeable future, with the true upturn in volumes commencing in 2012.

Exhibit 9: Forecast large jet deliveries



Source: Edison Investment Research

The challenge for the industry over the next few years is to manage the production increase, incorporating several concurrent new aircraft, while ensuring the supply chain remains robust. As long as this is achieved then the outlook for commercial OE remains very healthy, in our view.

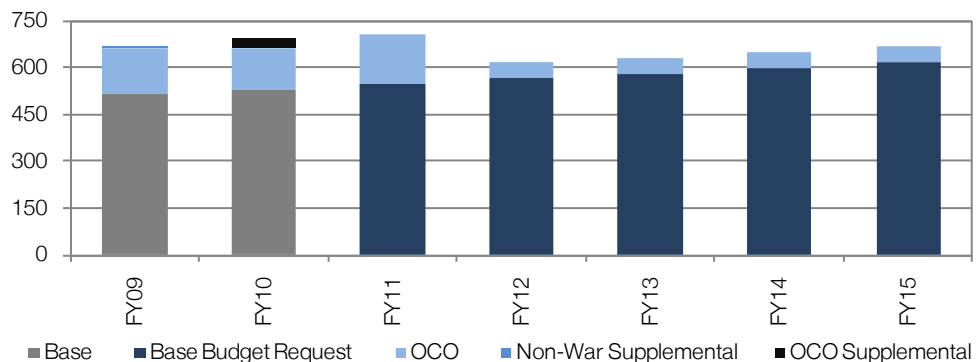
Government austerity: Defence feeling the pinch

With western governments in particular following deficit reduction plans and the real impact starting to come through, we see the remainder of 2011 as a difficult year across the defence market. While we feel most companies are placed to cope, there are circumstances where delays and cancellations, not just in programmes, but also in agreeing budgets, are having an impact. In addition, competitive pressures are building on both sides of the Atlantic and in the export markets, which are increasingly being targeted by all firms as home market pressures increase. In addition, with budgets squeezed, many firms have been using acquisitions to reposition into growth segments.

US: Stable, but under pressure

The US defence budget remains the largest in the world, with the FY12 presidential budget request standing at a combined \$671bn (\$553bn base and \$118bn for Overseas Contingency Operations - OCO). Despite this, there are a series of pressures which will see the historic growth slow to effectively a zero real rate over the next three years. In addition, while the FY12 budget was submitted on 14 February, the FY11 budget was not appropriated and therefore is operating under a continuing resolution that funds defence with a \$513bn base budget, \$18bn less than the FY11 request, but \$5bn above the 2010 level, along with an OCO of \$157bn.

Exhibit 10: US defence budget – FY12 Presidential Budget Request



Source: Edison Investment Research

Pressures being applied – eliminating waste, punishing delays

As with many areas of federal spending in the US, the DoD has been pressed to find additional savings where possible, while redirecting these savings to front-line operations. With over \$400bn of efficiency savings already identified and further savings to be sought, there will undoubtedly be increasing scrutiny of defence spend. While the greatest focus is on eliminating waste and inefficiencies, there is also a tougher stance being taken on poor contract performance.

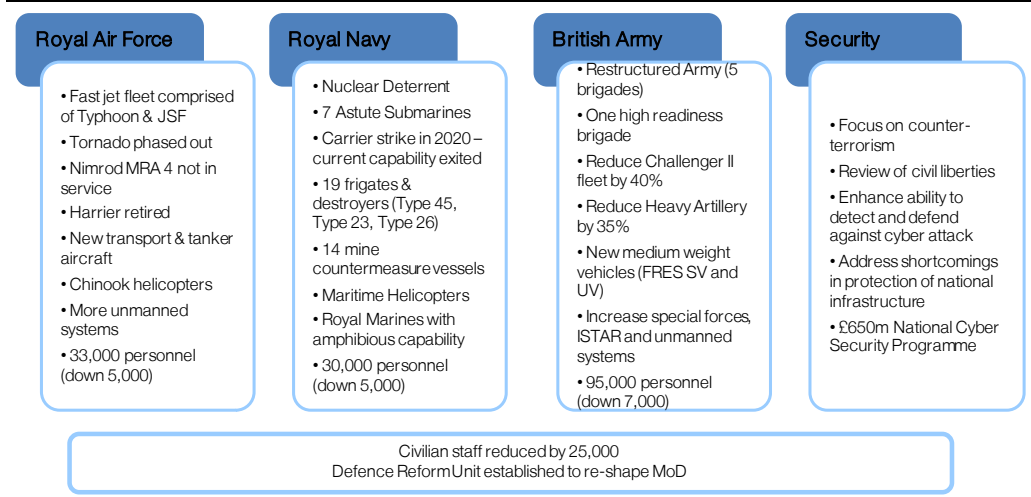
Outlook remains stable

In the long-term, we believe that despite the current fiscal imperative, the outlook for US defence is set to remain stable. With the global uncertainties described earlier in this report, coupled with a resurgent Russia and a developing China, we feel the perceived risk of real defence cuts in the US is too great for it to happen on a meaningful scale. What is certain is that the days of plenty are most certainly at an end.

