TT Electronics plc

Results for the half-year ended 30 June 2022

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A management presentation for analysts and investors will be held today at 08.30 and can be accessed on https://stream.brrmedia.co.uk/broadcast/62cea99d287bf548a3b8c93f

There will be a conference call and moderated Q&A session following this and to participate you will need to dial +44 (0)330 165 4012, confirmation code 2205337.

A recording of the presentation and Q&A session will be available on the website later in the day.

A PDF of this half year announcement is available for download from https://www.ttelectronics.com/investors/investor-highlights/reports-presentations-videos/.

Interim Results for the half-year ended 30 June 2022

Continued strong order intake and organic growth, with full year outlook unchanged

Highlights

- Revenue up 10% on a constant currency basis, 8% on an organic basis, reflects our successful positioning in structural growth markets and new project wins
- Book to bill of 144% and record order intake, with 23 new significant contract wins in the half delivering over £60m of multi-year revenues.
- Order book more than double pre-pandemic levels and up 55% vs. prior year
- Adjusted operating profit up 5% at constant currency
- Pricing action offsetting inflationary pressures
- Investment in inventory to support increased customer demand, extended material lead times and shipment delays impacting cash flow and leverage, as anticipated
- Statutory operating profit down 4% at £8.9m, statutory basic EPS of 2.3p
- Interim dividend increased 11% to 2.0p per share reflecting confidence in full year outlook and future prospects

Outlook

- Sales momentum strong and continuing;
  - 2022 expected revenues already fully covered and
  - orderbook creating a step-change in visibility of revenue for 2023
- Clear line of sight to delivering our unchanged, full year expectations with Group performance benefitting from an acceleration in growth, pricing action and the completion of our self-help programme
- Improved H2 profit and cash generation supports expectations that net debt to adjusted EBITDA will be within 1-2 times target range at year-end

£ million (unless otherwise stated)	Adjusted Results[1]				Statutory Results	
	H1 2022	H1 2021	Change	Change Constant fx	**H1 2022**	H1 2021
Revenue	**269.2**	235.6	14%	10%	**269.2**	235.6
Operating profit	**18.3**	15.9	15%	5%	**8.9**	9.3
Operating profit margin	**6.8%**	6.7%	10bps	(30)bps	**3.3%**	3.9%
Profit before tax	**15.0**	14.1	6%	(3)%	**5.6**	7.5
Basic earnings per share	**6.6p**	6.5p	2%	(8)%	**2.3p**	3.3p
Return on invested capital (2021[2])	**8.9[3]%**	9.1%	(20)bps			
Cash conversion	**(55)%**	(7)%				
Free cash flow[1]					(23.5)	(10.3)
Net debt (2021[2]) [1]					142.0	102.5
Leverage (2021[2])[1]					2.4x	1.7x
Dividend per share					2.0p	1.8p

Richard Tyson, Chief Executive Officer, said:

"We have delivered strong growth in the first half, in a challenging execution environment, reflecting our ability to win new business and good demand in our target end markets. We have secured a record order intake, with more customer wins and continue to expand our pipeline of new business opportunities, many on long term programmes.

Our order book fully covers the increased revenue expected in the second half. This, coupled with pricing actions to recover inflation and further benefits from our self-help programme, means our outlook for the full year is unchanged. While conscious of the wider macro environment, we are well positioned to deliver an improved margin and cash performance in the second half, and further growth in 2023."

About TT Electronics

TT Electronics is a global provider of engineered electronics for performance critical applications.

TT solves technology challenges for a sustainable world. TT benefits from enduring megatrends in structurally high-growth markets including healthcare, aerospace, defence, automation and electrification. TT invests in R&D to create designed-in products where reliability is mission critical. Products designed and manufactured include sensors, power management and connectivity solutions. TT has design and manufacturing facilities in the UK, North America, Sweden and Asia.

Notes

1. *Throughout this announcement we refer to a number of alternative performance measures which provide additional useful information. The Directors have adopted these measures to provide additional information on the underlying trends, performance and position of the Group with further details set out on* *page 26**. The adjusted measures used are set out in the reconciliation of KPIs and non IFRS measures on* *pages 37 to 43.*

2. *As at December 2021*

3. *Calculated for the 12 months to June 2022*

CHIEF EXECUTIVE OFFICER'S REVIEW

Introduction

We have delivered a good performance in the first half with strong revenue growth, as our teams continue to execute in a challenging environment. Order demand has continued at record levels with increased multi-year programme wins over recent reporting periods. The Group's order book now stands at £666[1] million, up 55 per cent at constant currency compared to a year ago, and more than double pre-pandemic levels. This strength reflects both our collaborative approach with customers and the momentum in the end markets in which we operate, creating a step-change in visibility and giving us confidence in further attractive organic growth. Constant currency revenue growth was 10 per cent in the half, despite some programme timing, COVID-19 and supply chain issues.

The Group's operating performance was led by outstanding results from our Sensors and Specialist Components (S&SC) division which is delivering strong top line growth and the benefits of this, and our self-help actions, are evidenced by excellent profit and margin growth. Global Manufacturing Solutions (GMS) delivered strong growth which offset the impact of temporary headwinds. We expect GMS margins to show improvement in the second half. The first half Power and Connectivity (P&C) performance was, as expected, impacted by timing of revenues; we have clear line of sight to deliver an improved second half performance as these effects reverse and we execute on our strong order book, and as pricing actions continue to take effect.

Demand from our customers is strong as our focus on building close, long-term relationships further up the value chain and collaborating on design-led solutions delivers. This is evidenced by new business, with 23 significant new wins in the half delivering over £60 million of multi-year revenues, and the ongoing growth and visibility in our order book.

We believe our collaborative approach to deliver solutions based on our technical expertise has been a key factor in winning new orders. With long lead times and an uncertain supply chain situation, customers are looking to commit to us to lock in capacity for the longer term. We are focused on leveraging expertise across the Group to pursue cross selling opportunities. Much of this effort is led by the GMS division which is integral to converting these opportunities and increasingly GMS showcases the capabilities of the P&C division.

Spend on our self-help programme will be complete this year; the closure of six sites is already complete, and we are in the process of consolidating the Covina site into the Torotel site at Kansas City, which will create one power business in North America. Production will cease in December 2022 and the full benefits of these actions will be realised in 2023. The new facility in Plano, Texas is now up and running and in the final phase of qualifying products for customers. This process has taken a little longer than planned due to the unprecedented levels of demand, which has required the prioritisation of resources to support customers. We still expect all qualification activities to complete in 2022.

We are delighted with the Ferranti Power and Control (Ferranti) acquisition which completed in January 2022. The business is performing in line with our expectations and has already secured new orders under our ownership and is also set to benefit from the extension of demand for programmes which had been expected to tail off over the next few years.

[1] *at current FX spot rates*

Results and operations

Group revenue for the period was £269.2 million, up 10 per cent on a constant currency basis and 8 per cent on an organic basis. The Group's adjusted operating profit for the period was £18.3 million, 5 per cent higher than the prior period on a constant currency basis.

Our results in the first half reflect a strong revenue performance in both our GMS and S&SC businesses. Revenue in our P&C business was moderated by programme phasing and the Lutterworth closure. Cost inflation has been largely mitigated through price increases, including to the existing order book, and operational efficiencies, enhanced through our self-help programme.

The adjusted operating margin in the first half was 6.8 per cent (H1 2021: 6.7 per cent) and we remain on track to deliver a second half margin improvement. We have clear line of sight to an improved P&C performance as some of the external factors which impacted the first half are moderating, allowing us to execute on our strong order book, and as pricing actions take effect. After the impact of adjusting items, including restructuring and acquisition related costs, the Group's half year statutory operating profit was £8.9 million (H1 2021: £9.3 million) and operating margin was 3.3 per cent (H1 2021: 3.9 per cent).

