

BAE SYSTEMS



Half-yearly
Report
2019

BAE Systems plc

Half-yearly Report 2019

Results in brief

Financial performance measures as defined by the Group¹

	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018
Order intake	£8,418m	£9,701m	£28,280m
Order backlog	£47.4bn	£39.7bn	£48.4bn
Sales	£9,416m	£8,818m	£18,407m
Underlying EBITA ³	£999m	£874m	£1,928m
Underlying earnings per share ³			
excluding one-off tax benefit	21.9p	19.8p	42.9p
including one-off tax benefit	26.9p	19.8p	42.9p
Operating business cash flow ³	£(309)m	£(436)m	£993m
Net debt	£(1,889)m	£(1,921)m	£(904)m

Pension and dividend

	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018
Group's share of the net pension deficit	£(4.3)bn	£(3.1)bn ⁴	£(3.9)bn
Dividend per share	9.4p⁵	9.0p ⁵	22.2p

Financial performance measures defined in IFRS²

	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018
Revenue	£8,674m	£8,161m	£16,821m
Operating profit ³	£896m	£792m	£1,605m
Basic earnings per share ³	25.0p	14.8p	31.3p
Net cash flow from operating activities ³	£(232)m	£(397)m	£1,200m

Charles Woodburn, Chief Executive, said: "The first half performance underpins our guidance for the full year with improvements being made on a number of operational fronts. Our priority is to deliver consistent and strong operational performance for our customers and shareholders to enable us to meet our growth expectations over the medium term."

Guidance for 2019

Whilst the Group is subject to geopolitical uncertainties, the following guidance is provided on current expected operational performance.

We expect the Group's underlying earnings per share (excluding the one-off tax benefit) to grow by mid-single digit compared to the full year underlying earnings per share in 2018 of 42.9p, assuming a US\$1.30 to sterling exchange rate.

Whilst there is no change to Group-level earnings per share guidance, the first half restructuring charge taken at Applied Intelligence, together with slightly higher HQ costs, are expected to be covered by improved operational performance and a slightly lower effective tax rate.

In 2019 the Group now expects net debt to be broadly unchanged from the net debt at 31 December 2018. This is a slight improvement from the previous guidance reflecting a net timing mix on the Qatar Typhoon programme and the M109A7 programme. The Group continues to target in excess of £3bn of free cash flow over the three-year period 2019-2021, assuming a US\$1.30 to sterling exchange rate.

The guidance is based on the measures used to monitor the underlying financial performance of the Group. Reconciliations from these measures to the financial performance measures defined in International Financial Reporting Standards for the six months ended 30 June 2019 are provided in the Group financial review on pages 10 to 16.

Financial highlights

Financial performance measures as defined by the Group¹

- Order backlog of £47.4bn has reduced marginally over the first half of the year with trading on multi-year, long-term contracts in Air partly offset by further growth in the US businesses.
- Sales increased by 4% on a constant currency basis⁶ to £9.4bn.
- Underlying EBITA of £999m increased by 9% on a constant currency basis⁶ and excluding the estimated impact of IFRS 16.
- Underlying earnings per share increased by 11% to 21.9p, excluding the one-off tax benefit. The Group's underlying effective tax rate (excluding the one-off tax benefit) for the first half of the year was 17%, consistent with the prior year.
- Operating business cash outflow of £309m.
- Net debt at £1.9bn (£904m at 31 December 2018).

Financial performance measures defined in IFRS²

- Revenue increased to £8.7bn, up 4% on a constant currency basis⁶.
- Operating profit increased to £896m, up 7% on a constant currency basis⁶ and excluding the estimated impact of IFRS 16.
- Basic EPS increased to 25.0p, up 69%, driven by the profit performance and the £161m one-off tax benefit.

Pension and dividend

- The Group's share of the pre-tax accounting net pension deficit increased to £4.3bn (31 December 2018 £3.9bn). The funding position is currently estimated to be approximately £2.0bn lower than the accounting position.
- Interim dividend increased by 4.4% to 9.4p per share.

One-off tax benefit

A one-off tax benefit of £161m was recognised in the first half of the year, arising from agreements reached in respect of an overseas tax matter, net of a provision taken in respect of the estimated exposure arising from the EU's decision regarding the UK's Controlled Foreign Company regime.

1. We monitor the underlying financial performance of the Group using alternative performance measures. These measures are not defined in International Financial Reporting Standards (IFRS) and, therefore, are considered to be non-GAAP (Generally Accepted Accounting Principles) measures. Accordingly, the relevant IFRS measures are also presented where appropriate. For alternative performance measure definitions see glossary on page 8.
2. International Financial Reporting Standards.
3. The financial impact of the adoption of IFRS 16 Leases from 1 January 2019 is described on pages 12, 13 and 15.
4. The deficit at 30 June 2018 has been restated to correct a prior period error in respect of the accounting valuation of a longevity swap held by one of the Group's defined benefit pension schemes.
5. Interim dividend declared (see note 7).
6. Current period compared with prior period translated at current period exchange rates.

Operational and strategic key points

Air

- Working closely with industry partners and the UK government to continue to fulfil contractual support arrangements in Saudi Arabia on the key European collaboration programmes.
- The Qatar Typhoon and Hawk programme has been mobilised and the contract amended to accelerate aircraft deliveries.
- The UK Tornado fleet successfully retired from service on schedule in March 2019.
- 500th F-35 aft fuselage was delivered with the business ramping up to full rate production in 2020.
- Next phase of the Tempest next-generation combat air programme was contracted.
- In Australia the mobilisation of the Hunter Class frigate programme commenced.

Maritime and Land UK

- A further £0.8bn of funding was received on the Dreadnought programme.
- The second of the five Offshore Patrol Vessels (OPV) was accepted by the customer and the third OPV is close to acceptance.
- HMS Prince of Wales aircraft carrier sea trials are expected to commence in the second half.
- BAE Systems' Type 26 design was selected for the Canadian Surface Combatant programme.
- The UK combat vehicles joint venture between Rheinmetall and BAE Systems Land UK was formally launched on 1 July 2019.

Electronic Systems

- Continued production ramp up on F-35 electronic warfare systems and APKWS[®] product line.
- The business continues to experience growth in classified work.
- Establishing new facilities in Huntsville, Alabama and Manchester, New Hampshire expanding capacity as the business delivers on increased order backlog.
- Acquired Riptide Autonomous Solutions, a developer of unmanned underwater vehicles, securing a flexible platform for integrating our electronic solutions and mission capabilities.

Platforms & Services (US)

- Implementation of process and automation improvements in Combat Vehicles production.
- Armored Multi-Purpose Vehicle Low-Rate Initial Production has commenced.
- M109A7 deliveries progressing as we work towards a revised production schedule, on track to achieve production of eight vehicles per month by year end.
- The first of the Amphibious Combat Vehicles (ACVs) is undergoing acceptance testing in conjunction with the US Marine Corps ahead of the first delivery.
- Investments are ongoing to modernise facilities, manufacturing technologies and processes.
- The US Ship Repair business received orders totalling \$427m (£336m) and concluded commercial shipbuilding operations.

Cyber & Intelligence

- Disposal process is underway of the Applied Intelligence ex-SilverSky business together with an exit from the loss making UK-based Managed Security Services business. A restructuring charge of £25m has been recognised in the first half of the year.
- The US-based Intelligence & Security (I&S) business continues to increase its bid pipeline, perform on existing contracts and win new orders, capturing its first Federated Secure Cloud opportunity.

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Analyst and investor presentation

A presentation, for analysts and investors, of the Group's first half results for 2019 will be available via webcast at 9.30am today (31 July 2019).

Details can be found on investors.baesystems.com, together with presentation slides and a pdf copy of this report. A recording of the webcast will be available for replay later in the day.

About BAE Systems

At BAE Systems, our advanced defence technology protects people and national security, and keeps critical information and infrastructure secure. We search for new ways to provide our customers with a competitive edge across the air, maritime, land and cyber domains. We employ a skilled workforce of 87,300 people¹ in over 40 countries, and work closely with local partners to support economic development by transferring knowledge, skills and technology.

1. Including share of equity accounted investments.

Interim management report

In the first half of 2019, BAE Systems delivered a performance consistent with guidance for the full year. Production on a number of programmes is ramping up as we deliver on the record defence order backlog coming into the year and strong programme positions. Operational focus remains the priority with appropriate actions being taken to meet operational challenges and delivery improvements being made to meet the increased volume of activity across our Submarines, US Combat Vehicles and Electronic Systems businesses.

Governments in our key markets continue to prioritise defence and security, and there is a growing demand for our capabilities, products and services. BAE Systems is a diverse and resilient company, pursuing the right strategy for long-term performance. We have a strong order backlog giving multi-year visibility, a broad portfolio with long-term positions on key programmes with strong customer relationships, and a track record of successful partnerships in international markets to develop local industry, employment and skills.

BAE Systems continues to provide equipment, support and training under government to government agreements between the United Kingdom and Saudi Arabia. Following the updates in March from the German government regarding export licences, we are working closely with industry partners and the UK government to continue to fulfil our contractual support arrangements in Saudi Arabia on key European collaboration programmes. BAE Systems notes the judgment in June from the Court of Appeal of England and Wales directing the Secretary of State for International Trade to revisit the process for granting export licences for the sale of military equipment to the Kingdom of Saudi Arabia. Both the Secretary of State and the other party to the proceedings have sought and obtained permission to appeal the Court's ruling to the Supreme Court. BAE Systems will assess the result of any re-consideration by the Secretary of State of its decision-making on the basis set out by the Court, once it has been made.

US Market

The US Department of Defense fiscal year 2019 budget and the President's proposal for 2020 maintain positive momentum for military readiness and modernisation. The recent passage of a two-year agreement to lift the deficit ceiling and budget caps provides greater near-term fiscal certainty and provides increased confidence that a fiscal year 2020 budget will be passed at currently proposed funding levels, further underpinning our confidence in continued growth for the business. The Group's US-based portfolio remains aligned with customer priorities and growth areas with support for key programmes, including electronic warfare programmes, F-35 Lightning II, combat vehicles, current and future precision-weapon systems and naval ship repair and modernisation services. The order backlog for the US-managed business grew by \$1.0bn (£0.8bn) in the first half of the year.

The Electronic Systems business is approaching full-rate production on the F-35 electronic warfare programme, and closed the 2019 half year with a record order backlog and a portfolio well aligned to the US National Defense Strategy. In May, we acquired the Riptide Autonomous Solutions business, a provider of innovative, unmanned underwater vehicles. This enables us to leverage our technologies further and pursue growth in the emerging undersea market.

Platforms & Services (US) continues to make progress addressing its operational challenges. The US-based Combat Vehicles business is implementing a number of process and automation improvements to meet increased production volumes across multiple programmes with lessons learned being applied across the portfolio. The sector continued to shape its well-performing US Ship Repair business, maintaining a strong bid pipeline for repair and modernisation services, and working with the US Navy on its acquisition strategy for ship maintenance to improve utilisation levels. With the delivery of the final constructed ship in March, we have exited commercial shipbuilding.

In our US-based Intelligence & Security business, we are maintaining a high level of bid activity and a strong pipeline despite the highly competitive and evolving market conditions. The business continues to deliver on its contracts with good programme and financial performance.

UK Market

The final terms of the UK's exit from the EU after October 2019 will be important to enable companies to prepare for potential changes in the regulatory environment. There is relatively limited UK-EU trading

and movement of EU nationals into and out of BAE Systems' UK businesses, and near-term impacts across the business are likely to be limited. BAE Systems will support the UK government in achieving its aim of ensuring that the UK maintains its key role in European security and defence post-Brexit.

Focus continues to be on the execution of the Group's long-term contracted positions in Air and Maritime.

Defence and security remains a priority for the UK government with the next phase of the Tempest next-generation combat air programme contracted between industry and UK government. The Memorandum of Understanding signed in July between the UK and Sweden committing both governments to work on a joint combat air development and acquisition programme is a welcome development.

2019 production ramp-up of rear fuselage assemblies for the F-35 Lightning II aircraft programme progresses well towards 140 sets, with full rate production levels targeted in 2020. As the UK and global fleets grow, securing a long-term support position on F-35 Lightning II remains a key focus for the Air business.

Typhoon support continues to perform strongly and, with the Centurion standard having been declared, the UK Tornado fleet successfully retired from service on schedule.

Typhoon production is currently focused on completing the UK final aircraft and the remaining partner nation deliveries, sub-assembly build on the Kuwait programme and the Qatar programme, which sustains production revenues into the next decade. The potential pipeline for Typhoon additional orders remains positive, with opportunities both with partner nations and through exports with existing and new customers. Securing additional orders would extend or enhance current production revenue levels.

On the Offshore Patrol Vessels programme the second ship of five, HMS Medway, was accepted by the customer in February and the third ship, HMS Trent, is close to acceptance, with the programme due to complete in 2020. On the Aircraft Carrier programme HMS Prince of Wales remains on track for sea trials later in 2019. The Type 26 programme is progressing towards its first of class contractual date in the mid-2020s. Work continues on the manufacture of the remaining four Astute class submarines, with Boat 4 being prepared for sea trials later this year. Activity on the Dreadnought programme is ramping up and the major programme of building works at the Barrow site required to deliver the programme is also progressing.

In July, following receipt of regulatory clearances, the new UK-based military land vehicle design, manufacturing and support joint venture was formed between Rheinmetall and BAE Systems Land UK, designed to bring the strength of both businesses together to be more competitive in the UK and international markets whilst maintaining UK jobs.