UK: Priorities fixed?

Following the publication of the UK's Strategic Defence and Security Review and Comprehensive Spending Review, the UK MoD budget has been reduced by 8% over four years. While the cuts were lower than had been suggested, and indeed compared to many departments appeared to be a robust outcome, several difficult and deep cutting decisions were made. Exhibit 11 below shows the main impact on the force structure of the SDSR decisions.

Exhibit 11: MoD SDSR impact by service – 2020 force and restructuring of priorities



Source: BAE Systems and Edison Investment Research

However, since those decisions have been made the UK has entered into support of NATO's Operation Unified Protector in Libya. This in itself has raised further questions regarding the cuts that were made and again highlighted the difficulty in assessing which capabilities were truly required for future operations. While we do not see any significant changes being made to current policy, we feel the impact of actions in Libya ensures operational capability will remain a priority.

European governments: Mixed bag, greater co-operation?

Across other European governments we have seen further retrenchment in defence spending as they seek to reduce government expenditure and realign capabilities with operations. Across the main spenders, such as France, Germany, Italy and Spain, budgets have reduced, forces shrunk and the whole concept of operations revisited. This was demonstrated by the proposed restructuring of the armed forces in Germany, which is set to see the size reduced from 222,000 personnel to 185,000 and an end to compulsory military service.

One thing that has emerged is a greater opportunity and desire to forge mutually beneficial agreements in terms of cooperation. One such example is the UK-France Defence & Security Co-operation Treaty. This will see co-operation in areas such as equipment development (eg Unmanned Air Systems), logistics, training and, in certain, circumstances operations.

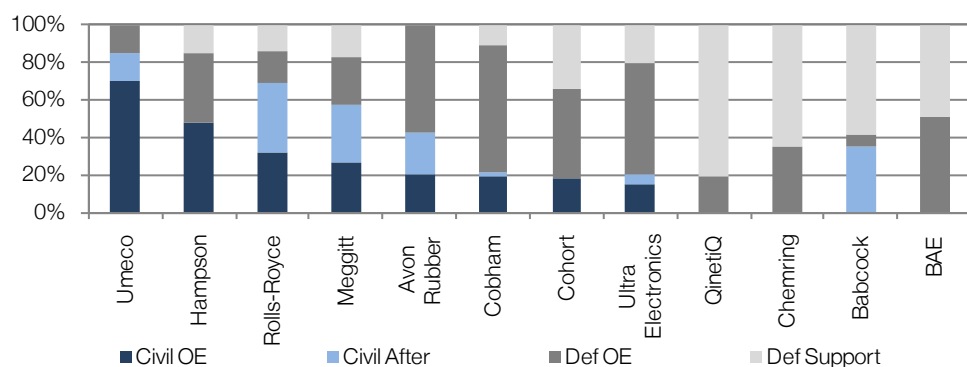
The world a safer place?

We believe that one of the clearest messages to come out from the recent instability is that, unfortunately, the world is not becoming a safer place. Indeed, as highlighted by the UK's National Security Strategy entitled "Age of Uncertainty", the risks are increasingly more diverse in nature and constantly evolving. As a result, defence needs to remain flexible and adaptable and that may mean in many cases designing equipment on accelerated timescales to address emerging threats. This is evidenced by areas such as counter improvised explosive devices (C-IED) and the response to the developing cyber security threat. However, we believe that current action has also demonstrated the need for conventional forces and this is the balancing act governments around the world are facing.

What does it mean for UK A&D?

Traditionally the Paris Air Show is predominantly more civil-focused than Farnborough, and therefore identifying companies that are most likely to benefit from newsflow depends upon their relative business split. Exhibit 12 below highlights the proportion of civil and defence business, as well as a view of OE and aftermarket.