Cash conversion was impacted by a working capital outflow totalling £33.0 million, reflecting our decision to invest in additional inventory to protect the rapidly growing order book, thus supporting our customers and enhancing our relationships with them. During the first half we have agreed improved terms with some customers to mitigate the impact of the working capital investment we have committed to support their orders. We expect to see improved cash conversion in the second half of the year. Adjusted operating cash outflow post capital expenditure during the period was £10.0 million (H1 2021: £1.1 million outflow, excluding property disposals). On a statutory basis, cash flow from operating activity was an outflow of £12.3 million (H1 2021: £5.0 million outflow).

At 30 June 2022 net debt was £142.0 million, (31 December 2021: £102.5 million), including IFRS 16 lease liabilities of £23.4 million (31 December 2021: £22.6 million), and as previously indicated leverage increased to 2.4x (31 December 2021: 1.7x). We expect leverage to reduce over the course of the second half and to be within our target range of 1-2 times by December 2022.

In January 2022 we were delighted to complete the £8.3 million acquisition of Ferranti, based in Greater Manchester, which designs and manufactures mission-critical complex power and control sub-assemblies for blue chip customers in high-reliability and high-performance end markets, primarily aerospace and defence. One of the principal benefits of the acquisition is that it brings highly skilled employees who provide full-service capabilities from design, assembly, manufacturing, and testing including environmental stress screening and inspection through to service.

Ferranti adds further technology capability and scale to our Power business with valuable long-term customer relationships and programmes with leading global aerospace, defence and industrial OEMs operating in highly regulated markets with significant barriers to entry through necessary industry accreditations and customer approvals.

Momentum across the Group has been strong with the order book for 2022 fully covering expected revenues and we now have materially improved visibility of revenues for 2023 compared to the same point last year.

Dividend

Strong trading momentum reinforces our confidence in full year expectations and the Group's future prospects. As a result, the Board is declaring an interim dividend of 2.0 pence per share, an increase of 11 per cent. The total cost of this dividend will be approximately £3.5 million. Payment of the dividend will be made on 13 October 2022, to shareholders on the register at 23 September 2022.

DIVISIONAL REVIEW

POWER AND CONNECTIVITY

The Power and Connectivity division develops and manufactures power application products and connectivity devices which enable the capture and wireless transfer of data. We collaborate with our customers to develop innovative solutions to optimise their electronic systems.

	H1 2022	H1 2021	Change	Change constant fx[1]
Revenue	£68.8m	£68.2m	1%	(2)%
Adjusted operating profit[1]	£2.1m	£3.6m	(42)%	(48)%
Adjusted operating margin[1]	3.1%	5.3%	(220) bps	(260)bps

[1] See note 1c on page 26 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to note 6 on page 31 of this document.

Revenue increased by £0.6 million to £68.8 million (H1 2021: £68.2 million) and included a £3.7 million contribution from the acquisition of Ferranti, which has performed well in its first few months with TT. Organic revenue was 7 per cent lower due to the timing of programme revenues and the closure of the Lutterworth facility. A COVID-19 shutdown in Dongguan delayed deliveries into the second half.

Adjusted operating profit reduced by £1.5 million to £2.1 million (H1 2021: £3.6 million) and the adjusted operating margin was 3.1 per cent (H1 2021: 5.3 per cent after £2.9 million of Virolens start-up costs). There was a £0.4 million foreign exchange benefit and the constant currency reduction in operating profit was mainly driven by reduced revenues. As previously noted, during the first half we experienced a COVID-19 shutdown, impacting our Dongguan facility for approximately 4-6 weeks and while the local teams were quick to re-establish production levels once restrictions were lifted, congestion in the local supply chains caused inefficiencies which impacted our performance in the half.

Overall order intake remains good though revenues from commercial aerospace are lumpy and taking longer to return, despite a resumption in order intake, in part due to our wide body weighting which is lagging the narrow body recovery.

As we look into the second half, we are confident of an improved performance as we deliver on our strong order book, work through the COVID-19 inefficiencies and realise the benefits of the pricing initiatives from the first half.

There have been some significant awards during the period, which gives us confidence as we look forward including:

- A three year contract with a new customer for our Kansas facility with an existing TT aerospace and defence customer for a transformer for an Air and Missile Defence Radar (AMDR). This new customer chose to work with us over the competition because of our strong relationship, engineering expertise, product quality and ability to meet schedule changes.

- Following on from the power electronics assembly contract win with a major defence prime, RBSL, for the main UK army vehicle programme Boxer, we have been awarded a package of electrical cable harnesses for the same Boxer programme. We have also had further success with the award of a contract to design and develop electrical cable harness systems for the Challenger 3 upgrade project, a combat vehicle being upgraded as the British Army's new main battle tank. TT will lead the design, development, manufacturing, and initial fitment trials of the various cable assemblies. This contract extends out to 2024.

- Our recently acquired Ferranti business in Oldham has successfully secured a design and development contract for power converters for a new business jet. The seven-year contract (two years of development and five years of production) worth over £6 million in sales, will see us supply Permanent Magnet Alternator Converters (PMAC) with the potential for further orders dependent on demand for the aircraft. The award builds on the existing relationship between TT and this business jet OEM

GLOBAL MANUFACTURING SOLUTIONS

The Global Manufacturing Solutions division provides manufacturing services and engineering solutions for our product divisions and to customers that often require a lower volume and higher mix of different products. We manufacture complex integrated product assemblies for our customers and provide engineering services including designing testing solutions and value-engineering.

	H1 2022	H1 2021	Change	Change constant fx[1]
Revenue	£135.3m	£109.6m	23%	17%
Adjusted operating profit[1]	£9.4m	£8.5m	11%	1%
Adjusted operating margin[1]	6.9%	7.8%	(90)bps	(120) bps

[1] See note 1c on page 26 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to note 6 on page 31 of this document.

Revenue grew by £25.7 million to £135.3 million (H1 2021: £109.6 million). We have delivered organic growth of 17 per cent, reflecting partnerships with our key long term relationship customers and recent project wins. Pass through revenue was around £10 million in the first half which causes a technical head wind to margin progression. We are currently anticipating a similar level of pass through revenue in the second half.

All of our GMS sites are fully booked for the year and the order book growth has been underpinned by several multi-million pound wins, a number of which extend beyond 12 months. We continue to see that our power customers require manufacturing capability and so our GMS and P&C divisions are partnering to provide this solution. We continue to improve our understanding of how to leverage these opportunities from the customer perspective.

Adjusted operating profit increased by £0.9 million to £9.4 million (H1 2021: £8.5 million) including a £0.8 million foreign exchange benefit. The adjusted operating profit margin was 6.9 per cent (H1 2021: 7.8 per cent) in part reflecting our previous guidance that the higher than normal level of cost pass through to customers would be a headwind to short term margin progression. We expect to deliver an enhanced margin from the GMS division in the second half of the year.

The considerable sales momentum has resulted in customer awards across our key markets from new and existing customers. Notable wins and growth areas include the following:

- We have secured a sizeable contract win from a life sciences lab equipment customer who needed a manufacturing partner for a blood analyser. The contract is over a two-year period and is worth over £2 million in sales. This is a relatively new customer to TT that initially awarded us some low volume requirements in 2021, allowing us to prove our capability and build trust. It was a win for TT's North America site in Cleveland which has a strong presence in medical and life science products. The site has the medical ISO13485 accreditation and is FDA registered. Our S&SC division also secured a small win with the same customer in April.

- Also in healthcare, our Suzhou facility has added a new medical lab equipment customer. Our healthcare credentials, especially in life sciences, and our ability to offer manufacturing capacity in a low-cost region helped us to win the order. This is a multi-year contract worth over £2.5 million in sales.

- In the UK we have secured work for a new division of an existing defence and security customer to provide solutions for embedded encryption. The client needed a reliable manufacturing partner for a new programme and the £2.5 million sales win further strengthens our strategic partnership with this long-standing customer.