International Markets

In an uncertain global environment with complex threats, our defence and security capabilities remain highly relevant. There are good prospects in existing and new international markets for our products and services in air, maritime, land and cyber with defence and security high on national agendas with the need in many cases to recapitalise or upgrade ageing equipment.

In Saudi Arabia, the Memorandum of Intent signed between the Kingdom of Saudi Arabia and the UK government in March 2018 remains under discussion for a further 48 Typhoon aircraft, support and transfer of technology and capability. This would enable BAE Systems to continue with the Industrialisation of Defence capabilities in the Kingdom of Saudi Arabia, in support of the Saudi Arabian government's National Transformation Plan and Vision 2030. The final assembly of the Typhoon would follow on from the Hawk programme where the first In-Kingdom final-assembled Hawk aircraft was completed in May and entered service with the Royal Saudi Air Force in June. Over many years the company has developed and taken shareholdings in local Saudi businesses. The company is restructuring its portfolio of interests in these businesses through the disposal in January of its shareholding in Aircraft Accessories and Components Company, and through entering into a heads of terms for the sale of its stake in Advanced Electronics Company to Saudi Arabian Military Industries, with the transaction expected to take place towards the end of the year.

The contract between BAE Systems and the Government of the State of Qatar for the supply of 24 Typhoon and nine Hawk aircraft to the Qatar Emiri Air Force, along with a bespoke support and training package, is progressing well and a contract amendment to accelerate deliveries was agreed.

In Oman, deliveries continue on a five-year availability service for Typhoon and a support package for Hawk aircraft.

The Australian business is mobilising for a period which is expected to see the business double in size over the next five years, driven by the Hunter Class frigate programme. This programme is in the early stages of mobilisation under the initial four-year design and development phase. On the Australian Land 400 Phase 3 programme our bid was submitted in February with an initial down select to the risk mitigation stage expected later in the year.

In Canada, following the successful selection in February of the BAE Systems' Type 26 design for the Canadian Surface Combatant programme, mobilisation activities are underway.

The MBDA joint venture has continued to win orders in both domestic and export markets and with a strong order backlog has clear visibility of growth in the coming years. The business continues to invest in new products and is well placed to benefit from defence spend increases in a number of European countries and from export opportunities.

Cyber security domain

In our Applied Intelligence business the UK Government services division continues to perform well. The Group has commenced a process for the disposal of the Applied Intelligence US-based software as a service business and has decided to exit the UK-based Managed Security Services business. Cyber security is an increasingly important part of government security and a core element of stewardship for companies in a sophisticated and persistent threat environment. The services and products we offer in the remaining core business, including the Financial Services division, are expected to drive growth and improved returns as the market continues to develop.

Balance sheet and capital allocation

The Group's balance sheet is managed conservatively in line with its policy to retain its investment grade credit rating and to ensure operating flexibility. Consistent with this approach, the Group expects to continue to meet its pension obligations, invest in research and technology and other organic investment opportunities, and plans to pay dividends in line with its policy of long-term sustainable cover of around two times underlying earnings. Investment in value-enhancing acquisitions and returns to shareholders through a share buyback will be considered in line with our clear and consistent strategy and capital allocation policy.

A US\$1bn 6.375% bond, of which US\$500m had been converted to a floating rate bond by utilising interest rate swaps, matured and was repaid in June 2019.

Pension schemes

The Group's share of the pre-tax accounting net pension deficit increased to £4.3bn (31 December 2018 £3.9bn). The impact of lower discount rates increasing liabilities was largely offset by good asset returns and changes in mortality assumptions.

Summary

Our business benefits from a large order backlog, with established positions on long-term programmes in the US, UK, Saudi Arabia and Australia. Our strategy is clear and well defined with governments in our key markets continuing to prioritise defence and security, with strong demand for our capabilities. Through execution of our strategy, BAE Systems is well placed to maximise opportunities, deal with the challenges and continue to generate good shareholder returns.

Directors and the Board

With effect from 1 June 2019, Nicole Piasecki and Stephen Pearce were appointed to the Board as non-executive directors.

Dividend

The Board has declared a 4.4% increase in the interim dividend to 9.4p for the half year to 30 June 2019.

Glossary

We monitor the underlying financial performance of the Group using alternative performance measures. These measures are not defined in International Financial Reporting Standards (IFRS) and, therefore, are considered to be non-GAAP (Generally Accepted Accounting Principles) measures. Accordingly, the relevant IFRS measures are also presented where appropriate.

	Definition	Purpose
Financial performance measures as defined by the Group		
Sales	Revenue including the Group's share of revenue of equity accounted investments.	Allows management to monitor the sales performance of subsidiaries and equity accounted investments.
Underlying EBITA	Operating profit excluding amortisation and impairment of intangible assets, finance costs and taxation expense of equity accounted investments (EBITA) and non-recurring items*.	Provides a measure of operating profitability that is comparable over time.
Underlying earnings per share	Basic earnings per share excluding amortisation and impairment of intangible assets, non-cash finance movements on pensions and financial derivatives, and non-recurring items*.	Provides a measure of underlying performance that is comparable over time.
Operating business cash flow	Net cash flow from operating activities excluding taxation and including net capital expenditure and lease principal amounts, financial investment and dividends from equity accounted investments.	Allows management to monitor the operational cash generation of the Group.
Free cash flow	Operating business cash flow less interest paid (net) and taxation.	Allows management to monitor utilisation of cash in line with the Group's capital allocation policy.
Net debt	Cash and cash equivalents, less loans and overdrafts (including debt-related derivative financial instruments). Net debt does not include lease liabilities.	Allows management to monitor the indebtedness of the Group.
Order intake	Funded orders received from customers including the Group's share of order intake of equity accounted investments.	Allows management to monitor the order intake of subsidiaries and equity accounted investments.
Order backlog	Funded and unfunded unexecuted customer orders including the Group's share of order backlog of equity accounted investments. Unfunded orders include the elements of US multi-year contracts for which funding has not been authorised by the customer.	Supports future years' sales performance of subsidiaries and equity accounted investments.

	Definition	Purpose
Financial performance measures defined in IFRS		
Revenue	Income derived from the provision of goods and services by the Company and its subsidiary undertakings.	N/a
Operating profit	Profit for the period before finance costs and taxation expense. This measure includes finance costs and taxation expense of equity accounted investments.	N/a
Basic earnings per share	Basic earnings per share in accordance with International Accounting Standard 33 Earnings per Share.	N/a
Net cash flow from operating activities	Net cash flow from operating activities in accordance with International Accounting Standard 7 Statement of Cash Flows.	N/a
Other financial measures		
Net pension deficit	Net International Accounting Standard 19 Employee Benefits deficit excluding amounts allocated to equity accounted investments.	N/a
Dividend per share	Interim dividend paid and final dividend proposed per share.	N/a

* Non-recurring items are items of financial performance which have been determined by management as being material by their size or incidence and not relevant to an understanding of the Group's underlying business performance. The Group's definition of non-recurring items includes profit or loss on business transactions, and costs incurred which are one-off in nature, for example non-routine costs or income relating to post-retirement benefit schemes, and other exceptional items which management has determined as not being relevant to an understanding of the Group's underlying business performance.

Financial performance

Income statement

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Financial performance measures as defined by the Group¹		
Sales	9,416	8,818
Underlying EBITA	999	874
Return on sales	10.6%	9.9%
Financial performance measures defined in IFRS²		
Revenue	8,674	8,161
Operating profit	896	792
Return on revenue	10.3%	9.7%
Reconciliation of sales to revenue		
Sales	9,416	8,818
<i>Deduct</i> Share of sales by equity accounted investments	(1,271)	(1,319)
<i>Add</i> Sales to equity accounted investments	529	662
Revenue	8,674	8,161
Reconciliation of underlying EBITA to operating profit		
Underlying EBITA	999	874
Non-recurring items	(28)	(33)
Amortisation of intangible assets	(49)	(33)
Financial expense of equity accounted investments	(10)	(6)
Taxation expense of equity accounted investments	(16)	(10)
Operating profit	896	792
Net finance costs	(120)	(221)
Taxation credit / (expense)	41	(86)
Profit for the period	817	485

Segmental analysis

Financial performance measures as defined by the Group¹

	Sales		Underlying EBITA	
	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Electronic Systems	2,142	1,819	316	260
Cyber & Intelligence	853	815	25	48
Platforms & Services (US)	1,522	1,382	135	56
Air	3,366	3,305	438	459
Maritime	1,525	1,447	133	93
HQ	163	163	(48)	(42)
<i>Deduct</i> Intra-group	(155)	(113)	–	–
	9,416	8,818	999	874

Financial performance measures defined in IFRS²

	Revenue		Operating profit / (loss)	
	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Electronic Systems	2,142	1,819	308	252
Cyber & Intelligence	853	815	22	41
Platforms & Services (US)	1,459	1,328	130	20
Air	2,824	2,839	379	438
Maritime	1,512	1,432	120	88
HQ	23	25	(63)	(47)
<i>Deduct</i> Intra-group	(139)	(97)	–	–
	8,674	8,161	896	792

Exchange rates

	Six months ended 30 June 2019	Six months ended 30 June 2018
Average		
£/\$	1.294	1.376
£/€	1.146	1.137
£/A\$	1.832	1.785
Period end	30 June 2019	30 June 2018
£/\$	1.272	1.320
£/€	1.117	1.131
£/A\$	1.813	1.787
Year end		31 December 2018
£/\$		1.274
£/€		1.114
£/A\$		1.809
Sensitivity analysis		£m
Estimated impact on annual sales of a ten cent movement in the average exchange rate:		
\$		650
€		100
A\$		40

Sales in the first half increased to £9.4bn (2018 £8.8bn), up 4% on a constant currency basis³.

Underlying EBITA was £999m (2018 £874m), 14% up on last year, or 9% on a constant currency basis³ and excluding the estimated impact of IFRS 16.

Revenue increased to £8.7bn (2018 £8.2bn), up 4% on a constant currency basis³.

Operating profit was £896m (2018 £792m), 13% up on last year, or 7% on a constant currency basis³ and excluding the estimated impact of IFRS 16.

Non-recurring items in 2019 represents a £36m charge relating to the derecognition of Enterprise Resource Planning software intangible assets in the Air sector and a gain of £8m relating to the disposal of the Aircraft Accessories and Components Company. The 2018 expense of £33m represented an impairment of the Mobile, Alabama, shipyard (£28m) and costs incurred as a result of the decision to no longer pursue contracts for the Mobile shipyard (£5m).

Amortisation of intangible assets increased to £49m (2018 £33m).

Net finance costs were £120m (2018 £221m). The underlying interest charge, excluding pension accounting, and fair value and foreign exchange adjustments on financial instruments and investments, was £130m (2018 £101m). There was a credit of £61m (2018 charge of £68m) in respect of rolling hedges on balances with the Group's subsidiaries and equity accounted investments.

IFRS 16 Leases has been applied for the first time in 2019, and as a result underlying EBITA and operating profit are both approximately £25m higher than the prior year as the depreciation charge on leased assets replaces the operating lease expense previously reported. Net finance costs have increased under IFRS 16 by approximately £25m owing to the recognition of the interest charge element of the lease liabilities.

Taxation credit, including taxation expense of equity accounted investments, of £25m (2018 taxation expense of £96m) reflects the Group's underlying effective tax rate for the period of 17% (2018 16.5%), adjusted by a £161m credit in respect of one-off items.

Following agreements reached in respect of an overseas tax matter, a one-off benefit has been recognised and, following review of the April EU Commission decision that concluded the UK's Controlled Foreign Company regime partially represents State Aid, the Group has recognised a provision for the estimated exposure. There remains uncertainty surrounding HMRC's likely approach to the assessment of the deemed State Aid and recovery of amounts which they consider to be due, and accordingly developments will continue to be monitored and assessed.

The underlying effective tax rate for the full year is expected to be around 19%, with some dependency on the geographical mix of profits. This excludes the impact of the credit referred to above.

1. For alternative performance measure definitions see glossary on page 8.

2. International Financial Reporting Standards.

3. Current period compared with prior period translated at current period exchange rates.

Earnings per share

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Financial performance measures as defined by the Group¹		
Underlying earnings (excluding the one-off tax benefit)	696	631
Underlying earnings per share (excluding the one-off tax benefit)	21.9p	19.8p
Underlying earnings (including the one-off tax benefit)	857	631
Underlying earnings per share (including the one-off tax benefit)	26.9p	19.8p
Financial performance measures defined in IFRS²		
Profit for the period attributable to equity shareholders	795	471
Basic earnings per share	25.0p	14.8p
Reconciliation of underlying earnings to profit for the period attributable to equity shareholders		
Underlying earnings (excluding the one-off tax benefit)	696	631
Non-recurring items, post tax	(22)	(28)
Amortisation of intangible assets, post tax	(40)	(28)
Net interest expense on retirement benefit obligations, post tax	(50)	(44)
Fair value and foreign exchange adjustments on financial instruments and investments, post tax	50	(60)
One-off tax benefit	161	–
Profit for the period attributable to equity shareholders	795	471
Non-controlling interests	22	14
Profit for the period	817	485

Underlying earnings per share (excluding the one-off tax benefit) for the period increased by 11% to 21.9p (2018 19.8p). Underlying earnings per share (including the one-off tax benefit) for the period was 26.9p.

Basic earnings per share for the period increased by 69% to 25.0p (2018 14.8p). The increase is a result of the profit performance and the one-off tax benefit.