Exhibit 12: Relative sales mix of UK A&D



Source: Edison Investment Research

We identify four main potential beneficiaries from positive newsflow at the air show where civil activities dominate, namely Rolls-Royce, Meggitt, Umeco and Hampson. Meggitt is most likely to benefit from reassurance on the aftermarket, Rolls through a combination of aftermarket and importantly development programmes, while the ramp-up in production will support Hampson and Umeco, although these latter two have much greater company-specific issues that will drive performance over the next 12 months.

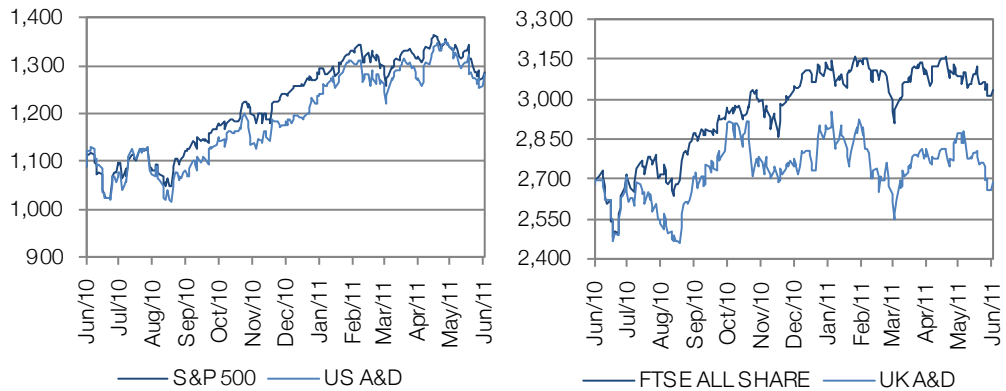
While defence names may get some benefit from individual announcements, we feel the overriding concern on defence spend will dominate, and focus will therefore be on the demonstration of new capabilities such as Unmanned Air Systems, cyber intelligence, or showcasing related activities in areas such as Intelligence, Surveillance and Reconnaissance (ISR). We refer back to our September report [Sensors for investors](#) for more detail on each company's activities in defence.

Sector performance and valuation

Over the past 12 months, the UK A&D sector has underperformed the FTSE All-Share by 11%, whereas the US A&D sector has effectively mirrored the S&P 500. We believe this is in large part due to the greater proportion of UK companies that have a weighting towards defence and,

following a period of negative sentiment as a result of defence cuts and uncertainty, these stocks as a basket have underperformed the market. In the US there are a larger number of companies for which commercial aerospace has a greater impact, hence the performance has been more closely linked to wider economic sentiment.

Exhibit 13: UK and US aerospace industry relative share price performance (last 12 months)

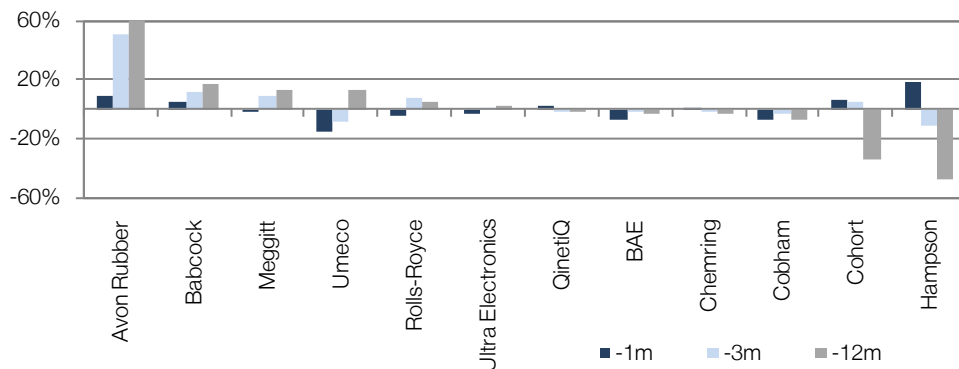


Source: Datastream and Edison Investment Research

UK company-specific performance

Within the sector, many of the largest moves have been company specific. Exhibit 14 below shows the relative performance on a one, three and 12 month basis.

Exhibit 14: Relative share price performance



Source: Datastream, Edison Investment Research

As can be seen, the best and worst performers over the past 12 months have been small cap stocks with specific issues. Avon Rubber, one of our top picks in September, has benefitted from the structural growth drivers in its safety markets, while Hampson was hit by a fund-raising and concerns that debt covenants may still be breached.