- Our Cleveland facility has received a new award with an existing industrial customer for high level assemblies (HLA) on a new programme for semiconductors. The customer was looking for the right partner to help meet accelerating semi-conductor demand and chose TT on the back of the proven partnership and confidence in our team and Cleveland facility. Our vertical integration strategy and HLA capabilities were key to winning this award.

Overall, the GMS division is in excellent shape, the order pipeline is stronger than ever, and our enhanced customer relationships and business development initiatives are delivering revenue and order book growth.

SENSORS AND SPECIALIST COMPONENTS

The Sensors and Specialist Components division works with customers to develop high specification, standard and customised solutions, including sensors and power management devices. Our solutions improve the precision, speed and reliability of critical aspects of our customers' applications.

	H1 2022	H1 2021	Change	Change constant fx[1]
Revenue	£65.1m	£57.8m	13%	8%
Adjusted operating profit[1]	£10.6m	£7.4m	43%	34%
Adjusted operating margin[1]	16.3%	12.8%	350 bps	320 bps

[1] See note 1c on page 26 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to note 5 on page 31 of this document.

Revenue increased by £7.3 million to £65.1 million (H1 2021: £57.8 million). Organic revenue was 8 per cent higher. Despite typically short order visibility in this division, we are already covered for the balance of this year's revenue and are starting to build the order book for 2023. We have been careful to adjust our commercial terms, where possible, to orders that are non-cancellable, non-refundable and in some cases, non-reschedulable. We are seeing very strong demand from the healthcare market and through the distributors.

Adjusted operating profit increased by £3.2 million to £10.6 million (H1 2021: £7.4 million) including a £0.5 million foreign exchange benefit. The results of the self-help programme continue to benefit the performance of the division and this, together with an attractive drop through on volume growth and favourable product mix, is reflected in a further step up in adjusted operating profit margin to 16.3 per cent (H1 2021: 12.8 per cent).

Prices are under continuous review to ensure we recoup cost inflation, including higher freight costs where there can be a short-term lag in recovery, and we continue to win new orders at the higher price points.

We constantly monitor inventory levels within the distributors, the channel through which 67 per cent of our sales are sourced. Distributor inventory levels for our products are currently 5 per cent lower than at the start of 2020.

There have been a number of key developments during the first half of the year including:

- We have recently been awarded a contract to supply sensors for an Electric Power Assisted Steering (EPAS) System for a leading manufacturer of steering and suspension systems. This system will be used in three and four-wheeler small commercial electric vehicles. Our sales and engineering team worked closely with the customer's engineering team from inception to ensure our sensors accurately measured the torque applied by the driver on the steering wheel.

- Our Asia Pacific sales team won a three-year optoelectronics contract with a new medical customer, for optical sensors to be used in liquid level detection in a quantum fluorescence immunoanalyser.

- The U.S. team secured two different optical sensor opportunities with a medical device company, for use in a blood analyser. These sensors are used in the disposable test vessel cartridges designed for the Werfen GEM 5000 blood gas analyser. The sensors are critical to detect the proper loading of the cartridge as its alignment with the analyser optics, for spectral measurements, is essential for proper execution of the test.

OUR STRATEGY

Creating value through technology investment

Working in partnership with our customers to bring new, innovative products to market that provide sustainable solutions is key to driving future growth. Investment in R&D is therefore one of our top capital allocation priorities. During the period we invested £5.4 million (H1 2021: £5.8 million) in R&D spend, representing 4.0 per cent (H1 2021: 4.6 per cent) of aggregate revenue of our product businesses.

We are developing, with customers, a pipeline of new products to bring to market. A selection of notable examples from H1 include:

- A recent agreement with our long-term partner Honeywell Aerospace was reached to proceed with the design of a new power supply for next-generation inertial navigation units for its aerospace and defence customers. This is a result of TT's strong focus on innovation and our investment in engineering capability.

- TT continues to work with a world leader in aircraft electrical systems on power supplies for electric and hybrid electric aircraft. This is supported by grant funding from the Aerospace Technology Institute and we have moved to the first stage of hardware validation for a new, high efficiency DC-DC power converter.

- TT is partnering alongside medical device providers to expand the use of electromagnetic tracking for new medical procedures. Prototypes are being developed for use in cardiac procedures and we are also involved in the design of robotically assisted endoscopy using our sensor technology.

Creating value through margin enhancement

Margin enhancement continues to be a key focus. A number of factors will drive margins higher in the future:

- Operational leverage from organic revenue growth: the benefits of our strategic repositioning to build closer, more embedded customer relationships and completing more design led work with a focus on cross selling is supporting strong growth

- Reductions in overheads: the self-help programme which will be completed this year and remains on track to generate full run rate benefits of £13-14 million per annum from 2023 onwards

- Acquisition-led enhancement of margin, through technology offerings and market positions: the recent acquisition of the Ferranti businesses is already making a healthy contribution to the Group's margins and delivering absolute profit improvement.

A noticeable characteristic of the new orders we are winning is the number from customers wanting more integrated, design led solutions. In addition to winning new higher quality orders from existing customers, we have also won work from eleven new customers in the first half of the year.

We are well advanced through the various projects which make up our self-help programme and cash spend will complete in this calendar year. The physical transfer of manufacturing from the Lutterworth site to Bedlington was completed during 2021 and we are well advanced on the establishment of a new clean room and qualification process. Our new facility in Plano, Texas houses the former activities from Carrollton and Corpus Christi and is now operational, though the qualification process has taken slightly longer than expected. The integration of the Covina business into the Torotel site in Kansas City is in progress as planned.

The cash cost of the Group self-help programme is now expected to be circa £21 million, as a result of the longer Plano qualification times. The project spend will be completed this year. We remain on track to deliver £2 million of incremental benefits in 2022 taking the annual run rate benefits in 2022 to £10 million and are confident of achieving the programme's £13-14 million of run-rate benefits in 2023.

Creating value from mergers and acquisitions

M&A is an important part of our growth proposition as we look to add higher margin businesses that enhance TT's capability in our key markets.

In January 2022 we completed the acquisition of Ferranti Power and Control, based in Greater Manchester, which designs and manufactures mission-critical complex power and control sub-assemblies for blue chip customers in high-reliability and high-performance aerospace and defence end markets. One of the principal benefits of this acquisition is that it brings highly skilled employees who provide full-service capabilities from design, assembly, manufacturing and testing including environmental stress screening and inspection through to service. The integration of the Ferranti business into our P&C division is on track and planning for the relocation of the business out of the Elbit facility is underway. We were pleased to have recently secured a win for a power electronic assembly contract for a new business jet. Ferranti is also set to benefit from the extension of demand for programmes which had been expected to tail off over the next few years.

Environmental, social and governance (ESG)

Not only do we develop, design, engineer and manufacture products that enable reduced environmental impacts for our customers, but we are also optimising our own operations to reduce our impact on the environment.

We have set ourselves a target to be Net Zero by 2035 for our Scope 1 & 2 emissions and we are undertaking a range of actions to deliver like-for-like reductions in our annual emissions, in accordance with our carbon reduction roadmap. In the near term, we have made a commitment to deliver a 50 per cent reduction in Scope 1 & 2 carbon emissions by the end of 2023, against our 2019 baseline.

As we look forward, further reductions in our carbon emissions will require other measures such as infrastructure and process projects to reduce electricity consumption and investment in solar power or a change in the approach of local Governments to provide renewables in Asia and Mexico. We are undertaking feasibility studies for possible solar projects.

For our Scope 3 emissions we are assessing areas of materiality for the Group. We believe our top four most significant, and measurable categories are transportation (upstream and downstream), purchased goods and services, and waste. Our corporate partnership with the Carbon Disclosure Project (CDP) Supply Chain Management team will help measure the supply chain element of our emissions.

Outlook

Our order book fully covers the increased revenue expected in the second half. This, coupled with pricing actions to recover inflation and further benefits from our self-help programme, means our outlook for the full year is unchanged. While conscious of the wider macro environment, we are well positioned to deliver an improved margin and cash performance in the second half, and further growth in 2023.