The application of IFRS 16 Leases for the first time in 2019 has had no material impact on earnings per share.

1. For alternative performance measure definitions see glossary on page 8.

2. International Financial Reporting Standards.

Cash flow

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Financial performance measures as defined by the Group¹		
Operating business cash flow	(309)	(436)
Financial performance measures defined in IFRS²		
Net cash flow from operating activities	(232)	(397)
Reconciliation from operating business cash flow to net cash flow from operating activities		
Operating business cash flow	(309)	(436)
<i>Add back</i> Net capital expenditure and financial investment	201	186
<i>Add back</i> Principal element of lease payments and receipts	114	–
<i>Deduct</i> Dividends received from equity accounted investments	(90)	(16)
<i>Deduct</i> Taxation	(148)	(131)
Net cash flow from operating activities	(232)	(397)
Net capital expenditure and financial investment	(201)	(186)
Principal element of finance lease receipts	5	–
Dividends received from equity accounted investments	90	16
Interest received	17	11
Cash flow in respect of acquisitions, disposals and held for sale assets	31	(5)
Net cash flow from investing activities	(58)	(164)
Interest paid	(134)	(107)
Net sale of own shares	–	1
Equity dividends paid	(423)	(415)
Dividends paid to non-controlling interests	(26)	–
Principal element of lease payments	(119)	–
Cash flow from matured derivative financial instruments	47	(60)
Cash flow from cash collateral	4	(8)
Cash flow from loans	(773)	(7)
Net cash flow from financing activities	(1,424)	(596)
Net decrease in cash and cash equivalents	(1,714)	(1,157)
Foreign exchange translation	(8)	(83)
Other non-cash movements	(36)	64
<i>Less</i> cash flow from loans	773	7
Increase in net debt	(985)	(1,169)
Opening net debt	(904)	(752)
Net debt	(1,889)	(1,921)
Operating business cash flow	(309)	(436)
Interest paid, net of interest received	(117)	(96)
Taxation	(148)	(131)
Free cash flow (as defined by the Group)¹	(574)	(663)

1. For alternative performance measure definitions see glossary on page 8.

2. International Financial Reporting Standards.

Segmental analysis

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Financial performance measures as defined by the Group¹		
Electronic Systems	137	117
Cyber & Intelligence	23	63
Platforms & Services (US)	5	(46)
Air	(163)	(167)
Maritime	(92)	(196)
HQ	(219)	(207)
Operating business cash flow	(309)	(436)
Financial performance measures defined in IFRS²		
Electronic Systems	213	174
Cyber & Intelligence	38	69
Platforms & Services (US)	25	(30)
Air	(132)	(125)
Maritime	(45)	(153)
HQ	(183)	(201)
<i>Deduct</i> Taxation ³	(148)	(131)
Net cash flow from operating activities	(232)	(397)

Operating business cash outflow was £309m (2018 outflow £436m), primarily resulting from timing of receipts, utilisation of advances and increased working capital ahead of production deliveries. The outflow includes cash contributions in respect of pension deficit funding, over and above service costs, for the UK schemes totalling £160m (2018 £139m).

Net cash outflow from operating activities was £232m (2018 outflow £397m). Under IFRS 16 net lease cash outflows of £134m are now classified under financing and investing activities.

Taxation payments increased to £148m (2018 £131m).

Net capital expenditure and financial investment increased to £201m (2018 £186m).

Dividends received from equity accounted investments of £90m (2018 £16m) is primarily receipts from Advanced Electronics Company, MBDA and FNSS.

Cash flows in respect of acquisitions, disposals and held for sale assets represent the disposal of Aircraft Accessories and Components Company (£26m) and the partial disposal of Overhaul and Maintenance Company (£14m), offset by the investment in Riptide Autonomous Solutions (£9m).

Equity dividends paid in 2019 represents the 2018 final dividend.

There was a **cash inflow from matured derivative financial instruments** of £47m (2018 outflow £60m) from rolling hedges on balances with the Group's subsidiaries and equity accounted investments.

Foreign exchange translation primarily arises in respect of the Group's US dollar-denominated borrowing.

1. For alternative performance measure definitions see glossary on page 8.
2. International Financial Reporting Standards.
3. Taxation is managed on a Group basis.

Net debt

	30 June 2019 £m	31 December 2018 £m
Components of net debt		
Cash and cash equivalents	1,501	3,232
Debt-related derivative financial instrument assets – non-current	118	87
Debt-related derivative financial instrument assets – current	13	78
Loans – non-current	(3,520)	(3,514)
Loans and overdrafts – current	–	(785)
Debt-related derivative financial instrument liabilities – current	(1)	(2)
Net debt	(1,889)	(904)

The Group's **net debt** at 30 June 2019 is £1,889m, a net increase of £1.0bn from the net debt position of £904m at the start of the year. The US\$1bn 6.375% bond, of which US\$500m had been converted to a floating rate bond by utilising interest rate swaps, matured and was repaid in June 2019.

Cash and cash equivalents of £1,501m (31 December 2018 £3,232m) are held primarily for the repayment of debt securities, pension deficit funding, payment of the 2019 interim dividend and management of working capital.

Going concern

After making due enquiries, the directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for at least 12 months from the date of approval of this report and, therefore, continue to adopt the going concern basis in preparing the financial statements.

Principal risks and uncertainties

The principal risks and uncertainties facing the Group for the remainder of the year are unchanged from those reported in the Annual Report 2018.

The Group's principal risks are detailed on pages 68 to 71 of the Annual Report 2018, and relate to the following areas: defence spending; government customers; international markets; competition in international markets; laws and regulations; contract risk and execution; contract awards and cash profiles; pension funding; information technology security; and people.

Since the Annual Report 2018, the Court of Appeal has directed the United Kingdom Secretary of State for International Trade to revisit the decision-making process for granting licences for the sale of military equipment to the Kingdom of Saudi Arabia for possible use in the conflict in Yemen and to retake its decisions regarding such licences on that basis. BAE Systems will assess the result of the retaking by the Secretary of State of such decisions, once they have been made. Pursuant to the Order of the Court, the Secretary of State undertook not to grant new licences for the export of arms or military equipment to Saudi Arabia for possible use in the conflict in Yemen until such decisions have been retaken or a stay of the Order to retake the decisions has been granted. Both the Secretary of State and the other party to the proceedings have sought and obtained permission to appeal the Court's ruling to the Supreme Court. The Group's inability to obtain and maintain the necessary export licences for our business in the Kingdom of Saudi Arabia could affect the Group's provision of capability to the country.

Segmental performance: Electronic Systems

Electronic Systems, with 16,700 employees¹, comprises the US- and UK-based electronics activities, including electronic warfare systems, electro-optical sensors, military and commercial digital engine and flight controls, precision guidance and seeker solutions, next-generation military communications systems and data links, persistent surveillance capabilities and hybrid electric drive systems.

Financial performance

	Financial performance measures as defined by the Group ²			Financial performance measures defined in IFRS ³			
	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018	
Order intake	£2,227m	£2,230m	£4,624m	Revenue	£2,142m	£1,819m	£3,965m
Order backlog	£6.0bn	£5.3bn	£5.4bn	Operating profit	£308m	£252m	£590m
Sales	£2,142m	£1,819m	£3,965m	Return on revenue	14.4%	13.9%	14.9%
Underlying EBITA	£316m	£260m	£606m	Cash flow from operating activities	£213m	£174m	£575m
Return on sales	14.8%	14.3%	15.3%				
Operating business cash flow	£137m	£117m	£431m				

- Order backlog grew again to \$7.6bn (£6.0bn), following further awards on F-35 and APKWS[®].
- Sales of \$2.8bn (£2.1bn) are up 11% over last year albeit with a first half bias. Growth in the defence businesses was at 10% as the F-35 and APKWS[®] programmes continue to ramp up and classified activity expands. Commercial sales of engine and flight controls, and HybriDrive[®] units grew by 14%. Commercial sales were more than \$600m in the first half.
- Return on sales was 14.8%.
- First half cash conversion of EBITA⁴ reflects the usual second half bias and an improved conversion level is expected over the full year.

1. Including share of equity accounted investments.

2. For alternative performance measure definitions see glossary on page 8.

3. International Financial Reporting Standards.

4. Operating business cash flow as a percentage of Underlying EBITA.

Operational performance

Electronic Combat Solutions

As a leader in the electronic warfare market, we continue to produce critical capabilities across a number of programmes.

On the F-35 Lightning II programme, Low-Rate Initial Production Lot 11 hardware deliveries were completed in July. We have completed contract negotiations for Lots 12 to 14 with a final award value exceeding \$1bn (£0.8bn). We continue to execute the Electronic Warfare Performance Based Logistics contract to provide material availability and support for the F-35 programme over a five-year period. We were also awarded a Block 4 capability upgrade contract valued at \$349m (£274m).

We are currently executing the engineering and manufacturing development contract to provide the next-generation digital electronic warfare system for the US Air Force's Eagle Passive Active Warning Survivability System (EPAWSS) programme, which completed its first flight in April on board an F-15E test aircraft.

We completed the installation of the Digital Electronic Warfare System (DEWS) on new F-15 aircraft, and continue to upgrade existing F-15 aircraft and provide spare units and modules for an international customer. We are also executing a \$311m (£244m) contract to provide DEWS to support the sale of new F-15 aircraft to another international customer.

Production of our sensor technology for the Long Range Anti-Ship Missile (LRASM) programme supported several successful tests of LRASM, leading to a successful Early Operational Capability on the B1-B platform.

Due to the sensitive nature of electronic combat systems and technology, many of the company's programmes are classified. As a world leader in electronic warfare, we continue to experience growth in these increasingly important areas.

Survivability, Targeting & Sensing Solutions

Our Advanced Precision Kill Weapon System (APKWS[®]) laser-guided rocket has delivered over 29,000 units to date. In addition to expanding US military use, the system is generating strong international interest. Further production awards totalling \$225m (£177m) were received this year extending our backlog into 2020.

We continue to perform on the Terminal High-Altitude Area Defence programme with a \$152m (£119m) production contract on Lots 9 and 10 awarded in 2018. Additional orders are expected in response to increasing demand.

We are developing a next-generation missile warning system for the US Army under the Limited Interim Missile Warning System programme awarded in 2017. Critical design reviews and initial prototypes have been completed and qualification events have begun.

C4ISR Systems

Consistent with our strategy to obtain and incubate small business innovations that can yield disruptive technology breakthroughs, the Electronic Systems FAST Labs[™] organisation acquired the key assets of Riptide Autonomous Solutions to advance our capabilities to address expanding maritime mission requirements for integrated, flexible, modular, unmanned underwater vehicle solutions.

In the space resilience domain, we are a leading provider of space-qualified subsystems and components, and we continue to experience growth in the areas of integrated on-board processors, reconfigurable processing payloads and secure communications. In May, our radiation-hardened electronic products reached an unprecedented milestone marking 10,000 cumulative years in orbit.

We have been awarded funding from the Defense Advanced Research Projects Agency (DARPA) to integrate machine-learning into platforms that decipher radio frequency signals in increasingly crowded electromagnetic spectrum environments. Our flexible, reconfigurable hardware solution will provide commercial or military users with greater, automated situational awareness of their operating environments.

Controls & Avionics Solutions

As a leading supplier of commercial avionics we continue to develop the integrated flight control electronics and remote electronic units for Boeing's next-generation 777X aircraft, with hardware qualifications now complete. Systems verification testing is being conducted to support first flight of the aircraft. During the first half of the year, our 737 MAX production rates were scaled back to meet reduced demand until the aircraft is back in service. The business' long-term agreement on Boeing's current aircraft has been extended through to 2034.

We continue to see the rapid adoption of active inceptor technology, with systems now in service on Gulfstream G500, G600 and Embraer KC390 aircraft. A derivative, LinkEdge[™] (active parallel actuation subsystem), is being developed for the Chinook CH-47, and the first set of units has been delivered for systems integration. LinkEdge[™] will be a key enabler for flight in degraded visual environments.

Under the recently awarded Improved Turbine Engine Program, we will provide the Electronic Engine Controls and Distributed Control Modules to modernise the US Army's Black Hawk and Apache fleets.

FADEC Alliance, a joint venture between GE Aviation and FADEC International (our joint venture with Safran Electronics & Defense), has completed certification testing of the GE9X FADEC for the Boeing 777X and Low-Rate Initial Production has been initiated.

Development of the F-35 vehicle management computer technology refresh is proceeding to plan with first customer deliveries due later this year. We have also received active inceptor system orders for production Lots 12 to 14.

The business is taking a lead role in the emerging areas of electrification and autonomy. Leveraging our extensive experience in hybrid propulsion systems for ground vehicles, the business is developing power management solutions for hybrid aircraft. Autonomy solutions are in development to enable manned aircraft to pair up with unmanned aircraft for mission effectiveness.

We have been awarded contracts to supply the Vehicle Management Controls system and Identification Friend or Foe system to support the engineering and manufacturing development of four MQ-25 aircraft – the US Navy's first carrier-based unmanned aircraft designed for aerial refuelling.

Power & Propulsion Solutions

With more than 10,000 green power and propulsion solutions in the field, we are making a positive impact on the environment. This year, our battery electric and fuel cell electric systems hit a major milestone – recording two million zero emission miles.

We are seeing an increase in demand for electric systems for both commercial and military applications, with a number of European cities employing vehicles powered by our technology. In the maritime domain, our technology is powering both passenger and cargo vessels.