In the wider sector, there is a clear aversion to the defence names, with the notable exception of Babcock, which, as we have highlighted over the past year, should be considered in its support service role. On the whole, civil aerospace stocks have outperformed over the past year, although the past month has seen some weakness on the back of a renewed focus on economic prospects.

Relative global peer valuation

The global peer group valuations are highlighted in the exhibits below. We will be meeting with a number of the companies both in investor forums and in one-to-one meetings throughout the course of the air show.

Prime contractor valuations

Exhibit 15: Prime contractor valuations (prices as at 15 June 2011)

US	P/E			EV/EBITDA		
	2010	2011e	2012e	2010	2011e	2012e
Boeing	16.8	18.3	14.2	9.3	9.1	7.6
Lockheed Martin	11.0	11.0	9.2	6.2	6.5	5.7
Northrop Grumman	9.5	9.6	9.0	5.3	5.5	5.4
General Dynamics	10.4	9.9	9.3	0.6	5.9	5.7
Textron	26.8	19.2	11.8	13.2	9.5	7.6
Europe						
BAE Systems	7.7	7.5	7.2	4.4	4.5	4.3
EADS	31.9	25.0	12.9	2.0	1.8	1.4
Finmeccanica	6.8	7.1	6.6	3.6	3.7	3.5
Saab	18.8	11.4	10.4	4.8	4.4	4.4
RoW						
Bombardier	16.5	14.8	11.5	8.5	7.9	6.4
Embraer	15.9	15.7	12.4	8.3	9.9	8.7

Source: Thomson Reuters, Edison Investment Research

There is a clear divergence between those companies that are involved primarily in defence (BAE, Finmeccanica, Lockheed, Northrop, GD) compared to those that also have a substantial presence in the civil aerospace market (Boeing, EADS, Bombardier, Embraer). However, we continue to feel that the discrepancy between **BAE** and its closest US peers at c 25% provides a long-term value opportunity given BAE's wider international presence.

Electronics/avionics valuations

Exhibit 16: Electronics/avionics valuations (prices as at 15 June 2011)

US	P/E			EV/EBITDA		
	2010	2011e	2012e	2010	2011e	2012e
Raytheon	10.2	10.0	8.8	5.9	5.6	5.2
Eaton	16.7	12.0	10.1	8.4	8.1	7.2
Esterline	16.9	14.6	13.3	9.2	7.8	7.1
Honeywell	21.9	14.3	12.4	10.7	8.4	7.5
ITT Corp.	12.6	11.6	10.8	6.7	6.3	6.1
L-3 Communications	9.8	9.5	9.1	6.1	6.4	6.4
Rockwell Collins	16.2	14.1	12.4	8.8	8.4	7.6
Europe						
Barco	14.7	10.7	8.8	6.5	5.0	4.4
Cohort	7.3	6.4	N/A	4.4	3.6	N/A
Thales	(123.8)	11.7	9.6	15.6	4.9	4.3
QinetiQ	9.0	8.8	8.7	6.7	5.8	5.5
Ultra Electronics	15.2	13.6	12.5	9.1	8.1	7.0
RoW						
CAE	18.9	17.0	14.5	9.4	8.6	7.6
Elbit Systems	11.1	10.7	9.3	6.2	5.5	5.0

Source: Thomson Reuters/Edison Investment Research

Ratings in the electronics subsector are spread widely, with many companies grappling with structural and demand issues (**QinetiQ**, **Cohort**, Thales), while others such as **CAE**, which we

highlighted in our September note are benefitting from recovery in end markets and an increasing move towards simulation training. We highlight the fact that **Ultra** has slipped from its position as one of the highest rated stocks across this subsector as growth expectations temper. However, it still compares favourably to the likes of Raytheon and L-3, which operate in similar defence fields.

Systems/subcontractor valuations

Exhibit 17: Systems/subcontractor valuations (prices as at 15 June 2011)