OTHER FINANCIAL INFORMATION

Group revenue was £269.2 million (H1 2021: £235.6 million). Group revenue was 10 per cent higher than in the same period last year on a constant currency basis. Sales volumes in all key markets, with the exception of commercial aerospace, are buoyant and the order book and forward pipeline of new business opportunities gives us confidence that this momentum will continue.

The Group reported an adjusted operating profit of £18.3 million (H1 2021: £15.9 million) with the improvement driven by revenue growth and benefits from the Group's self-help programme. Statutory operating profit for the period was £8.9 million (H1 2021: £9.3 million) after a charge of £9.4 million (H1 2021: £6.6 million) for items excluded from adjusted operating profit including:

- Restructuring and other costs of £5.5 million (H1 2021: £2.6 million), comprising £4.5 million relating to the self-help programme and pension project costs of £1.0 million

- Acquisition and disposal related costs of £3.9 million (H1 2021: £4.0 million), comprising £3.1 million of amortisation of acquired intangible assets; £0.2 million of acquisition costs and £0.4 million of integration costs relating to the acquisition of Ferranti; £0.1 million of integration costs of Torotel, Inc. and £0.1 million of costs of terminated acquisitions.

The Group generated an adjusted operating margin of 6.8 per cent (H1 2021: 6.7 per cent). This was delivered whilst dealing with increased costs to execute on high levels of growth and increases in input costs linked to supply chain constraints. We are having considerable success at recovering the latter through price increases.

The net finance cost was higher at £3.3 million (H1 2021: £1.8 million) due to a higher level of borrowing over the half year, increasing interest rates and non-cash accelerated amortisation of fees, associated with the previous RCF. The Group's overall tax charge was £1.5 million (H1 2021: £1.7 million). The tax charge on adjusted profit before tax was £3.4 million (H1 2021: £2.8 million), resulting in an effective adjusted tax rate of 22.8 per cent (H1 2021: 19.6 per cent) with the increase due to a higher proportion of profits coming from higher rate jurisdictions.

Basic earnings per share (EPS) reduced to 2.3 pence (H1 2021: 3.3 pence). Adjusted EPS increased to 6.6 pence (H1 2021: 6.5 pence), reflecting the improvement in adjusted operating profit partly offset by a higher interest and tax charge.

Adjusted operating cash flow post capital expenditure was lower with a £10.0 million outflow (H1 2021: £1.1 million outflow excluding property disposals) which was primarily due to a £33.0 million working capital outflow (H1 2021: £18.9 million outflow), reflecting further strong growth and the maintenance of higher inventory levels in response to supply chain constraints. This resulted in operating cash conversion of (55) per cent (H1 2021: (7) per cent). On a statutory basis, cash flow from operating activity was an outflow of £12.3 million (H1 2021: £5.0 million outflow).

There was a free cash outflow of £23.5 million (H1 2021: £10.3 million outflow), including £7.0 million of restructuring and acquisition related payments (H1 2021: £0.6 million after £5.8 million proceeds of property disposals). There were no pension contribution payments in the period (H1 2021: £2.7 million) while we finalise new escrow arrangements to avoid the risk of a trapped surplus in the future. The total net accounting surplus under the Group's defined benefit pension schemes was £91.6 million (31 December 2021: £74.5 million) with the increase due to increases in yields on corporate bonds in the half year causing the scheme obligation to decrease.

As at 30 June 2022 the Group's net debt was £142.0 million (31 December 2021: £102.5 million), including £23.4 million of lease liabilities (31 December 2021: £22.6 million). Leverage, consistent with the bank covenants, was 2.4 times at 30 June 2022 (31 December 2021: 1.7 times).

The Group has recently re-financed its bank revolving credit facility with a syndicate of five relationship banks at commercially attractive rates. This £147.4 million facility has a four-year tenor with one year extension option and complements last year's debut issue of £75 million of private placement fixed rate loan notes.

Summary of Adjusted results

To assist with the understanding of earnings trends, the Group has included within its non-GAAP alternative performance measures including adjusted operating profit and adjusted profit. Further information is contained in the 'Reconciliation of KPIs and non IFRS measures' on pages 37 to 43.

A summary of the Group's adjusted results, and a reconciliation of statutory to adjusted profit numbers are set out below:

£ million	**H1 2022**	**H1 2021**
Revenue	**269.2**	235.6
Operating profit	**18.3**	15.9
Operating margin	***6.8%***	*6.7%*
Net finance expense	**(3.3)**	(1.8)
Profit before tax	**15.0**	14.1
Tax	**(3.4)**	(2.8)
Tax rate	***22.8%***	*19.6%*
Profit after tax	**11.6**	11.3
Weighted average number of shares	***175.7 million***	*174.7 million*
EPS	**6.6p**	6.5p

Reconciliation of Adjusted results

£ million	**Note**	**H1 2022**	**H1 2021**
Operating profit		**8.9**	9.3
Adjusted to exclude:			
Restructuring and other items			
Restructuring	**1**	**(4.5)**	(3.3)
Property disposals	**2**	**-**	1.3
Pension restructuring costs	**3**	**(1.0)**	(0.6)
		(5.5)	(2.6)
Acquisition related costs			
Amortisation of intangible assets arising on busines combinations		**(3.1)**	(2.5)
Torotel acquisition and integration costs		**(0.1)**	(0.9)
Ferranti acquisition and integration costs	**4**	**(0.6)**	-
Covina acquisition and integration costs		**-**	(0.2)
Other acquisition related costs	**5**	**(0.1)**	(0.4)
		(3.9)	(4.0)
Total operating reconciling items		**(9.4)**	(6.6)
Adjusted operating profit		**18.3**	15.9
Profit / (loss) before tax		**5.6**	7.5
Total operating reconciling items (as above)		**9.4**	6.6
Adjusted profit before tax		**15.0**	14.1
Taxation charge on adjusted profit		**(3.4)**	(2.8)
Adjusted profit after taxation		**11.6**	11.3

Restructuring and other costs charged in the period comprise:

Note 1: Restructuring costs charged in the period primarily relate to costs arising on the restructuring of the Group's footprint, product rationalisation and headcount reduction programme to reduce the Group's fixed costs which was initiated in 2020. Restructuring costs of £4.5 million comprise £2.6 million relating to the restructure of the North America Resistors business; £1.0 million relating to closure of our site in Lutterworth, UK, £0.7 million relating to the relocation of production facilities from Covina, USA to Kansas, USA and £0.2 million relating to the relocation of production facilities from Medina, USA to Minnesota, USA. Prior period costs of £3.3 million comprise £2.0 million relating to the restructure of the North America Resistors business; £0.8 million relating to closure of our site in Lutterworth, UK and £0.5 million relating to the closure of our site in Tunis, Tunisia.

Note 2: Gain on disposal of the Covina property

Note 3: Other pension costs relating to costs associated with liability management exercises and cleansing of scheme data. Prior period costs relate primarily to the equalisation of male and female members' benefits in respect of guaranteed minimum pensions.

Note 4: Comprises £0.2 million of acquisition costs and £0.4 million of integration costs relating to the acquisition of the Power and Control business of Ferranti Technologies Ltd. based in Oldham, UK.

Note 5: Costs of unannounced and terminated acquisitions

Cash flow, net debt and leverage

The table below sets out Group cash flows and net debt movement:

£ million	**H1 2022**	H1 2021
Adjusted operating profit	**18.3**	15.9
Depreciation and amortisation	**7.9**	8.0
Working capital movement	**(33.0)**	(18.9)
Net capital expenditure	**(5.0)**	(6.2)
Capitalised development expenditure	**(1.0)**	(1.0)
Other	**2.8**	1.1
Adjusted Operating Cash Flow post capex and excluding property disposals	**(10.0)**	(1.1)
Restructuring and acquisition costs[1]	**(7.0)**	(0.6)
Net interest and tax	**(4.6)**	(4.0)
Lease payments	**(1.9)**	(1.9)
Retirement benefit schemes	**-**	(2.7)
Free Cash Flow	**(23.5)**	(10.3)
Dividends	**(6.7)**	(8.2)
Lease payments	**1.9**	1.9
Equity issued	**0.2**	0.3
Acquisitions & disposals	**(8.3)**	(0.5)
Other	**(0.2)**	(0.1)
Increase in net debt	**(36.6)**	(16.9)
Opening net debt	**(102.5)**	(83.9)
Other non-cash (new leases and lease reassessments)	**(1.1)**	(7.1)
FX	**(1.8)**	0.6
Closing net debt	**(142.0)**	(107.3)

[1]In the prior year, restructuring, acquisition and disposal related costs includes the net proceeds of the Covina property sale (£5.8 million).