Looking forward

Electronic Systems is well positioned to address current and evolving priority programmes from its strong franchise positions in electronic warfare, precision guidance and seeker solutions. Electronic Systems has a long-standing programme of research and development, and its focus remains on maintaining a diverse portfolio of defence and commercial products and capabilities for US and international customers.

The business expects to benefit from its ability to apply innovative technology solutions that meet defence customers' changing requirements. As a result, the business is well positioned for the medium term with significant roles on F-35 Lightning II and classified programmes, as well as with specific products such as APKWS[®]. Over the longer term, the business is poised to leverage its technology strength in emerging areas of demand such as space resilience, machine learning applications and autonomous vehicles.

In the commercial aviation market, Electronic Systems' technology innovations are enabling the business to maintain its long-standing customer positions and to compete for, and win, new business.

Segmental performance: Cyber & Intelligence

Cyber & Intelligence, with 10,400 employees¹, comprises the US-based Intelligence & Security business and UK-headquartered Applied Intelligence business, and covers the Group's cyber security, secure government and commercial financial security activities.

Financial performance

Financial performance measures as defined by the Group ²				Financial performance measures defined in IFRS ³			
	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018		Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018
Order intake	£966m	£864m	£1,802m	Revenue	£853m	£815m	£1,678m
Order backlog	£1.9bn	£2.0bn	£1.9bn	Operating profit	£22m	£41m	£59m
Sales	£853m	£815m	£1,678m	Return on revenue	2.6%	5.0%	3.5%
Underlying EBITA	£25m	£48m	£111m	Cash flow from operating activities	£38m	£69m	£96m
Return on sales	2.9%	5.9%	6.6%				
Operating business cash flow	£23m	£63m	£85m				

- As expected, order backlog was stable at \$2.4bn (£1.9bn).
- In aggregate, sales of \$1.1bn (£0.9bn) were broadly unchanged on a constant currency basis⁴.
- Sales in the US business were down marginally, and in the Applied Intelligence business, sales were up 6% driven by the Government business line.
- Following the decision to dispose of the Applied Intelligence ex-SilverSky business, and to exit from the UK-based Managed Security Services business, a restructuring charge of £25m has been recognised in the first half of the year.
- Whilst the US business delivered a 9.5% return on sales, the aggregate sector return on sales was 2.9% reflecting the charge in Applied Intelligence. The planned exit from these areas of Applied Intelligence should enhance return on sales going into 2020 and beyond.
- Cash flow is expected to improve in the second half of the year, although the £25m restructuring charge is largely a cash cost.

1. Including share of equity accounted investments.

2. For alternative performance measure definitions see glossary on page 8.

3. International Financial Reporting Standards.

4. Current period compared with prior period translated at current period exchange rates.

Operational performance

Intelligence & Security

Air Force Solutions

Our sensors business received orders exceeding \$48m (£38m) from the US Air Force, primarily under the Instrumentation Radar Sustainment Program (IRSP). Under IRSP, we have been a radar sustainment contractor of choice since 1985, providing support, sustainment, and maintenance services for instrumentation systems at test ranges around the world.

Incremental orders have been received in the period under the US Air Force Intercontinental Ballistic Missile Integration Support Contractor programme, bringing the total lifecycle value of the programme to \$976m (£767m). Our work includes programme management, systems engineering, integration and testing, sustainment and cyber defence.

Integrated Defense Solutions

Our US Navy Strategic Systems Program experts continue to execute the third year of a five-year, \$368m (£289m) sole-source contract to support weapons systems on board US Ohio and UK Vanguard Class submarines, as well as future US Columbia Class and UK Dreadnought Class submarines.

Other US Navy contracts were secured in the period to perform rapid engineering and integration support for communication systems, and C5ISR system integration, modernisation, installation and sustainment.

Intelligence Solutions

The business is executing on a number of task order contracts valued at approximately \$320m (£251m) to provide motion-imagery analysis, training, and research support services to the US intelligence community, and provide technical, functional, and general support to enhance the situational awareness and training of US Army troops deployed around the world.

We secured a \$70m (£55m) engineering change proposal to extend the period of performance on a contract originally awarded in 2013 to provide high performance computing and infrastructure support to the US intelligence community.

Strategic developments in the first half of the year included a new partnership with robotic process automation leader UiPath to develop suites of software tools that its customers can use to automate high-volume, repetitive business and mission processes, and we secured our first Federated Secure Cloud opportunity with the US Army.

Applied Intelligence

The Group has commenced a process for the disposal options of the Applied Intelligence US-based software as a service business and has decided to exit the UK-based Managed Security Services business. As a result of the exit from this business, a restructuring cost of £25m has been recognised in the first half of the year.

Government

The Government business achieved good growth in the first half, driven by higher demand for intelligence offerings and increased investment in business development. There were notable orders with key UK and international customers.

Financial Services

In April 2019 the business launched a new version of the NetReveal[®] platform. The latest version, v8.0 for AML Regulatory Compliance and Payments Fraud, combines the best of new technologies, advanced analytics and human expertise to enable financial institutions to effectively combat financial crime and fraud in an environment of rapidly evolving regulatory requirements and changing financial crime patterns. The new version is built on modernised modular technology allowing analysts and fraud investigators to work smarter and faster using an intelligence-led approach. Initial response from industry analysts and customers has been positive.

Looking forward

Intelligence & Security

The outlook for the US government services sector is stable, although market conditions remain highly competitive and continue to evolve. The US business remains well positioned and will continue to leverage its established market positions and reputation for reliable and adaptable performance to meet customer demands for innovative, cost-effective and cyber-hardened solutions to pursue re-competed contracts and new business across its portfolio of sustainment, integration and modernisation solutions for military, intelligence and nuclear triad customers.

Applied Intelligence

Order and revenue growth in Government and Financial Services is expected with profitability in 2020 and subsequent years expected to improve following the exit from the former Technology & Commercial business.

Segmental performance: Platforms & Services (US)

Platforms & Services (US), with 12,300 employees¹, has operations in the US, UK and Sweden. It manufactures combat vehicles, weapons and munitions, and delivers services and sustainment activities, including naval ship repair and the management and operation of government-owned munitions facilities.

Financial performance

Financial performance measures as defined by the Group ²	Six months ended	Six months ended	Year ended	Financial performance measures defined in IFRS ³			
	30 June 2019	30 June 2018	31 December 2018	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018	
Order intake	£1,810m	£1,479m	£3,693m	Revenue	£1,459m	£1,328m	£2,864m
Order backlog	£5.6bn	£4.6bn	£5.4bn	Operating profit	£130m	£20m	£161m
Sales	£1,522m	£1,382m	£3,005m	Return on revenue	8.9%	1.5%	5.6%
Underlying EBITA	£135m	£56m	£210m	Cash flow from operating activities	£25m	£(30)m	£31m
Return on sales	8.9%	4.1%	7.0%				
Operating business cash flow	£5m	£(46)m	£(30)m				

- Order backlog has further increased to \$7.2bn (£5.6bn) mainly on the award of the Low-Rate Initial Production for the Armored Multi-Purpose Vehicle.
- Sales were up 4% to just under \$2.0bn (£1.5bn). As expected there is a second half sales bias in the ramp up of US combat vehicle production activity.
- Return on sales performance for the first half of the year improved to 8.9%, absent the charges taken last year on the Radford facilities construction and commercial shipbuilding. However, as combat vehicles volumes of lower margin sales increase in the second half, the return on sales for the full year is expected to be slightly lower.
- First half cash flow, whilst slightly better than last year, reflects the significant working capital held in the Combat Vehicles business. We continue to expect to see this convert into cash flow through Q4 2019 and into 2020, on the increased production deliveries.

1. Including share of equity accounted investments.

2. For alternative performance measure definitions see glossary on page 8.

3. International Financial Reporting Standards.

Operational performance

US Combat Vehicles

With recent management changes and ongoing improvements and investments in modernising facilities and manufacturing technologies, including automation and robotic welding, the business continues to make progress towards achieving consistent production throughput across multiple programmes. Lessons learned from the M109A7 programme are being applied to other programmes.

The first of the Amphibious Combat Vehicles (ACVs) is undergoing acceptance testing in conjunction with the US Marine Corps ahead of the first delivery. Low-Rate Initial Production (LRIP) contracts for 60 vehicles valued at \$338m (£266m) have been awarded. Under a \$67m (£53m) contract awarded in June we have begun design and development activities on two new mission variants of the ACV. The ACV programme includes options for a total of approximately 700 vehicles.

We continue to work on the US Army's Mobile Protected Firepower programme under a \$376m (£296m) contract for the engineering and manufacturing development phase for rapid prototyping efforts. We were one of two competitors selected for this phase, and the Army is expected to down select to a single supplier for the LRIP phase in 2022.

On the US Army's Armored Multi-Purpose Vehicle programme, we were awarded a \$575m (£452m) contract modification for LRIP vehicles. Combined with previous long-lead procurement awards, production has reached a cumulative value of \$873m (£686m). We will begin delivery of the initial LRIP

vehicles in 2020. If all phases and options are exercised on the AMPV programme, there is a potential total demand of approximately 2,900 to 3,000 vehicles.

Work continues on a \$365m (£287m) contract for the fourth option in the LRIP phase for 48 M109A7 self-propelled howitzer and ammunition carrier vehicles sets, with an option for an additional 12. A full-rate production decision is expected this year. Deliveries are progressing as we work towards a revised production schedule, and we are on track to achieve production of eight vehicles per month by year end.

Following completion of the engineering and manufacturing development contract to address the space, weight, power and cooling limitations of the Bradley family of vehicles and to prepare the vehicle for communication network upgrades, work has begun under the \$348m (£273m) contract, initially funded at \$132m (£104m), to upgrade 164 vehicles to the Bradley A4 configuration.

We continue to work on US Army contracts for production and sustainment of M88 recovery vehicles, to include upgrades from the M88A1 to the more capable M88A2 Heavy Equipment Recovery Combat Utility Lift Evacuation Systems (HERCULES) configuration.

Internationally, work continues on the delivery of an additional eleven Assault Amphibious Vehicles for Japan and 36 vehicles for Taiwan.

Weapon Systems

Deliveries of M777 ultra-lightweight howitzers continue to the Indian Army under a \$542m (£426m) Foreign Military Sale contract to provide 145 M777s. We are building the initial guns in our facilities, with at least 120 subsequent systems to be assembled in India by Mahindra Defence Systems, at their new assembly and integration facility.

In April we received a further \$71m (£56m) contract from the US Navy to deliver five Mk 45 Mod 4 gun systems providing a solid US Navy order book of 19 Mk45 gun systems. We are also delivering additional 57mm Mk110 gun systems for the Navy's Littoral Combat Ship programme, as well as the US Coast Guard's National Security Cutter Legend Class and Offshore Patrol Cutter programmes, with nearly 60 now delivered to US maritime forces.

We continue to execute on contracts to deliver 155mm BONUS ammunition to the Swedish Army and the US Army. Under a 2016 contract modification, the business is also delivering 24 additional ARCHER artillery systems to the Swedish government. We are also under multiple export contracts to build and deliver 40 Mk4 and 57 Mk3 naval guns systems.

We continue to execute on a \$183m (£144m) contract to provide the Maritime Indirect Fire System for the Royal Navy's Type 26 frigate, which includes Mk45 Mod 4 gun systems, automated ammunition handling systems and gun fire control systems.

Ordnance Systems

In the complex ordnance manufacturing business, we manage and operate the US Army's Radford and Holston munitions facilities. In parallel, we are working to upgrade these facilities in partnership with the Army.

At Holston, production operations impacted by a fire in January are coming back online. A £10m charge was recognised in the HQ segment for this fire as this facility forms part of the Group insurance arrangement. Modernisation activities continue under multiple contracts to construct a natural gas-fired steam facility, and the waste water management facility that is nearing completion, as well as the design, construction and commissioning of new production facilities that will improve efficiency and modernise energetics manufacturing.

At Radford, in addition to ongoing operations, work continues on the construction of a modernised nitrocellulose facility, and we are actively managing ongoing subcontractor performance issues, cost overruns and related disputes.

US Ship Repair

In 2019, we have secured firm orders across our US shipyards totalling approximately \$427m (£336m), including awards to service: the USS Thomas Hudner and USS Paul Ignatius in Jacksonville; the USS Bulkeley in Norfolk; and the USS Anchorage in San Diego.

We continue to see strong demand across our US shipyards, and initiatives are in progress to increase our capacity with existing infrastructure. In May we informed the Navy we will not bid for future work under the Multiple Award Contract it is implementing in Pearl Harbor. Our no-bid decision resulted from a thorough analysis and careful consideration of the business environment under this new contracting structure. We will continue to execute on existing modernisation work in Pearl Harbor scheduled through to Q3 2020 under previous awards.

We have exited commercial shipbuilding, following delivery of the final constructed ship in March.

BAE Systems Hägglunds

With an installed base of nearly 1,300 CV90 vehicles in Sweden and across six other international markets, the business continues to pursue a number of significant CV90 contractual opportunities, including a CV90 bid into Australia's Land 400 Phase 3 competition for a Mounted Close Combat Capability family of vehicles, and the Czech Republic's competition to replace their fleet of BMP2 Infantry Combat Vehicles.

Work is also progressing to refurbish Swedish CV90s under a 2016 contract, and we are integrating Mjölner mortar systems on 40 of the vehicles under a separate contract.

Under a contract for 32 BvS10 all-terrain vehicles for Austria, the serial deliveries are approaching the final stage.