US	P/E			EV/EBITDA		
	2010	2011e	2012e	2010	2011e	2012e
Alliant Techsystems	7.3	7.9	7.8	5.0	5.0	4.9
BE Aerospace	26.9	18.4	14.8	13.7	10.5	9.0
Ducommun Inc.	11.5	11.7	8.2	5.4	5.4	5.4
FLIR Systems	21.8	19.5	16.7	12.3	11.0	9.6
Goodrich	19.7	15.8	13.8	9.9	8.5	7.7
LMI Aerospace	19.5	13.4	11.6	10.6	7.6	6.5
Moog	16.5	14.0	12.1	8.6	7.9	7.3
Pall Corp.	22.2	17.8	15.4	12.6	10.8	9.7
Spirit Aerosystems	14.0	12.5	9.5	9.4	7.9	6.4
Telephonics (Griffon Corp)	34.2	16.0	9.5	11.1	6.1	5.8
Triumph Group	14.5	11.7	10.3	9.5	7.1	6.3
Europe						
Avon Rubber	12.8	9.8	N/A	7.2	6.5	N/A
Babcock	12.9	11.7	N/A	11.2	10.2	N/A
Cobham	10.9	10.1	9.3	6.8	6.6	6.0
Chemring	12.9	10.5	N/A	9.2	8.0	N/A
Hampson	6.4	7.6	N/A	4.6	4.8	N/A
Meggitt	12.6	11.8	10.1	6.6	5.6	4.8
Umeco	10.9	9.3	N/A	7.9	7.1	N/A
Zodiac	16.4	12.7	11.7	10.5	8.0	7.4
RoW						
Heroux-Devtek	14.0	12.7	10.5	5.9	5.5	4.9

Source: Thomson Reuters, Edison Investment Research

This subsector yet again demonstrates the divergence in ratings between defence and civil focused stocks, with the likes of B/E Aerospace, Goodrich, Moog and Spirit all comparing favourably to those such as Alliant Techsystems (ATK), Chemring and Cobham. We feel that the c 25% discount of **Meggitt** when compared to its closest peer Goodrich, is excessive. In addition, we highlight the c 10x rating of **Avon Rubber**, which we feel does not fully reflect the ongoing growth potential in this stock.

Engine manufacturer valuations

Exhibit 18: Engine manufacturer valuations (prices as at 15 June 2011)

US	P/E			EV/EBITDA		
	2010	2011e	2012e	2010	2011e	2012e
General Electric	16.2	13.7	11.2	18.7	17.0	16.8
United Technologies	17.7	15.4	13.6	9.7	8.6	7.9
Europe						
MTU	15.2	13.9	11.9	7.3	6.9	6.1
Rolls-Royce	15.7	13.7	12.5	0.0	0.0	0.0
Safran	22.9	16.4	13.0	9.6	7.5	6.4

Source: Thomson Reuters, Edison Investment Research

Once the recession abates the engine manufacturers are set for a period of growth, with a series of new aircraft due to enter production, increasing air traffic, and the prospect of rising production

rates. We highlight the benefits of **Rolls-Royce's** long-term contracts, but also believe the recovery in the aftermarket bodes well for the higher margin time and materials supply. The completion of the Tognum deal will also provide further growth opportunities in the wider power systems strategy.

MRO/aftermarket valuations

Exhibit 19: MRO/aftermarket valuations (prices as at 15 June 2011)

	P/E			EV/EBITDA		
	2010	2011e	2012e	2010	2011e	2012e
AAR Corp	17.5	13.1	10.8	8.3	6.4	5.5
HEICO	39.4	32.3	27.5	14.2	12.2	N/A
Satair	17.4	14.3	11.7	12.6	11.1	9.4
ST Engineering	18.0	16.3	15.1	10.8	10.7	10.0

Source: Thomson Reuters, Edison Investment Research

The MRO sector is a clear beneficiary of the recovery in air traffic and the associated aftermarket. With growth being demonstrated across all constituents, we believe the ratings reflect the belief that the upturn is sustainable.

UK valuation and rating

Exhibits 20 and 21 below show the current valuation and performance tables based on our latest published forecasts.

Exhibit 20: UK A&D valuation table (prices as at 15 June 2011)