At 30 June 2022 the Group's net debt was £142.0 million (31 December 2021: £102.5 million). Included within net debt was £23.4 million of lease liabilities (31 December 2021: £22.6 million).

Consistent with the Group's borrowing agreements, which exclude the impact of IFRS 16 leases, leverage ratio was 2.4 times at 30 June 2022 (31 December 2021: 1.7 times). Net interest cover was 9.4 times (31 December 2021: 13.5 times). The Group's debt covenants state that the leverage ratio must not exceed 3.0 times and that interest cover must be more than 4.0 times.

Principal risks and uncertainties

The Group has an established, structured approach to identifying and assessing the impact of financial and operational risks on its business, which is reviewed and updated quarterly. The principal risks and uncertainties for the remainder of the financial year are not expected to change materially from those included on pages 67 and 70 of the Annual Report and Accounts 2021. The risks identified relate to the following areas: general revenue reduction due to geopolitical instability and COVID-19, contractual risks; research and development; people and capability; supplier resilience due to increased lead times and COVID-19; IT systems and information; M&A and integration, sustainability, climate change and the environment, health and safety, legal and regulatory compliance. Further information in relation to the Group's financial position and going concern is included on page 18.

Cautionary statement

This report contains forward-looking statements. These have been made by the Directors in good faith based on the information available to them up to the time of their approval of this report. The Directors can give no assurance that these expectations will prove to have been correct. Due to the inherent uncertainties, including both economic and business risk factors underlying such forward-looking information, actual results may differ materially from those expressed or implied by these forward-looking statements. The Directors undertake no obligation to update any forward-looking statements whether as a result of new information, future events or otherwise.

Going Concern

The Group has experienced continued improvement in trading momentum and strong growth on our 2021 numbers. We continue to see benefit from our strategic repositioning in our chosen structural growth markets as well as our focus on building close relationships with our clients and this can be seen in both the order book and financial performance of the Group.

The Group's financial position remains stable, at 30 June 2022 it had:

- £267.6 million of total borrowing facilities available (comprising committed facilities of £226.1 million and uncommitted facilities of £41.5 million representing overdraft lines and an undrawn accordion facility of £32.6 million). The Group's primary source of finance is the £147.4 million committed revolving credit facility (RCF) which was signed in June 2022 to replace the already existing RCF; at 30 June 2022 £109.5 million of this facility had been drawn down. The Group's RCF is payable on a floating rate basis above GBP SONIA, USD SOFR or EURIBOR depending on the currency of the loan and will mature in June 2026 with a one year extension option which expires in May 2023. In December 2021, TT completed a debut issue of £75 million of private placement fixed rate loan notes with three institutional investors; the issue is evenly split between 7 and 10 year maturities with an average interest rate of 2.9% and covenants in line with our bank facility. The private placement complements, at an attractive rate, the Group's existing bank revolving credit facility, diversifying our sources of debt funding and providing us with a stable, long-term financing structure.

- A leverage ratio of 2.4 times at 30 June 2022 compared to an RCF covenant maximum of 3.0 times. Interest cover (pre-IFRS 16 and excluding pension interest) of 9.4 times compared to an RCF covenant minimum of 4.0 times.

The Group has prepared and reviewed cash flow forecasts across the business over the twelve-month period from the date of the approval of these interim results, considering the Group's current financial position and the potential impact of our principal risks on divisions.

Under the Group's base case financial projections, the Group retains significant liquidity and covenant headroom, with both metrics improving from the position as at 30 June 2022.

The Group's downside stress test scenario has been sensitised for supply chain challenges, inflationary pressure and further covid related disruption which show a reduction in revenue and operating profit compared to the latest forecast. Despite this further reduction these projections show that the Group should remain well within its facilities headroom and within bank covenants for 2022 and 2023. A 'reverse' stress-test was also modelled to understand the conditions which could jeopardise the ability of the Group to continue as a going concern including assessing against covenant testing and facility headroom. The reverse stress test scenario is deemed to have a remote likelihood and help inform the Directors' assessment that there are no material uncertainties in relation to going concern.

The Group's wide geographical and sector diversification helps minimise the risk of serious business interruption or catastrophic reputational damage. Furthermore, the business model is structured so that the Group is not overly reliant on any single customer, market or geography.

The Directors have assessed the future funding requirements of the Group with due regard to the risks and uncertainties to which the Group is exposed and compared them with the level of available borrowing facilities and are satisfied that the Group has adequate resources for at least twelve months from the date of signing. Accordingly, the financial statements have been prepared on a going concern basis.

Responsibility statement of the Directors

We confirm that to the best of our knowledge:

- The 2022 annual financial statements of TT Electronics plc will be prepared in accordance with United Kingdom adopted International Financial Reporting Standards. The condensed set of financial statements included in this half yearly financial report has been prepared in accordance with United Kingdom adopted International Accounting Standard 34 'Interim Financial Reporting';
- the interim management report includes a fair review of the information required by DTR 4.2.7R:
  - (i) 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
  - (ii) a description of the principal risks and uncertainties for the remaining six months of the year
- the interim management report includes a fair review of the information required by DTR 4.2.8R:
  - (i) 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 performance of the Group in that period; and
  - (ii) any changes in the related parties transactions described in the 2021 Annual Report that could have a material effect on the financial position or performance of the Group in the current period.

By order of the Board

Richard Tyson	**Mark Hoad**
Chief Executive Officer	Chief Financial Officer
3 August 2022	3 August 2022

Cautionary statement

This report contains forward-looking statements. These have been made by the directors in good faith based on the information available to them up to the time of their approval of this report. The directors can give no assurance that these expectations will prove to have been correct. Due to the inherent uncertainties, including both economic and business risk factors underlying such forward looking information, actual results may differ materially from those expressed or implied by these forward-looking statements. The directors undertake no obligation to update any forward-looking statements whether as a result of new information, future events or otherwise.

Independent review report to TT Electronics plc

Conclusion

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 2022 which comprises the Condensed consolidated income statement, the Condensed consolidated statement of comprehensive income, the Condensed consolidated statement of financial position, the Condensed consolidated statement of changes in equity, and Condensed consolidated cash flow statement and related notes 1 to 15.

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 2022 is not prepared, in all material respects, in accordance with United Kingdom adopted International Accounting Standard 34 and the Disclosure Guidance and Transparency Rules of the United Kingdom's Financial Conduct Authority.

Basis for conclusion

We conducted our review in accordance with International Standard on Review Engagements (UK) 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.

As disclosed in note 2, the annual financial statements of the group will be prepared in accordance with United Kingdom adopted International Financial Reporting Standards. The condensed set of financial statements included in this half-yearly financial report has been prepared in accordance with United Kingdom adopted International Accounting Standard 34, "Interim Financial Reporting".

Conclusion relating to Going Concern

Based on our review procedures, which are less extensive than those performed in an audit as described in the Basis for Conclusion section of this report, nothing has come to our attention to suggest that the directors have inappropriately adopted the going concern basis of accounting or that the directors have identified material uncertainties relating to going concern that are not appropriately disclosed. This conclusion is based on the review procedures performed in accordance with this ISRE (UK), however future events or conditions may cause the entity to cease to continue as a going concern.