FNSS

FNSS, our land systems joint venture based in Turkey, continues to perform under its \$524m (£412m) programme to produce 259 8x8 wheeled armoured vehicles for the Royal Malaysian Army.

Programme deliveries are on schedule under the contract with Oman for PARS wheeled armoured vehicles in 8x8 and 6x6 configurations.

Work progresses under multiple contracts to Turkish Armed Forces, including a €278m (£249m) contract to supply 260 anti-tank vehicles, an €84m (£75m) contract for air defence vehicles, and a €155m (£139m) contract to provide 27 amphibious assault vehicles. In April, FNSS signed a contract worth €154m (£138m) to supply the Turkish Armed Forces with 100 special purpose vehicles in 8x8 and 6x6 configurations.

Looking forward

The combat vehicles business is underpinned by a substantial order backlog and incumbencies on key franchise programmes, including the US Army's Armored Multi-Purpose Vehicle, M109A7 self-propelled howitzer, Bradley upgrade programmes, the Amphibious Combat Vehicle, and the CV90 and BvS10 export programmes from BAE Systems Hägglunds. FNSS continues to execute on its order book of both Turkish and international orders.

These long-term contracts and franchise positions have the combat vehicles business well placed for growth in the medium term, with further opportunities for future growth in Combat Vehicles.

The sector has a strong position on naval gun programmes and US Navy ship repair activities where the business has invested in facilities in key homeports. This infrastructure represents a high barrier to entry and the business remains aligned to the US Navy's operational strategy.

The Group remains a leading provider of gun systems and precision strike capabilities, and manages and operates the US Army's Radford and Holston munitions facilities.

Segmental performance: Air

Air, with 27,700 employees¹, comprises the Group's UK-based air activities for European and International markets and US Programmes, and its businesses in Saudi Arabia and Australia, together with a 37.5% interest in the European MBDA joint venture.

Financial performance

	Financial performance measures as defined by the Group ²			Financial performance measures defined in IFRS ³			
	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018	Six months ended 30 June 2019	Six months ended 30 June 2018	Year ended 31 December 2018	
Order intake	£2,046m	£2,699m	£14,845m	Revenue	£2,824m	£2,839m	£5,579m
Order backlog	£25.9bn	£18.9bn	£27.4bn	Operating profit	£379m	£438m	£810m
Sales	£3,366m	£3,305m	£6,712m	Return on revenue	13.4%	15.4%	14.5%
Underlying EBITA	£438m	£459m	£859m	Cash flow from operating activities	£(132)m	£(125)m	£719m
Return on sales	13.0%	13.9%	12.8%				
Operating business cash flow	£(163)m	£(167)m	£666m				

- As expected, order backlog reduced to £25.9bn, primarily for the trading on multi-year orders received in prior years for Saudi support.
- Sales of £3.4bn were slightly ahead of last year. Activity on the Typhoon and Hawk programme for Qatar and sales from MBDA are expected to ramp up in the second half of the year.
- Given the very early stages of the Qatar programme, and therefore the lower return on sales recognised, higher sales on Qatar in the second half will be dilutive to the full year return on sales. In addition there is second half weighting of the self-funded research and development expenditure on the Tempest future combat air programme.
- The cash outflow in the period reflects timing of receipts on international Typhoon programmes and utilisation of advances on the Saudi support contract. In addition, there has been utilisation of the advance held on the Qatar programme, albeit that is now more weighted to the second half of the year. Following a contract amendment to accelerate aircraft deliveries on the Qatar programme, approximately £80m of customer funding was brought forward to the first half of the year.

1. Including share of equity accounted investments.

2. For alternative performance measure definitions see glossary on page 8.

3. International Financial Reporting Standards.

Operational performance

European & International markets

Mobilisation activity continues on the 24 Typhoon and nine Hawk aircraft and associated support and training contract for the Government of the State of Qatar, with all initial milestones achieved. During the period a contract amendment was agreed to revise the contract deliverables, including accelerating Typhoon deliveries. Revised contract payment milestones were also incorporated.

The first two deliveries of major units under the Kuwait Typhoon contract, secured by Italian Eurofighter partner Leonardo, occurred in the period. The remaining 26 major units are planned for delivery by 2022.

Following the declaration by the Royal Air Force that Typhoon had met Centurion standard in December 2018, enabling the transition of capabilities from Tornado to Typhoon, the UK Tornado fleet successfully retired from service on schedule.

In the UK, under a ten-year partnership arrangement, and in Oman, under a five-year availability service contract, we continue to support their respective Typhoon fleets to achieve the flying hours contracted. The European Partner Nations support arrangements also continue in line with contractual commitments.

Support to the Royal Air Force's UK fleet of Hawk fast jet trainer aircraft continues through the long-term availability contract with progress being made for a 13-year follow-on arrangement commencing in November 2020, along with support to users of Hawk trainer aircraft around the world.

The next phase of the Tempest programme has been contracted between industry and the UK government. The Memorandum of Understanding signed in July between the UK and Sweden, committing both governments to work on a joint combat air development and acquisition programme, is a welcome development.

Progress continues on the collaboration for the design and development phase of an indigenous fifth-generation fighter jet for the Turkish Air Force. There are 74 employees now deployed in country.

US Programmes

On the F-35 programme, price negotiations on Lots 12 to 14 are expected to conclude in the second half of 2019, and the business is ramping up to full-rate production by 2020. In the period, 67 rear fuselage assemblies were delivered for the Low-Rate Initial Production contracts across Lots 11 to 13, bringing total rear fuselage deliveries on the programme to over 500.

At RAF Marham in Norfolk, following the declaration of Initial Operational Capability in 2018, we continue to support the customer in integrating F-35 into its operational fleet and forward deployments.

BAE Systems continues to play a significant role on the F-35 sustainment programme including the supply of spares and technical support, software products, upgrades and specialist manpower services. This role is expected to expand in the second half to include a global consumable spares service.

Saudi Arabia

The Group is reliant on the continued approval of export licences by a number of governments in order to continue supplies to the Kingdom of Saudi Arabia. Following updates from the German government regarding export licences, we are working closely with industry partners and the UK government to continue to fulfil the contractual support arrangements in Saudi Arabia on the key European collaboration programmes.

In June 2019, the Court of Appeal of England and Wales directed the Secretary of State for International Trade to revisit the decision-making process for granting export licences for the sale of military equipment to the Kingdom of Saudi Arabia. Both the Secretary of State and the other party to the proceedings have sought and obtained permission to appeal the Court's ruling to the Supreme Court. The Company will assess the result of any re-consideration by the Secretary of State of its decision-making on the basis set out by the Court, once it has been made.

The Memorandum of Intent signed between the Kingdom of Saudi Arabia and the UK government in March 2018 remains under discussion for a further 48 Typhoon aircraft, support and transfer of technology and capability. This would enable BAE Systems to continue with the Industrialisation of Defence capabilities in Saudi Arabia. Final assembly of all 48 Typhoon aircraft would be in-Kingdom.

The business continues to perform against the contract secured in 2018 to provide Typhoon support services to the Royal Saudi Air Force through 2022.

The Saudi British Defence Co-operation Programme five-year funding agreement through 2021 comprises a number of contracts, including support to the Tornado fleet and provision of Officer and Aircrew Training for the Royal Saudi Air Force, as well as engineering and logistics services for the Royal Saudi Naval Forces. While the company continues to meet the majority of its contractual obligations under these contracts, availability of Hawk trainer aircraft to the Royal Saudi Air Force has been lower than required during the period. The Company continues to work with its suppliers and the customer to rectify this.

In May, the first Hawk aircraft assembled in-Kingdom was completed and entered service with the Royal Saudi Air Force in June. The Company has delivered 19 of 22 major units to meet this final assembly programme.

Work continues to reorganise our portfolio of interests in a number of industrial companies in Saudi Arabia. Riyadh Wings Aviation Academy LLC increased its ownership to 18.79% in the Group's Overhaul and Maintenance Company (OMC) subsidiary, under a contract to acquire an interest of 49%.

Additionally OMC disposed of its 85.7% shareholding in Aircraft Accessories and Components Company to Saudi Arabian Military Industries (SAMI).

OMC has also entered into a heads of terms for the sale of its 50% shareholding in Advanced Electronics Company to SAMI, with the transaction expected to take place towards the end of the year.

Through the restructuring of the Group's portfolio of interests in its Kingdom of Saudi Arabia industrial companies, along with sustaining current industrialised capability and building on our strong history in Saudi Arabia, we are working in partnership with SAMI to explore how we can collaborate to deliver further In-Kingdom Industrial Participation, in line with the Kingdom's National Transformation Plan and Vision 2030.

Australia

The initial design and production readiness phase of the Hunter Class programme for the Royal Australian Navy is mobilising. ASC Shipbuilding is being integrated into our Australian operations and resource mobilisation is underway. The first Integrated Baseline Review milestone on the programme is scheduled for completion in the second half of the year.

Progress continues on the Jindalee Operational Radar Network upgrade contract secured in 2018 from the Commonwealth of Australia, with the System Requirements Review completed. The first year of support to the three radar sites has seen all operational milestones achieved to plan.

Final acceptance of the Royal Australian Navy's two Landing Helicopter Docks is expected in the second half of the year. We have continued to provide in-service support, whilst handing over responsibility for future support to Naval Ship Management who secured the contract for the next stage of support.

The Hawk Mk127 Lead-In Fighter project team continues to maintain the high level of aircraft availability required. The Capability Assurance Programme to upgrade the Hawk fleet to meet the F-35 training requirements completed in the period.

Progress continues in line with plan on sustainment activity for the regional F-35 fleet at our Williamstown facility, following arrival of the first four aircraft.

MBDA

In the period, MBDA has continued to win orders on domestic and export programmes, and with several key bids underway, is well placed to benefit from defence spending in a number of European countries and International opportunities.

In June, the MBDA / Lockheed Martin joint venture submitted to the German customer the updated TLVS (Ground-Based Air Defence System) proposal.

During the first half of 2019 new contracts were signed, including in Qatar for ASRAAM on the Typhoon platform, in addition to the already contracted Meteor and Brimstone, as well as a number of key support contracts for both European and International customers.

Good progress has been made on a number of development programmes including: Spear Capability 3; and Aster New Technology and the Future Cruise / Anti-Ship Weapon (the Anglo / Franco co-operation Programme to replace Storm Shadow / Harpoon in the UK and SCALP / Exocet in France) which has successfully achieved its concept review, providing an important step in the decision to launch the following phases of the programme. Progress has also continued on production programmes, notably MICA missile deliveries for a number of International customers.

Looking forward

Future sales are underpinned by existing contracts for both Typhoon production and support. Production of rear fuselage assemblies for F-35 Lightning II will increase to reach its expected peak rate for the next decade by 2020. The business is expected to play a significant role in the F-35 sustainment programme in the UK, Australia and in support of Lockheed Martin.

Discussions continue with current and prospective customers in relation to potential further contract awards for Typhoon. The UK Typhoon support operation is underpinned by a long-term partnering arrangement with the Ministry of Defence.

In Saudi Arabia, the In-Kingdom Industrial Participation (IKIP) programme continues to make good progress consistent with our long-term strategy, as well as the Saudi Arabian government's National Transformation Plan and Vision 2030. In order to provide ongoing capability to international customers, the company is reliant on the continued approval of export licences by a number of governments. Any significant change in UK or foreign government policy in this regard may have an adverse effect on the Group's provision of capability (including IKIP) to the Kingdom of Saudi Arabia and the Group is liaising closely with the UK government in working to reduce the impact of any such occurrence.

The Australian business has long-term sustainment and upgrade activities in maritime, air, wide-area surveillance, missile defence and electronic systems. The ship design and production readiness activity on the Hunter Class frigate will continue to grow.

MBDA continues to have a strong order book which provides a good basis for increasing revenues. Development programmes continue to improve the long-term capabilities of the business.

Segmental performance: Maritime

Maritime, with 16,000 employees¹, comprises the Group's UK-based maritime and land activities.

Financial performance

Financial performance measures as defined by the Group ²	Six months ended	Six months ended	Year ended	Financial performance measures defined in IFRS ³	Six months ended	Six months ended	Year ended
	30 June 2019	30 June 2018	31 December 2018		30 June 2019	30 June 2018	31 December 2018
Order intake	£1,334m	£2,422m	£3,513m	Revenue	£1,512m	£1,432m	£2,940m
Order backlog	£8.7bn	£9.5bn	£9.0bn	Operating profit	£120m	£88m	£191m
Sales	£1,525m	£1,447m	£2,975m	Return on revenue	7.9%	6.1%	6.5%
Underlying EBITA	£133m	£93m	£209m	Cash flow from operating activities	£(45)m	£(153)m	£190m
Return on sales	8.7%	6.4%	7.0%				
Operating business cash flow	£(92)m	£(196)m	£67m				

- Order backlog is little changed at £8.7bn, with further awards for funding on the Dreadnought programme received in the first half, offset by trading on Astute, and the Aircraft Carrier and Type 26 programmes.
- Sales of £1.5bn are 5% higher than the prior year, with a slight first half bias for higher activity on the Carrier programme and Portsmouth Naval Base support.
- Return on sales was at 8.7%, back within our guidance range.
- There was an operating cash outflow of £92m which includes utilisation of the Naval Ships provision recognised last year and timing across a number of programmes. Annual funding of the UK munitions supply contract continues to be scheduled for December.