	Market Cap (£m)	Share Price (p)	EV/Sales			EV/EBITDA			P/E			Div Yield			FCF Yield		
			2010	2011e	2012e	2010	2011e	2012e	2010	2011e	2012e	2010	2011e	2012e	2010	2011e	2012e
FTSE 100																	
BAE Systems	11,106	316	0.5	0.5	0.5	4.4	4.5	4.3	7.7	7.5	7.2	5.5%	5.9%	6.2%	6.2%	6.9%	7.1%
Rolls-Royce	11,355	610	0.9	0.8	0.8	7.1	6.2	5.6	15.7	13.7	12.5	2.6%	2.8%	3.1%	6.9%	5.7%	5.3%
FTSE Mid/Small Cap																	
Avon Rubber	90	310	0.7	0.6	0.6	5.8	4.9	4.4	14.1	10.0	9.4	0.5%	0.8%	0.9%	2.0%	0.9%	0.9%
Babcock	2,544	697	1.5	1.1	N/A	11.2	10.2	N/A	12.9	11.7	N/A	2.5%	2.8%	N/A	8.3%	4.7%	N/A
Chemring	1,090	661	2.3	1.6	1.4	9.2	8.0	N/A	12.9	10.5	N/A	1.8%	2.1%	2.3%	2.9%	4.0%	3.2%
Cobham	2,450	214	1.5	1.5	1.3	6.8	6.6	6.0	10.9	10.1	9.3	2.8%	3.1%	3.4%	6.9%	8.6%	8.5%
Cohort	26	63	0.3	0.3	N/A	4.4	3.6	N/A	7.3	6.4	N/A	3.2%	3.8%	N/A	0.9%	12.6%	N/A
Hampson Ind	48	30	0.7	0.7	N/A	4.6	4.8	N/A	6.1	7.3	N/A	10.8%	0.0%	N/A	33.6%	(28.7%)	N/A
Meggitt	2,362	349	2.1	1.7	1.5	6.6	5.6	4.8	12.6	11.8	10.1	2.6%	3.0%	3.0%	6.9%	4.9%	7.2%
QinetiQ	786	120	0.8	0.6	0.6	6.7	5.8	5.5	9.0	8.8	8.7	1.3%	1.3%	2.1%	20.2%	26.7%	9.4%
Ultra	1,118	1,640	1.6	1.4	1.3	9.1	8.1	7.0	15.2	13.6	12.5	2.1%	2.3%	2.6%	1.3%	3.4%	5.0%
Umeco	202	420	0.7	0.6	N/A	7.9	7.1	N/A	10.9	9.3	N/A	4.2%	4.3%	N/A	22.1%	3.2%	N/A
Average			1.1	1.0	1.0	7.0	6.3	5.4	11.3	10.1	10.0	3.3%	2.7%	2.9%	9.8%	4.4%	5.8%

Source: Edison Investment Research estimates

Exhibit 21: UK A&D operational performance (prices as at 15 June 2011)

Note: 2011 figures are actual where reported.

	Sales (£m)			EBIT (£m)			EPS (p)			DPS (p)			3-yr CAGR to 2012 (%)				EBIT ROACE margin	
	2010	2011e	2012e	2010	2011e	2012e	2010	2011e	2012e	2010	2011e	2012e	Sales	EBIT	EPS	DPS	2010	2010
FTSE 100																		
BAE Systems	22,392	21,426	21,890	2,214	2,277	2,339	40.8	42.2	43.7	17.5	18.5	19.5	0%	2%	3%	7%	10%	19%
Rolls-Royce	10,866	11,395	12,054	1,010	1,149	1,255	38.7	44.4	48.9	16.0	17.3	18.7	4%	8%	7%	8%	9%	21%
FTSE Mid/Small Cap																		
Avon Rubber	118	118	128	11	13	14	22.0	31.0	33.1	1.5	2.5	2.8	8%	25%	32%	n/a	11%	12%
Babcock	1,923	2,895	3,432	168	262	325	51.4	55.0	61.3	17.6	19.4	22.0	21%	30%	14%	15%	9%	11%
Chemring	597	819	920	136	179	208	49.2	61.6	69.0	11.8	14.0	15.2	22%	22%	17%	15%	23%	16%
Cobham	1,902	1,965	2,047	348	367	384	19.7	21.3	23.1	6.0	6.6	7.2	3%	4%	7%	10%	18%	15%
Cohort	78	69	72	4	5	6	8.1	9.0	10.4	2.1	2.4	2.6	(2%)	(3%)	(7%)	14%	7%	8%
Hampson Ind	178	189	203	32	18	24	10.6	3.0	4.5	3.3	0.0	0.0	(7%)	(20%)	(38%)	(100%)	9%	4%
Meggitt	1,162	1,403	1,594	304	355	417	27.8	29.6	34.6	9.2	10.5	10.5	11%	13%	11%	8%	26%	11%
QinetiQ	1,625	1,703	1,592	120	145	128	11.1	14.2	13.5	1.6	1.6	2.5	(1%)	(5%)	(5%)	(19%)	9%	14%
Ultra	710	754	809	110	120	132	107.9	120.2	131.7	34.5	38.5	42.5	8%	11%	11%	11%	16%	29%
Umeco	409	443	480	32	33	37	36.6	39.4	46.8	17.5	18.0	19.0	5%	2%	6%	3%	7%	8%
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6%	8%	5%	(3%)	13%	14%

Source: Edison Investment Research estimates

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