Responsibilities of 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. In preparing the half-yearly financial report, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the review of the financial information

In reviewing the half-yearly financial report, we are responsible for expressing to the group a conclusion on the condensed set of financial statement in the half-yearly financial report. Our conclusion, including our Conclusions Relating to Going Concern, are based on procedures that are less extensive than audit procedures, as described in the Basis for Conclusion paragraph of this report.

Use of our report

This report is made solely to the company in accordance with International Standard on Review Engagements (UK) 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.

Deloitte LLP
Statutory Auditor
London, United Kingdom
3 August 2022

Condensed consolidated income statement (unaudited)

for the six months ended 30 June 2022

£million (unless otherwise stated)	Note	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021 (audited)
Revenue	3	269.2	235.6	476.2
Cost of sales		(206.8)	(178.8)	(360.6)
Gross profit		62.4	56.8	115.6
Distribution costs		(15.0)	(12.9)	(26.9)
Administrative expenses		(38.5)	(34.6)	(69.4)
Operating profit		8.9	9.3	19.3
Analysed as:				
Adjusted operating profit	3	18.3	15.9	34.8
Restructuring and other	6	(5.5)	(2.6)	(7.8)
Acquisition and disposal related costs	6	(3.9)	(4.0)	(7.7)
Finance income		0.8	0.4	1.1
Finance costs		(4.1)	(2.2)	(4.4)
Profit before taxation		5.6	7.5	16.0
Taxation	7	(1.5)	(1.7)	(3.2)
Profit for the period attributable to the owners of the Company		4.1	5.8	12.8
EPS attributable to owners of the Company (pence)				
Basic	8	2.3	3.3	7.3
Diluted	8	2.3	3.3	7.2

Condensed consolidated statement of comprehensive income (unaudited)

for the six months ended 30 June 2022

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021 (audited)
Profit for the period	4.1	5.8	12.8
Other comprehensive income/(loss) for the year after tax			
Items that are or may be reclassified subsequently to the income statement:			
Exchange differences on translation of foreign operations	26.6	(1.8)	3.4
(Loss)/gain on hedge of net investment in foreign operations	(3.0)	0.2	(0.2)
Loss on cash flow hedges taken to equity less amounts recycled to the income statement	(4.8)	(1.4)	(3.2)
Deferred tax (loss)/gain on movements in cash flow hedge reserves	(0.8)	-	0.5
Items that will never be reclassified to the income statement:			
Remeasurement of defined benefit pension schemes	16.8	27.6	35.8
Tax on remeasurement of defined benefit pension schemes	(4.4)	(9.2)	(11.4)
Total comprehensive income for the period attributable to the owners of the Company	34.5	21.2	37.7

Condensed consolidated statement of financial position (unaudited)

£million	Note	30 June 2022	30 June 2021	31 December 2021 (audited)
ASSETS				
Non-current assets				
Right-of-use assets		19.8	17.8	19.6
Property, plant and equipment		54.7	48.6	50.4
Goodwill	5	171.6	154.6	156.5
Other intangible assets		56.2	54.3	51.7
Deferred tax assets		9.1	8.1	11.3
Derivative financial instruments		0.9	5.8	0.6
Pensions	11	95.0	65.4	78.4
Total non-current assets		407.3	354.6	368.5
Current assets				
Inventories		193.7	106.8	141.8
Trade and other receivables		102.5	86.3	86.2
Income taxes receivable		0.7	2.7	2.6
Derivative financial instruments		1.9	0.8	4.0
Cash and cash equivalents	12	76.3	100.6	68.3
Total current assets		375.1	297.2	302.9
Total assets		782.4	651.8	671.4
LIABILITIES				
Current liabilities				
Borrowings	12	12.6	35.8	1.1
Lease liabilities		4.5	3.4	4.1
Derivative financial instruments		4.0	1.9	1.3
Trade and other payables		160.3	95.2	133.9
Income taxes payable		6.6	7.3	7.1
Provisions		4.7	4.4	2.5
Total current liabilities		192.7	148.0	150.0
Non-current liabilities				
Borrowings	12	182.3	151.2	147.1
Lease liabilities		18.9	17.5	18.5
Derivative financial instruments		1.2	0.4	0.7
Deferred tax liability		23.5	16.2	20.2
Pensions	11	3.4	4.2	3.9
Provisions and other non-current liabilities		0.9	0.9	1.0
Total non-current liabilities		230.2	190.4	191.4
Total liabilities		422.9	338.4	341.4
Net assets		359.5	313.4	330.0
EQUITY				
Share capital	13	44.1	43.7	44.1
Share premium	13	22.8	21.9	22.6
Translation reserve		56.8	28.4	33.2
Other reserves		3.0	6.2	7.1
Retained earnings		230.8	211.2	221.0
Equity attributable to owners of the Company		357.5	311.4	328.0
Non-controlling interests		2.0	2.0	2.0
Total equity		359.5	313.4	330.0

Approved by the Board of Directors on 3 August 2022 and signed on their behalf by:

Richard Tyson
Director

Mark Hoad
Director

Condensed consolidated statement of changes in equity (unaudited)

for the six months ended 30 June 2022

£million	Share capital	Share premium	Translation Reserve	Other reserves	Retained earnings	Sub total	NCI [1]	Total
At 31 December 2020 (audited)	43.6	21.7	30.0	5.5	195.2	296.0	2.0	298.0
Profit for the period	-	-	-	-	5.8	5.8	-	5.8
Other comprehensive income								
Exchange differences on translation of foreign operations	-	-	(1.8)	-	-	(1.8)	-	(1.8)
Loss on hedge of net investment in foreign operations	-	-	0.2	-	-	0.2	-	0.2
Loss on cash flow hedges taken to equity less amounts recycled to the income statement	-	-	-	(1.4)	-	(1.4)	-	(1.4)
Remeasurement of defined benefit pension schemes	-	-	-	-	27.6	27.6	-	27.6
Tax on remeasurement of defined benefit pension schemes	-	-	-	-	(9.2)	(9.2)	-	(9.2)
Total comprehensive income	-	-	(1.6)	(1.4)	24.2	21.2	-	21.2
Transactions with owners recorded directly in equity								
Equity dividends paid by the Company	-	-	-	-	(8.2)	(8.2)	-	(8.2)
Share based payments	-	-	-	1.8	-	1.8	-	1.8
Deferred tax on share-based payments	-	-	-	0.3	-	0.3	-	0.3
New shares issued	0.1	0.2	-	-	-	0.3	-	0.3
At 30 June 2021	43.7	21.9	28.4	6.2	211.2	311.4	2.0	313.4
At 31 December 2021 (audited)	44.1	22.6	33.2	7.1	221.0	328.0	2.0	330.0
Profit for the period					4.1	4.1	-	4.1
Other comprehensive income						-	-	-
Exchange differences on translation of foreign operations	-	-	26.6	-	-	26.6	-	26.6
Loss on hedge of net investment in foreign operations	-	-	(3.0)	-	-	(3.0)	-	(3.0)
Loss on cash flow hedges taken to equity less amounts recycled to income statement	-	-	-	(4.8)	-	(4.8)	-	(4.8)
Deferred tax gain on movements in cash flow hedge reserves	-	-	-	(0.8)	-	(0.8)	-	(0.8)
Remeasurement of defined benefit pension schemes	-	-	-	-	16.8	16.8	-	16.8
Tax on remeasurement of defined benefit pension schemes	-	-	-	-	(4.4)	(4.4)	-	(4.4)
Total comprehensive income	-	-	23.6	(5.6)	16.5	34.5	-	34.5
Transactions with owners recorded directly in equity						-	-	-
Equity dividends paid by the Company	-	-	-	-	(6.7)	(6.7)	-	(6.7)
Share-based payments	-	-	-	2.3	-	2.3	-	2.3
Deferred tax on share-based payments	-	-	-	(0.8)	-	(0.8)	-	(0.8)
New shares issued	-	0.2	-	-	-	0.2	-	0.2
At 30 June 2022	44.1	22.8	56.8	3.0	230.8	357.5	2.0	359.5