1. Including share of equity accounted investments.

2. For alternative performance measure definitions see glossary on page 8.

3. International Financial Reporting Standards.

Operational performance

Maritime

The second aircraft carrier, HMS Prince of Wales, is progressing towards sea trials in the autumn ahead of vessel acceptance at the end of the year. Large volume installation and compartment completion activities continue to progress along with commissioning of all systems. Power and propulsion trials started in April with all six engines being set to work, linking major systems throughout the ship.

The second of five River Class Offshore Patrol Vessels (OPVs), HMS Medway, was accepted by the Royal Navy in February, with the third ship, HMS Trent, being close to acceptance. The fourth and fifth ships are in the final stages of outfit and commissioning in Glasgow and we are working to a delivery schedule which would see completion in 2020.

Production of the first batch of Type 26 ships continues with over one-third of the units for the first in class, HMS Glasgow, in production. The second ship is scheduled for its cut steel ceremony in August.

Following the success of the Global Combat Ship design in Australia and Canada, teams for both programmes are mobilising, with design activity and knowledge exchanges underway. The contract for the Commonwealth of Australia's Hunter Class nine-ship Future Frigate programme commenced in February. The vessels will be built in Australia over the next two decades with the first of class expected to enter service around 2030. Under a subcontract from Lockheed Martin Canada, BAE Systems is the warship designer for the Canadian Surface Combatant programme of 15 ships for the Royal Canadian Navy, in an initial three-year contract. The platform design is based on the UK Type 26 variant. Irving Shipbuilding Inc. is the nominated shipbuilder.

On the Astute Class submarine programme, the fourth boat is now undertaking final test and commissioning work at the Barrow shipyard in preparation for sea trials later this year. Manufacturing activities on the remaining three boats in the class continue to advance.

On the Dreadnought Class submarine programme, functional and spatial design and production of the first of class vessel are progressing, with production of the second boat in the class due to commence in the second half of the year. A further £0.8bn of contract funding for the programme has been secured from the customer in the first half of 2019.

The redevelopment of the Barrow site to provide the facilities required for the Dreadnought programme continues, with a number of the new facilities now completed and in operation.

BAE Systems manages and maintains HM Naval Base, Portsmouth, and supports more than half of the Royal Navy's surface fleet through the Maritime Support Delivery Framework contract. The current contract runs until March 2020, after which we expect support work to continue.

Land UK

In July, following receipt of regulatory approvals, the business completed the formation of a joint venture with Rheinmetall to create a joint UK-based military land vehicle design, manufacturing and support business. Rheinmetall purchased a 55% stake in the existing BAE Systems UK-based combat vehicles business for £31.4m with BAE Systems retaining 45%. The transaction does not include Land UK's munitions business or its holding in the CTA International joint venture with Nexter.

The business supplies the UK Ministry of Defence with its general munitions requirements, through a 15-year contract signed in 2008. In the first half of 2019, we have maintained operational performance across the large volume of ammunition natures and services provided under the contract. We have also won new contracts to supply smoke and illuminating artillery rounds to the Ministry of Defence and are collaborating with Rheinmetall to supply 155mm ammunition to their customers. We are investing in new technologies that allow for more advanced manufacturing techniques at our sites in Washington, Tyne and Wear, Glascoed in South Wales and Radway Green in Cheshire.

Looking forward

We continue to strengthen the Maritime sector, through increasingly integrated operations, with emphasis on functional collaboration, inter-programme lessons learned and standardisation of systems and processes. Robust governance over current and future programmes is essential to deliver the requirements of our customers and returns for our shareholders.

Maritime

There remains pressure on the Royal Navy's near-term budgets and a highly competitive environment in ship support and upgrade however, overall the outlook is stable based on the long-term contracted positions.

Within Submarines, the Astute programme is now at peak production with the fourth submarine in the class being prepared for sea trials. Construction of the first Dreadnought submarine is also well underway and initial fabrication of the second is scheduled to commence in the second half of this year. The major infrastructure programme to redevelop the Barrow site continues to progress.

In shipbuilding, sales are underpinned by the contracts to manufacture the Queen Elizabeth Class aircraft carriers, Type 26 frigates and River Class Offshore Patrol Vessels. The through-life support of surface ship platforms provides a sustainable business in technical services and mid-life upgrades. The success of the Global Combat Ship reference design in both Australia and Canada, combined with ongoing construction of the first of the UK Type 26 ships, provides the foundation for growth. Opportunities in both the Type 31e and Fleet Solid Support procurement programmes continue to be developed.

Land UK

The Land UK business continues to deliver support to armoured vehicle and bridging systems in UK and international markets, munitions under the 15-year Munitions Acquisition Supply Solution partnering agreement secured in 2008 and 40mm cased-telescopic cannons for the UK and French armies.

The joint venture with Rheinmetall to create a joint UK-based military land vehicle design, manufacturing and support business is positioned to secure a share of the British Army's expected Mechanised Infantry Vehicles order, and other combat vehicle requirements.

Responsibility statement of the directors in respect of the half-yearly financial report

Each of the directors (as detailed below) confirms that to the best of his / her knowledge:

- The condensed set of financial statements has been prepared in accordance with IAS 34 Interim Financial Reporting, as adopted by the European Union.
- The interim management report on pages 1 to 31 includes a fair review of the information required by:
 - (a) DTR 4.2.7R of the Disclosure Guidance and Transparency Rules (DTR), being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed set of financial statements; and a description of the principal risks and uncertainties for the remaining six months of the financial year; and
 - (b) DTR 4.2.8R of the DTR, being related party transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or the performance of the Company during that period; and any changes in the related party transactions described in the last annual report that could do so.

For and on behalf of the directors:

Sir Roger Carr

Chairman
30 July 2019

Directors

Sir Roger Carr	Chairman
Charles Woodburn	Chief Executive
Jerry DeMuro	Chief Executive Officer of BAE Systems, Inc.
Peter Lynas	Group Finance Director
Revathi Advaiti	Non-executive director
Elizabeth Corley	Non-executive director
Harriet Green	Non-executive director
Chris Grigg	Non-executive director
Stephen Pearce	Non-executive director
Nicole Piasecki	Non-executive director
Paula Rosput Reynolds	Non-executive director
Nick Rose	Non-executive director
Ian Tyler	Non-executive director

Independent review report to BAE Systems plc

We have been engaged by the company to review the condensed set of financial statements in the half-yearly financial report for the six months ended 30 June 2019 which comprises the Condensed consolidated income statement, the Condensed consolidated statement of comprehensive income, the Condensed consolidated statement of changes in equity, the Condensed consolidated balance sheet, the Condensed consolidated cash flow statement and the related explanatory notes 1-13. We have read the other information contained in the half-yearly financial report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the condensed set of financial statements.

This report is made solely to the company in accordance with International Standard on Review Engagements (UK and Ireland) 2410 "Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Financial Reporting Council. Our work has been undertaken so that we might state to the company those matters we are required to state to it in an independent review report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company, for our review work, for this report, or for the conclusions we have formed.

Directors' responsibilities

The half-yearly financial report is the responsibility of, and has been approved by, the directors. The directors are responsible for preparing the half-yearly financial report in accordance with the Disclosure Guidance and Transparency Rules of the United Kingdom's Financial Conduct Authority.

As disclosed in note 1, the annual financial statements of the Group are prepared in accordance with IFRSs as adopted by the European Union. The condensed set of financial statements included in this half-yearly financial report has been prepared in accordance with International Accounting Standard 34 "Interim Financial Reporting" as adopted by the European Union.

Our responsibility

Our responsibility is to express to the Company a conclusion on the condensed set of financial statements in the half-yearly financial report based on our review.

Scope of review

We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410 "Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Financial Reporting Council for use in the United Kingdom. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the condensed set of financial statements in the half-yearly financial report for the six months ended 30 June 2019 is not prepared, in all material respects, in accordance with International Accounting Standard 34 as adopted by the European Union and the Disclosure Guidance and Transparency Rules of the United Kingdom's Financial Conduct Authority.

Deloitte LLP

Statutory Auditor

London

United Kingdom

30 July 2019

Condensed consolidated income statement (unaudited)

	Notes	Six months ended 30 June 2019		Six months ended 30 June 2018	
		£m	£m	£m	£m
Continuing operations					
Sales	2	9,416		8,818	
<i>Deduct</i> Share of sales by equity accounted investments		(1,271)		(1,319)	
<i>Add</i> Sales to equity accounted investments		529		662	
Revenue	2	8,674		8,161	
Operating costs		(7,896)		(7,454)	
Other income		58		47	
Group operating profit		836		754	
Share of results of equity accounted investments		60		38	
<hr/>					
<i>Underlying EBITA</i>	2	999		874	
<i>Non-recurring items</i>	2	(28)		(33)	
<i>EBITA</i>		971		841	
<i>Amortisation of intangible assets</i>		(49)		(33)	
<i>Financial expense of equity accounted investments</i>		(10)		(6)	
<i>Taxation expense of equity accounted investments</i>		(16)		(10)	
Operating profit	2	896		792	
<hr/>					
<i>Financial income</i>		113		138	
<i>Financial expense</i>		(233)		(359)	
Net finance costs	3	(120)		(221)	
Profit before taxation		776		571	
Taxation credit / (expense)	4	41		(86)	
Profit for the period		817		485	
<hr/>					
Attributable to:					
Equity shareholders		795		471	
Non-controlling interests		22		14	
		817		485	
<hr/>					
Earnings per share					
	5				
Basic earnings per share		25.0p		14.8p	
Diluted earnings per share		24.9p		14.7p	

Condensed consolidated statement of comprehensive income (unaudited)

	Six months ended 30 June 2019			Six months ended 30 June 2018 (restated) ¹		
	Other reserves £m	Retained earnings £m	Total £m	Other reserves £m	Retained earnings £m	Total £m
Profit for the period	–	817	817	–	485	485
Other comprehensive income						
Items that will not be reclassified to the income statement:						
Subsidiaries:						
Remeasurements on retirement benefit schemes	–	(487)	(487)	–	897	897
Tax on items that will not be reclassified to the income statement	–	56	56	–	(155)	(155)
Equity accounted investments (net of tax)	–	(16)	(16)	–	30	30
Items that may be reclassified to the income statement:						
Subsidiaries:						
Currency translation on foreign currency net investments	18	–	18	158	–	158
Reclassification of cumulative currency translation reserve on disposal	(8)	–	(8)	–	–	–
Fair value gain / (loss) arising on hedging instruments during the period	13	–	13	(5)	–	(5)
Cumulative fair value gain on hedging instruments reclassified to the income statement	(57)	–	(57)	–	–	–
Tax on items that may be reclassified to the income statement	8	–	8	1	–	1
Equity accounted investments (net of tax)	8	–	8	3	–	3
Total other comprehensive income for the period (net of tax)	(18)	(447)	(465)	157	772	929
Total comprehensive income for the period	(18)	370	352	157	1,257	1,414
Attributable to:						
Equity shareholders	(18)	348	330	155	1,243	1,398
Non-controlling interests	–	22	22	2	14	16
	(18)	370	352	157	1,257	1,414

1. Prior period comparatives have been restated to correct a prior period error in respect of the accounting valuation of a longevity swap held by one of the Group's defined benefit pension schemes.

Condensed consolidated statement of changes in equity (unaudited)

	Attributable to equity holders of BAE Systems plc					Non-controlling interests £m	Total equity £m
	Issued share capital £m	Share premium £m	Other reserves £m	Retained earnings £m	Total £m		
Balance at 1 January 2019 as originally presented	87	1,249	6,481	(2,271)	5,546	72	5,618
Transition adjustment upon adoption of IFRS 16 Leases (note 11)	–	–	–	(92)	(92)	–	(92)
Balance at 1 January 2019	87	1,249	6,481	(2,363)	5,454	72	5,526
<i>Profit for the period</i>	–	–	–	795	795	22	817
<i>Total other comprehensive income for the period</i>	–	–	(18)	(447)	(465)	–	(465)
Total comprehensive income for the period	–	–	(18)	348	330	22	352
Share-based payments (inclusive of tax)	–	–	–	37	37	–	37
Partial disposal of shareholding in subsidiary undertaking	–	–	–	(6)	(6)	20	14
Cumulative fair value loss on hedging instruments transferred to the balance sheet (net of tax)	–	–	34	–	34	–	34
Ordinary share dividends	–	–	–	(423)	(423)	(26)	(449)
At 30 June 2019	87	1,249	6,497	(2,407)	5,426	88	5,514
Balance at 1 January 2018 (restated) ¹	87	1,249	6,090	(2,714)	4,712	43	4,755
<i>Profit for the period</i>	–	–	–	471	471	14	485
<i>Total other comprehensive income for the period (restated)¹</i>	–	–	155	772	927	2	929
Total comprehensive income for the period (restated) ¹	–	–	155	1,243	1,398	16	1,414
Share-based payments (inclusive of tax)	–	–	–	32	32	–	32
Net sale of own shares	–	–	–	1	1	–	1
Ordinary share dividends	–	–	–	(415)	(415)	–	(415)
At 30 June 2018 (restated)¹	87	1,249	6,245	(1,853)	5,728	59	5,787

1. Prior period comparatives have been restated to correct a prior period error in respect of the accounting valuation of a longevity swap held by one of the Group's defined benefit pension schemes.