1. Non-controlling interests

Condensed consolidated cash flow statement (unaudited)

for the six months ended 30 June 2022

£million	Note	Six months ended 30 June 2022	Six months ending 30 June 2021	Year ended 31 December 2021 (audited)
Cash flows from operating activities				
Profit for the year		4.1	5.8	12.8
Taxation		1.5	1.7	3.2
Net finance costs		3.3	1.8	3.3
Restructuring and other		5.5	2.6	7.8
Acquisition related costs		3.9	4.0	7.7
Adjusted operating profit		18.3	15.9	34.8
Adjustments for:				
Depreciation		6.8	6.7	13.6
Amortisation of intangible assets		1.1	1.3	2.5
Share based payment expense		2.5	1.5	3.8
Other items		0.3	1.2	1.1
Increase in inventories		(39.1)	(9.6)	(42.6)
Increase in receivables		(8.4)	(17.5)	(15.7)
Increase in payables and provisions		14.5	6.6	42.0
Adjusted operating cash flow		(4.0)	6.1	39.5
Special payments to pension funds		-	(2.7)	(5.5)
Restructuring and acquisition related costs		(7.0)	(6.4)	(15.0)
Net cash (used in)/generated from operations		(11.0)	(3.0)	19.0
Net income taxes paid		(1.3)	(2.0)	(4.7)
Net cash (used in)/generated from operating activities		(12.3)	(5.0)	14.3
Cash flows from investing activities				
Purchase of property, plant and equipment		(5.1)	(6.0)	(14.6)
Proceeds from sale of property, plant and equipment and government grants received		0.2	5.8	9.3
Capitalised development expenditure		(1.0)	(1.0)	(1.9)
Purchase of other intangibles		(0.1)	(0.2)	(0.5)
Acquisitions of businesses		(8.3)	(0.5)	(0.5)
Net cash flow used in investing activities		(14.3)	(1.9)	(8.2)
Cash flows from financing activities				
Issue of share capital		0.2	0.3	1.4
Interest paid		(3.3)	(2.0)	(4.0)
Repayment of borrowings		(109.5)	(4.6)	(86.9)
Proceeds from borrowings		141.3	18.8	96.4
Payment of lease liabilities		(1.9)	(1.9)	(3.9)
Other items		(0.2)	(0.1)	(0.5)
Dividends paid by the Company		(6.7)	(8.2)	(11.4)
Net cash flow from financing activities		19.9	2.3	(8.9)
Net change in cash and cash equivalents		(6.7)	(4.6)	(2.8)
Cash and cash equivalents at beginning of year	12	67.2	69.0	69.0
Exchange differences	12	3.2	0.5	1.0
Cash and cash equivalents at end of year	12	63.7	64.9	67.2
Cash and cash equivalents comprise:				
Cash at bank and in hand		76.3	100.6	68.3
Bank overdrafts		(12.6)	(35.7)	(1.1)
		63.7	64.9	67.2

Notes to the condensed consolidated financial statements (unaudited)

1. General information

The condensed consolidated financial statements for the six months ended 30 June 2022 are unaudited and were authorised for issue in accordance with a resolution of the Board of Directors. The information for the six months ended 30 June 2022 does not constitute statutory accounts as defined in section 434 of the Companies Act 2006. Comparative information for the year ended 31 December 2021 has been taken from the published statutory accounts, a copy of which has been delivered to the Registrar of Companies. The auditors reported on those accounts: their report was unqualified, did not draw attention to any matters by way of emphasis and did not contain a statement under section 498(2) or (3) of the Companies Act 2006.

2. Basis of preparation

a) Condensed consolidated half-year financial statements

The 2022 annual financial statements of TT Electronics plc will be prepared in accordance with United Kingdom adopted International Financial Reporting Standards. The condensed set of financial statements included in this half yearly financial report has been prepared in accordance with United Kingdom adopted International Accounting Standard 34 'Interim Financial Reporting'. These condensed consolidated half-year financial statements do not include all the information and disclosures required in the annual financial statements and should be read in conjunction with the 2021 Annual Report.

b) Basis of accounting

The accounting policies adopted are consistent with those followed in the preparation of the Group's annual financial statements for the year ended 31 December 2021.

Interest rate benchmark reform
Throughout 2021 the Group was exposed to the following interest rate benchmarks within its hedge accounting relationships and borrowings, which have been subject to interest rate benchmark reform in 2022: GBP LIBOR and USD LIBOR ("IBORs"). The hedging instruments are interest rate swaps and the hedged items are Sterling and US Dollar floating rate debt. On 4 January 2022 the Group transitioned away from GBP LIBOR and replaced this with GBP SONIA. USD LIBOR remained available throughout 2022. There was no impact of this transition. As described in note 12 the Group underwent a refinancing exercise in June 2022 and is now exposed to GBP SONIA, USD SOFR and EURIBOR.

c) Alternative performance measures

The Group presents Alternative Performance Measures ("APMs") in addition to the statutory results of the Group.

Adjusted operating profit has been defined as operating profit from continuing operations excluding the impacts of significant restructuring programmes, significant one-off items including property disposals, certain one off pension costs, business acquisition, integration and divestment related activity; and the amortisation of intangible assets recognised on acquisition. Acquisition and disposal related items include the writing off of the pre-acquisition profit element of inventory written up on acquisition, other direct costs associated with business combinations and adjustments to contingent consideration related to acquired businesses. Restructuring includes significant changes in footprint (including movement of production facilities) and significant costs of management changes.
In addition to the items above, adjusting items impacting profit after tax include:

- The net effect on tax of significant restructuring from strategy changes that are not considered by the Group to be part of the normal operating costs of the business; and
- The tax effects of adjustments to profit before tax.

Costs associated with restructuring, acquisitions and disposals are uncertain with regard to their timing and size and therefore their inclusion within adjusted operating profit could mislead the reader of the accounts.
These interim results include alternative performance measures that are not prepared in accordance with IFRS. These alternative performance measures have been selected by the Directors to assist them in making operating decisions because they represent the underlying operating performance of the Group and facilitate internal comparisons of performance over time.
The Directors consider the adjusted results to be an important measure used to monitor how the businesses are performing as this provides a meaningful reflection of how the businesses are managed and measured on a day-to-day basis and achieves consistency and comparability between reporting periods, when all businesses are held for a complete reporting period.

These alternative performance measures exclude certain significant non-recurring, infrequent or non-cash items that the Directors do not believe are indicative of the underlying operating performance of the Group (that are otherwise included when preparing financial measures under IFRS).
Adjusted profit is not a defined term under IFRS and may not be comparable with similarly titled profit measures reported by other companies. It is not intended to be a substitute for, or superior to, GAAP measures. All APMs relate to the current year results and comparable periods where provided.
The Directors consider there to be four main alternative performance measures: adjusted operating profit, free cash flow, adjusted EPS and adjusted effective tax rate.
All alternative performance measures are presented within the section titled 'Reconciliation of KPIs and non IFRS Measures' and are reconciled to their equivalent statutory measures where this is appropriate.

d) Estimates and judgements

The preparation of condensed consolidated financial statements requires management to make judgements, estimates and assumptions which affect the application of accounting policies and the reported amounts of assets, liabilities, income and expense. Actual results may differ from these estimates.

In preparing the condensed consolidated financial statements, the significant judgements and estimates made by management in applying the Group's accounting policies and the key sources of estimation uncertainty were consistent with those applied to the consolidated financial statements as at and for the year ended 31 December 2021, which can be found on pages 141 – 142 in the 2021 Annual Report. Significant judgements relate to the determination of items of income and expense excluded from operating profit to arrive at adjusted operating profit. Significant estimates relate to taxation, impairment of goodwill, the recoverability of Virolens related assets and defined benefit pension obligations.