Condensed consolidated balance sheet (unaudited)

	Notes	30 June 2019 £m	31 December 2018 £m
Non-current assets			
Intangible assets		10,648	10,658
Property, plant and equipment		2,392	2,365
Right-of-use assets	11	1,256	–
Investment property		142	98
Equity accounted investments		333	429
Other investments		13	13
Other receivables		409	352
Retirement benefit surpluses	6	346	308
Other financial assets		318	245
Deferred tax assets		741	702
		16,598	15,170
Current assets			
Inventories		847	774
Trade, other and contract receivables		6,070	5,177
Current tax		7	81
Other financial assets		136	166
Cash and cash equivalents		1,501	3,232
Assets held for sale		184	146
		8,745	9,576
Total assets		25,343	24,746
Non-current liabilities			
Loans		(3,520)	(3,514)
Lease liabilities	11	(1,242)	–
Other payables		(1,642)	(1,536)
Retirement benefit obligations	6	(4,650)	(4,240)
Other financial liabilities		(121)	(104)
Provisions		(372)	(427)
		(11,547)	(9,821)
Current liabilities			
Loans and overdrafts		–	(785)
Lease liabilities	11	(244)	–
Trade and other payables		(7,571)	(7,740)
Other financial liabilities		(86)	(74)
Current tax		(37)	(334)
Provisions		(324)	(334)
Liabilities held for sale		(20)	(40)
		(8,282)	(9,307)
Total liabilities		(19,829)	(19,128)
Net assets		5,514	5,618
Capital and reserves			
Issued share capital		87	87
Share premium		1,249	1,249
Other reserves		6,497	6,481
Retained earnings – deficit		(2,407)	(2,271)
Total equity attributable to equity holders of BAE Systems plc		5,426	5,546
Non-controlling interests		88	72
Total equity		5,514	5,618

Condensed consolidated cash flow statement (unaudited)

	Notes	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Profit for the period		817	485
Taxation (credit) / expense		(41)	86
Research and development expenditure credits		(8)	(10)
Share of results of equity accounted investments		(60)	(38)
Net finance costs		120	221
Depreciation, amortisation, impairment and derecognition		330	188
Profit on disposal of property, plant and equipment, and investment property		(3)	(1)
(Gain) / loss in respect of held for sale assets and disposal of businesses		(8)	5
Cost of equity-settled employee share schemes		38	28
Movements in provisions		(38)	(69)
Decrease in liabilities for retirement benefit obligations		(169)	(123)
Increase in working capital:			
Inventories		(70)	(56)
Trade, other and contract receivables		(885)	(462)
Trade and other payables		(107)	(520)
Taxation paid		(148)	(131)
Net cash flow from operating activities		(232)	(397)
Dividends received from equity accounted investments		90	16
Interest received		17	11
Principal element of finance lease receipts		5	–
Purchases of property, plant and equipment, and investment property		(142)	(140)
Purchases of intangible assets		(58)	(49)
Proceeds from sale of property, plant and equipment, and investment property		4	4
Purchase of subsidiary undertakings		(9)	–
Proceeds from sale of subsidiary undertakings		40	–
Cash flow in respect of held for sale assets and business disposals		–	(3)
Purchase of equity accounted investment		–	(2)
Equity accounted investment funding		(5)	(1)
Net cash flow from investing activities		(58)	(164)
Interest paid		(134)	(107)
Net sale of own shares		–	1
Equity dividends paid	7	(423)	(415)
Dividends paid to non-controlling interests		(26)	–
Principal element of lease payments		(119)	–
Cash flow from matured derivative financial instruments		47	(60)
Cash flow from cash collateral		4	(8)
Cash inflow from loans		463	–
Cash outflow from repayment of loans		(1,236)	(7)
Net cash flow from financing activities		(1,424)	(596)
Net decrease in cash and cash equivalents		(1,714)	(1,157)
Cash and cash equivalents at 1 January		3,232	3,264
Effect of foreign exchange rate changes on cash and cash equivalents		(17)	8
Cash and cash equivalents at end of period		1,501	2,115

Notes to the condensed half-yearly financial statements

1. Preparation

Basis of preparation and statement of compliance

These condensed consolidated half-yearly financial statements of BAE Systems plc (the Group) have been prepared in accordance with International Accounting Standard (IAS) 34 Interim Financial Reporting. The annual consolidated financial statements of the Group are prepared in accordance with EU-endorsed International Financial Reporting Standards (IFRSs). These condensed consolidated half-yearly financial statements do not comprise statutory accounts within the meaning of Section 435 of the Companies Act 2006 and should be read in conjunction with the Annual Report 2018. The comparative figures for the year ended 31 December 2018 are not the Group's statutory accounts for that financial year. Those financial statements have been reported upon by the Group's auditor and delivered to the registrar of companies. The report of the auditor was unqualified, did not include a reference to any matters to which the auditor drew attention by way of emphasis without qualifying their report and did not contain statements under Section 498 (2) or (3) of the Companies Act 2006.

The accounting policies adopted in the preparation of these condensed consolidated half-yearly financial statements to 30 June 2019 are consistent with the accounting policies applied by the Group in its consolidated financial statements as at, and for the year ended, 31 December 2018 as required by the Disclosure Guidance and Transparency Rules of the UK's Financial Conduct Authority, with the exception of the adoption of new and amended standards as set out below.

New and amended standards adopted by the Group

A number of new or amended standards became applicable for the current reporting period, and the Group changed its accounting policies as a result of adopting IFRS 16 Leases.

The impact of the adoption of the new leasing standard and the new accounting policies are disclosed in note 11. The other standards did not have any impact on the Group's accounting policies, and did not require retrospective adjustments.

2. Segmental analysis

Sales and revenue by reporting segment

	Sales		Deduct: Share of sales by equity accounted investments		Add: Sales to equity accounted investments		Revenue	
	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
	Electronic Systems	2,142	1,819	(61)	(42)	61	42	2,142
Cyber & Intelligence	853	815	–	–	–	–	853	815
Platforms & Services (US)	1,522	1,382	(63)	(54)	–	–	1,459	1,328
Air	3,366	3,305	(994)	(1,069)	452	603	2,824	2,839
Maritime	1,525	1,447	(13)	(16)	–	1	1,512	1,432
HQ	163	163	(140)	(138)	–	–	23	25
	9,571	8,931	(1,271)	(1,319)	513	646	8,813	8,258
Intra-group sales/revenue	(155)	(113)	–	–	16	16	(139)	(97)
	9,416	8,818	(1,271)	(1,319)	529	662	8,674	8,161

Operating profit / (loss) by reporting segment

	Underlying EBITA		Non-recurring items ¹		Amortisation of intangible assets		Financial and taxation expense of equity accounted investments		Operating profit / (loss)	
	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
	Electronic Systems	316	260	–	–	(8)	(8)	–	–	308
Cyber & Intelligence	25	48	–	–	(3)	(7)	–	–	22	41
Platforms & Services (US)	135	56	–	(33)	(5)	(4)	–	1	130	20
Air	438	459	(28)	–	(14)	(6)	(17)	(15)	379	438
Maritime	133	93	–	–	(12)	(5)	(1)	–	120	88
HQ	(48)	(42)	–	–	(7)	(3)	(8)	(2)	(63)	(47)
	999	874	(28)	(33)	(49)	(33)	(26)	(16)	896	792
Net finance costs									(120)	(221)
Profit before taxation									776	571
Taxation credit / (expense)									41	(86)
Profit for the period									817	485

1. Non-recurring items comprises a £36m charge relating to the derecognition of Enterprise Resource Planning software intangible assets in the Air sector and an £8m gain on disposal of Aircraft Accessories and Components Company (2018 impairment and other charges relating to the Mobile, Alabama, shipyard).

3. Net finance costs

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Net finance costs:		
Group	(120)	(221)
Share of equity accounted investments	(10)	(6)
	(130)	(227)
Analysed as:		
Underlying interest expense:		
Group	(123)	(101)
Share of equity accounted investments	(7)	–
	(130)	(101)
Other:		
Group:		
Net interest expense on retirement benefit obligations	(58)	(52)
Fair value and foreign exchange adjustments on financial instruments and investments	61	(68)
Share of equity accounted investments:		
Net interest expense on retirement benefit obligations	(2)	(2)
Fair value and foreign exchange adjustments on financial instruments and investments	(1)	(4)
	(130)	(227)

4. Taxation

Taxation credit / (expense)

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Taxation expense excluding one-off items	(120)	(86)
One-off tax benefit	161	–
Taxation credit / (expense)	41	(86)

Calculation of the underlying effective tax rate

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Profit before taxation	776	571
Add back: Taxation expense of equity accounted investments	16	10
Deduct: Non-taxable non-recurring items	(8)	–
Adjusted profit before tax	784	581
Taxation credit / (expense)	41	(86)
Taxation expense of equity accounted investments	(16)	(10)
Exclude: One-off tax benefit	(161)	–
Adjusted taxation expense (including equity accounted investments)	(136)	(96)
Underlying effective tax rate	17%	16.5%

5. Earnings per share

	Six months ended 30 June 2019			Six months ended 30 June 2018		
	£m	Basic pence per share	Diluted pence per share	£m	Basic pence per share	Diluted pence per share
Profit for the period attributable to equity shareholders	795	25.0	24.9	471	14.8	14.7
Add back / (deduct):						
Non-recurring items, post tax ¹	22			28		
Amortisation of intangible assets, post tax ¹	40			28		
Net interest expense on retirement benefit obligations, post tax ¹	50			44		
Fair value and foreign exchange adjustments on financial instruments and investments, post tax ¹	(50)			60		
Underlying earnings, post tax	857	26.9	26.8	631	19.8	19.7
One-off tax benefit	(161)			–		
Underlying earnings, excluding one-off tax benefit	696	21.9	21.8	631	19.8	19.7
		Millions	Millions		Millions	Millions
Weighted average number of shares used in calculating basic earnings per share		3,180	3,180		3,190	3,190
Incremental shares in respect of employee share schemes			14			13
Weighted average number of shares used in calculating diluted earnings per share			3,194			3,203

1. The tax impact, where applicable, is calculated using the underlying effective tax rate of 17% (2018 16.5%).

6. Retirement benefits

	UK £m	US and other £m	Total £m
Total net IAS 19 deficit at 1 January 2019	(3,554)	(682)	(4,236)
Actual return on assets excluding amounts included in net interest expense	1,368	526	1,894
Increase in liabilities due to changes in assumptions and experience	(2,020)	(419)	(2,439)
Contributions in excess of / (below) service cost	203	(12)	191
Past service cost – plan amendments	(4)	–	(4)
Net interest expense	(47)	(15)	(62)
Foreign exchange adjustments	–	3	3
Movement in US healthcare schemes	–	13	13
Total net IAS 19 deficit at 30 June 2019	(4,054)	(586)	(4,640)
Allocated to equity accounted investments	336	–	336
Group's share of net IAS 19 deficit excluding Group's share of amounts allocated to equity accounted investments at 30 June 2019	(3,718)	(586)	(4,304)
Represented by:			
Retirement benefit surpluses	240	106	346
Retirement benefit obligations	(3,958)	(692)	(4,650)
	(3,718)	(586)	(4,304)

Deficit allocation

MBDA participates in the Group's defined benefit schemes and, as these are multi-employer schemes, the Group has allocated a share of the IAS 19 pension surpluses and deficits to MBDA based on the relative payroll contributions of active members, which is consistent with prior years. Whilst this methodology is intended to reflect a reasonable estimate of the share of the deficit, it may not accurately reflect the obligations of the participating employers.

In the event that an employer who participates in the Group's pension schemes fails or cannot be compelled to fulfil its obligations as a participating employer, the remaining participating employers are obliged to collectively take on its obligations. The Group considers the likelihood of this event arising as remote.

Principal actuarial assumptions

The assumptions used are estimates chosen from a range of possible actuarial assumptions which, due to the long-term nature of the obligation covered, may not necessarily occur in practice.

	UK		US	
	30 June 2019	31 December 2018	30 June 2019	31 December 2018
Financial assumptions				
Discount rate – past service (%)	2.3	2.9	3.5	4.2
Discount rate – future service (%)	2.4	3.0	3.5	4.2
Retail Prices Index (RPI) inflation (%)	3.1	3.1	n/a	n/a
Rate of increase in salaries (%)	3.1	3.1	n/a	n/a
Rate of increase in deferred pensions (%)	2.1/3.1	2.1/3.1	n/a	n/a
Rate of increase in pensions in payment (%)	1.6/3.7	1.6-3.7	n/a	n/a
Demographic assumptions				
Life expectancy of a male currently aged 65 (years)	86-88	86-88	87	87
Life expectancy of a female currently aged 65 (years)	88-90	88-90	89	89
Life expectancy of a male currently aged 45 (years)	87-89	88-90	87	87
Life expectancy of a female currently aged 45 (years)	89-91	90-91	89	89

The Group has updated the UK demographic assumptions to use Continuous Mortality Investigation (CMI) 2018 data, reflecting the latest available projections published by the actuarial profession.

Sensitivity analysis

The sensitivity information has been derived using scenario analysis from the actuarial assumptions as at 30 June 2019 and keeping all other assumptions the same.

Financial assumptions

The estimated impact of changes in the discount rate and inflation assumptions on the defined benefit pension obligation, together with the estimated impact on scheme assets, is shown in the table below. The estimated impact on scheme assets takes into account the Group's risk management activities in respect of interest rate and inflation risk. The sensitivity analysis on the defined benefit obligation is measured on an IAS 19 accounting basis and, therefore, does not reflect the natural hedging in the discount rate used for funding valuation purposes.

	(Increase)/ decrease in pension obligation ¹ £bn	Increase/ (decrease) in scheme assets ¹ £bn
Discount rate:		
0.1 percentage point increase	0.5	(0.2)
0.1 percentage point decrease	(0.5)	0.2
Inflation:		
0.1 percentage point increase	(0.4)	0.2
0.1 percentage point decrease	0.4	(0.2)

1. Before allocation to equity accounted investments.

The sensitivity of the valuation of the liabilities to changes in the inflation assumption presented above assumes that a 0.1 percentage point change to expectations of future inflation results in a 0.1 percentage point change to all inflation-related assumptions (rate of increase in salaries, rate of increase in deferred pensions and rate of increase in pensions in payment) used to value the liabilities. However, upper and lower limits exist on the majority of inflation-related benefits such that a change in expectations of future inflation may not have the same impact on the inflation-related benefits, and hence will result in a smaller change to the valuation of the liabilities. Accordingly, extrapolation of the above results beyond the specific sensitivity figures shown may not be appropriate. To illustrate this, the (increase) / decrease in the defined benefit pension obligation before allocation to equity accounted investments resulting from larger changes in the inflation assumption would be as follows:

	(Increase)/ decrease in pension obligation ¹ £bn
Inflation:	
0.5 percentage point increase	(1.4)
0.5 percentage point decrease	1.4
1.0 percentage point increase	(3.0)
1.0 percentage point decrease	2.7

1. Before allocation to equity accounted investments.

Demographic assumptions

Changes in the life expectancy assumption, including the benefit of longevity swap arrangements, would have the following effect on the total net IAS 19 deficit:

	(Increase)/ decrease in net deficit ¹ £bn
Life expectancy:	
One-year increase	(1.3)
One-year decrease	1.3

1. Before allocation to equity accounted investments.

7. Equity dividends

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Prior year final 13.2p dividend per ordinary share paid in the period (2018 13.0p)	423	415

The directors have declared an interim dividend of 9.4p per ordinary share (2018 9.0p), totalling approximately £301m (2018 £288m). The dividend will be paid on 2 December 2019 to shareholders registered on 18 October 2019. The ex-dividend date is 17 October 2019.

Shareholders who do not at present participate in the Company's Dividend Reinvestment Plan and wish to receive the final dividend in shares rather than cash should complete a mandate form for the Dividend Reinvestment Plan and return it to the registrars for receipt no later than 11 November 2019.

8. Fair value measurement

Fair value of financial instruments

Certain of the Group's financial instruments are held at fair value.

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the balance sheet date.

The fair values of financial instruments held at fair value have been determined based on available market information at the balance sheet date, and the valuation methodologies listed below:

- the fair values of forward foreign exchange contracts are calculated by discounting the contracted forward values and translating at the appropriate balance sheet rates;
- the fair values of both interest rate and cross-currency swaps are calculated by discounting expected future principal and interest cash flows and translating at the appropriate balance sheet rates; and
- the fair values of money market funds are calculated by multiplying the net asset value per share by the investment held at the balance sheet date.

Due to the variability of the valuation factors, the fair values presented at 30 June may not be indicative of the amounts the Group would expect to realise in the current market environment.

Fair value hierarchy

The fair value measurement hierarchy is as follows:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 – Inputs for the asset or liability that are not based on observable market data (i.e. unobservable inputs).

Carrying amounts and fair values of certain financial instruments

	30 June 2019		31 December 2018	
	Carrying amount £m	Fair value £m	Carrying amount £m	Fair value £m
Financial instruments measured at fair value:				
Non-current				
Equity investments at fair value through profit and loss	13	13	13	13
Other financial assets	318	318	245	245
Other financial liabilities	(121)	(121)	(104)	(104)
Current				
Other financial assets	136	136	166	166
Money market funds	155	155	908	908
Other financial liabilities	(86)	(86)	(74)	(74)

Financial instruments not measured at fair value:

Non-current				
Loans ¹	(3,520)	(3,865)	(3,514)	(3,597)
Current				
Cash and cash equivalents (excluding money market funds)	1,346	1,346	2,324	2,324
Loans and overdrafts	–	–	(785)	(794)

1. US\$500m of the US\$800m 3.8% bond, repayable 2024, has been converted to a floating rate bond by utilising interest rate swaps. These derivatives have been designated as fair value hedges. Changes in the fair value of the bond attributable to interest rate risk, and gains and losses on the derivatives are recognised in the income statement. The bond has been included in financial instruments not measured at fair value because its carrying value has only been adjusted for the fair value attributable to interest rate risk on a portion of the bond, which has been calculated by discounting the future cash flows and translating at the appropriate balance sheet rate.

All of the financial assets and liabilities measured at fair value are classified as level 2 using the fair value hierarchy, except for money market funds, which are classified as level 1. There were no transfers between levels during the period.

Financial assets and liabilities in the Group's Consolidated balance sheet are either held at fair value or their carrying value approximates to fair value, with the exception of loans, most of which are held at amortised cost. The fair value of loans presented in the table above is derived from market prices.

9. Financial risk management

Currency risk

The Group's objective is to reduce its exposure to transactional volatility in earnings and cash flows from movements in foreign currency exchange rates, mainly the US dollar, euro, Saudi riyal and Australian dollar.

The Group is exposed to movements in foreign currency exchange rates in respect of foreign currency denominated transactions. All material firm transactional exposures are hedged and the Group aims, where possible, to apply hedge accounting to these transactions.

The Group is exposed to movements in foreign currency exchange rates in respect of the translation of net assets and income statements of foreign subsidiaries and equity accounted investments. The Group does not hedge the translation effect of exchange rate movements on the income statements or balance sheets of foreign subsidiaries and equity accounted investments it regards as long-term investments.

10. Related party transactions

Transactions with related parties are shown on page 199 of the Annual Report 2018.

	Six months ended 30 June 2019 £m	Six months ended 30 June 2018 £m
Sales to related parties	529	662
Purchases from related parties	116	181

	30 June 2019 £m	31 December 2018 £m
Amounts owed by related parties	157	71
Amounts owed to related parties	1,225	965

Amounts owed to related parties at 30 June 2019 includes £230m in respect of lease liabilities measured under IFRS 16 payable to BAE Systems Pensions Trust Limited. The undiscounted minimum lease commitments to this related party at 31 December 2018 were £297m, which is not included within amounts owed to related parties in the table above.

11. Change in accounting policies

This note explains the impact of the adoption of IFRS 16 Leases on the Group's financial statements and also discloses the new accounting policies that have been applied from 1 January 2019, where they are different from those applied in earlier periods.

IFRS 16 became effective from 1 January 2019 and replaced IAS 17 Leases and related interpretations. It results in almost all leases being recognised on the balance sheet by lessees, as the distinction between operating and finance leases is removed. Under the new standard, a right-of-use asset and a financial liability for future lease payments have been recognised. The only exceptions are short-term leases, low-value leases and leases of intangible assets.

The Group has applied the modified retrospective transition approach and has not restated comparative amounts for the year ended 31 December 2018. In the majority of cases the Group has elected to measure right-of-use assets at the amount of the lease liability on adoption (adjusted for any lease prepayments or accrued lease expenses, onerous lease provisions, and leased assets which have subsequently been sub-leased). For a number of property leases the Group has elected to measure the right-of-use asset as if IFRS 16 had been applied since the start of the lease, but using the incremental borrowing rate at 1 January 2019, with the difference between the right-of-use asset and the lease liability taken to retained earnings.

The Group has elected to adopt the following practical expedients on transition:

- not to capitalise a right-of-use lease asset or related lease liability where the lease expires before 31 December 2019;
- not to reassess contracts to determine if the contract contains a lease and not to separate lease and non-lease elements;
- where an onerous lease provision is in existence, to utilise this provision to reduce the right-of-use asset value rather than undertaking an impairment review;
- to use hindsight in determining the lease term;
- to exclude initial direct costs from the measurement of the right-of-use asset; and
- to apply the portfolio approach where a group of leases has similar characteristics.

IFRS 16 Leases – impact of adoption

Balance sheet

Upon transition on 1 January 2019, the Group recognised a right-of-use lease asset of £1,298m (after adjustments for onerous lease provisions, lease prepayments and accrued lease expenses), and lease liabilities of £1,486m (non-current £1,270m; current £216m), along with a deferred tax asset of £2m. A sub-lease finance receivable of £72m was also recognised. A transition adjustment of £92m was recognised as a debit to retained earnings. The Group has not capitalised low-value leases on transition, or those which expire before 31 December 2019, and has opted not to apply IFRS 16 to leases relating to intangible assets. The right-of-use lease asset principally consists of property. The weighted average incremental borrowing rate applied to lease liabilities was 3.43%.

Income statement

Under IFRS 16 the Group sees a different pattern of expense within the income statement, as the IAS 17 operating lease expense is replaced by depreciation and interest charges. In 2019, the Group's EBITA metric is expected to improve by an estimated £50m under IFRS 16 as the new depreciation expense is expected to be lower than the IAS 17 operating lease charge; however the new finance costs are expected to broadly offset this, such that net profit after tax and the underlying earnings metric are not expected to be materially different compared to the previous IAS 17 reporting basis.

Cash flow statement

The change in presentation as a result of the adoption of IFRS 16 is expected to see an improvement in 2019 of an estimated £46m in operating business cash flow, offset by a corresponding decline in cash flow from financing activities. There is no overall cash flow impact from the adoption of the new Standard.

Impact on Consolidated balance sheet at 1 January 2019 (extract)

The following table shows the effect of adopting IFRS 16 on the Consolidated balance sheet at 1 January 2019.

	£m
Non-current assets	
Right-of-use assets	1,255
Investment property	43
Equity accounted investments	(11)
Finance lease receivable	62
Deferred tax assets	2
	1,351
Current assets	
Finance lease receivable	10
Trade, other and contract receivables	(26)
	(16)
Total assets	1,335
Non-current liabilities	
Lease liabilities	(1,270)
Provisions	24
	(1,246)
Current liabilities	
Lease liabilities	(216)
Trade and other payables	28
Provisions	7
	(181)
Total liabilities	(1,427)
Net assets	(92)
Capital and reserves	
Retained earnings	(92)
Total equity attributable to equity holders of BAE Systems plc	(92)
Non-controlling interests	-
Total equity	(92)

Reconciliation between operating lease commitments and lease liability

The following table explains the difference between the operating lease commitments disclosed applying IAS 17 at 31 December 2018 and the lease liability recognised on adoption of IFRS 16 at 1 January 2019.

	£m
Total minimum lease payments reported at 31 December 2018 under IAS 17	1,706
Change in assessment of lease term under IFRS 16	107
Leases outside the scope of IFRS 16	(81)
Impact of discounting lease liability under IFRS 16	(246)
Lease liability recognised on transition to IFRS 16 at 1 January 2019	1,486

IFRS 16 Leases – accounting policies applied since 1 January 2019

Lessee accounting

Previously, under IAS 17 Leases, all of the Group's leases were classified as operating leases and payments made (net of any incentives received from the lessor) were charged to the income statement on a straight-line basis over the lease term.

From 1 January 2019, leases are recognised as a right-of-use asset and a corresponding lease liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between repayment of the lease liability and finance cost. The finance cost is charged to the income statement over the lease term to produce a constant periodic rate of interest on the outstanding lease liability balance. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

The lease liability is initially measured as the present value of future lease payments, discounted using the interest rate implicit in the lease. Where this rate is not determinable, the Group's incremental borrowing rate is used, which is the interest rate the Group would have to pay to borrow the amount necessary to obtain an asset of similar value, in a similar economic environment with similar terms and conditions.

The right-of-use asset is initially measured at cost, comprising the initial value of the lease liability, any lease payments made (net of any incentives received from the lessor) before the commencement of the lease, any initial direct costs and any restoration costs.

Payments in respect of short-term leases, low-value leases and leases of intangible assets continue to be charged to the income statement on a straight-line basis over the lease term.

Lessor accounting

Previously, under IAS 17 Leases, all of the Group's leases were classified as operating leases and payments received (net of any incentives granted by the Group) were recognised in the income statement on a straight-line basis over the lease term. Under IFRS 16 lessor accounting is broadly unchanged and therefore the majority of leases under which the Group is the lessor continue to be accounted for as operating leases.

12. Events after the reporting period

In July, following receipt of regulatory approvals, the business completed the formation of a joint venture with Rheinmetall to create a joint UK-based military land vehicle design, manufacturing and support business. Rheinmetall purchased a 55% stake in the existing BAE Systems UK-based combat vehicles business for £31.4m with BAE Systems retaining 45%. The transaction does not include BAE Systems Land UK's munitions business or its holding in the CTA International joint venture with Nexter.

13. Shareholder information

The Annual General Meeting of BAE Systems plc will be held on 7 May 2020.

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Registered in England and Wales, No 1470151

Cautionary statement:

All statements other than statements of historical fact included in this document, including, without limitation, those regarding the financial condition, results, operations and businesses of BAE Systems and its strategy, plans and objectives and the markets and economies in which it operates, are forward-looking statements. Such forward-looking statements which reflect management's assumptions made on the basis of information available to it at this time, involve known and unknown risks, uncertainties and other important factors which could cause the actual results, performance or achievements of BAE Systems or the markets and economies in which BAE Systems operates to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. BAE Systems plc and its directors accept no liability to third parties in respect of this report save as would arise under English law. Accordingly, any liability to a person who has demonstrated reliance on any untrue or misleading statement or omission shall be determined in accordance with Schedule 10A of the Financial Services and Markets Act 2000. It should be noted that Schedule 10A contains limits on the liability of the directors of BAE Systems plc so that their liability is solely to BAE Systems plc.