The Group tests whether goodwill has suffered any impairment on an annual basis or when there are triggers based on the value of the discounted future cash flows allocated to the group of CGUs to which it is allocated. The methodology and key assumptions used in assessing the carrying value of goodwill are set out in note 13 of the 2021 Annual Report. The key assumptions made for long term projections, sales and costs growth rates and discount rate all include an element of estimation that may give rise to a difference between the value ascribed and the actual outcomes. A reasonably possible change in these assumptions could lead to an impairment in the carrying value of goodwill specifically within the IoT Solutions CGU, where £27.7 million of goodwill is allocated, within the next financial year. At 30 June 2022 and 31 December 2021, the Group recognised no impairment loss in respect of these assets. Further details of the key assumptions used and the sensitivity analysis in respect of the recoverable amount of goodwill is disclosed in note 5.

The carrying amount of Virolens related assets at 30 June 2022 was £5.1 million (December 2021: £4.8 million). The assets consist of inventory, property, plant and equipment, and capitalised development expenditure. The value of these assets is dependent upon the success of the Virolens product, requiring management to estimate the future cash flows in a range of possible outcomes. The key sources of estimation uncertainty are our customers' ability to obtain regulatory approval and potential end customers converting expressions of interest into firm funded orders. Our customer continues to progress with regulatory approvals and global interest continues given ongoing covid prevalence, varying global responses and vaccine limitations (efficacy and supply). If regulatory approval is not obtained it is likely the assets related to Virolens will require impairment.

e) Going concern

After making appropriate enquiries, the Directors have a reasonable expectation that the Company has adequate resources and financial headroom to continue in operational existence for at least twelve months from the date of signing these interim results. Therefore, they continue to adopt the going concern basis of accounting in preparing the condensed consolidated half-year financial statements. Page 18 outlines the going concern assessment.

Given the financial resources available, together with long term partnerships with multiple key customers and suppliers across different geographic areas and industries, the Directors believe that the Group is well placed to manage its business risks successfully.

The Group continues to manage foreign currency risk at a transactional level through the use of hedges which are monitored by the Group Treasury Committee.

The Treasury Committee regularly reviews counterparty credit risk and ensures cash balances are held with carefully assessed counterparties with strong credit ratings.

Pages 67 to 70 of the 2021 Annual Report provide details of the Group's policy on managing its operational and financial risks.

3. Segmental reporting

The Group is organised into three divisions, as shown below, according to the nature of the products and services provided. Each of these divisions represents an operating segment in accordance with IFRS 8 'Operating segments' and there is no aggregation of segments. The chief operating decision maker is the Board of Directors. The operating segments are:

- Power and Connectivity – The Power and Connectivity division develops and manufactures power application products and connectivity devices which enable the capture and wireless transfer of data. We collaborate with our customers to develop innovative solutions to optimise their electronic systems;
- Global Manufacturing Solutions – The Global Manufacturing Solutions division provides manufacturing services and engineering solutions for our product divisions and to customers that often require a lower volume and higher mix of different products. We manufacture complex integrated product assemblies for our customers and provide engineering services including designing testing solutions and value-engineering; and
- Sensors and Specialist Components – The Sensors and Specialist Components division works with customers to develop standard and customised solutions, including sensors and power management devices. Our solutions improve the precision, speed and reliability of critical aspects of our customers' applications.

The key performance measure of the operating segments is adjusted operating profit. Refer to the section titled 'Reconciliation of KPIs and non IFRS Measures' for a definition of adjusted operating profit.

Corporate costs - Resources and costs of the head office managed centrally but deployed in support of the operating units are allocated to segments based on a combination of revenue and adjusted operating profit.

Resources and costs of the head office which are not related to the operating activities of the trading units are not allocated to divisions and are separately disclosed, equivalent to the segment disclosure information, so that reporting is consistent with the format that is used for review by the chief operating decision maker. This gives greater transparency of the adjusted operating profits for each segment. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items see note 6.

The accounting policies of the reportable segments are the same as the Group's accounting policies.

Group financing (including finance costs and finance income) and income taxes are managed on a Group basis and are not allocated to operating segments. Goodwill is allocated to the individual cash generating units within the segment of which it is a part.

	Six months ended 30 June 2022					
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	68.8	135.3	65.1	269.2	-	269.2
Adjusted operating profit	2.1	9.4	10.6	22.1	(3.8)	18.3
Add back: adjustments made to operating profit (note 6)						(9.4)
Operating profit						8.9
Net finance costs						(3.3)
Profit before taxation						5.6

	Six months ended 30 June 2021					
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	68.2	109.6	57.8	235.6		235.6
Adjusted operating profit	3.6	8.5	7.4	19.5	(3.6)	15.9
Add back: adjustments made to operating profit (note 6)						(6.6)
Operating profit						9.3
Net finance costs						(1.8)
Profit before taxation						7.5

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
						Year ended 31 December 2021
Sales to external customers	140.2	220.1	115.9	476.2	-	476.2
Adjusted operating profit	7.8	18.3	16.4	42.5	(7.7)	34.8
Add back: adjustments made to operating profit (note 6)						(15.5)
Operating profit						19.3
Net finance costs						(3.3)
Profit before taxation						16.0

There is no significant intergroup trading between segments.

The tables below show the geographies and markets in which the Group's revenues arose during the period.

£million	**Six months ended 30 June 2022**	Six months ended 30 June 2021	Year ended 31 December 2021
United Kingdom	**59.4**	48.0	100.2
Rest of Europe	**44.1**	40.3	78.6
North America	**102.7**	90.2	182.7
Central and South America	**0.6**	0.6	0.9
Asia	**61.9**	55.6	112.4
Rest of the World	**0.5**	0.9	1.4
	269.2	235.6	476.2

£million	**Six months ended 30 June 2022**	Six months ended 30 June 2021	Year ended 31 December 2021
Healthcare	**70.7**	62.2	118.8
Aerospace and defence	**38.8**	43.4	85.5
Automation and electrification	**105.6**	85.1	186.3
Distribution	**54.1**	44.9	85.6
	269.2	235.6	476.2

4. Acquisitions

On 7 January 2022 the Group acquired the Power and Control business of Ferranti Technologies Ltd, from Elbit Systems UK Ltd. Total cash consideration was £8.3 million comprising £10.0 million paid in January 2022 and a final £1.7 million working capital adjustment received in April 2022.

Ferranti Power and Control, based in Oldham, Greater Manchester, designs and manufactures mission-critical complex power and control sub-assemblies for blue chip customers in high-reliability and high-performance end markets, primarily aerospace and defence. The acquisition brings highly skilled employees who provide full-service capabilities from design, assembly, manufacturing, and testing including environmental stress screening and inspection through to service. Ferranti Power and Control adds further technology capability, and scale to our Power business with valuable long-term customer relationships and programmes with leading global aerospace, defence and industrial OEMs operating in highly regulated markets with significant barriers to entry through necessary industry accreditations and customer approvals. The goodwill recognised on acquisition represents the Group's view on the future earnings growth potential and technical capabilities of the acquired business. None of the goodwill recognised is expected to be deductible for income tax purposes. Costs in relation to this acquisition recognised in the statement of profit or loss amounted to £0.2 million. If this business was acquired from the start of the accounting period the revenue and operating profit of the Group would not be materially different.

The fair valuation of acquired assets and liabilities is provisional at the date of these financial statements and will be finalised prior to the end of the 12 month measurement period.

The provisional fair values of the identifiable assets (including goodwill) and liabilities are presented below.

The fair value of receivables of £2.2 million is not materially different to the contractual cashflows. The amount expected to not be collected is £nil.

£million	Power and Control business of Ferranti Technologies Ltd (provisional)
Non-current assets	
Right-of-use asset	0.2
Property, plant and equipment	0.4
Identifiable intangible assets	5.3
Current assets / (liabilities)	
Inventory	2.2
Trade and other receivables	2.2
Trade and other payables	(2.5)
Provisions	(2.6)
Lease liabilities	(0.2)
Deferred tax liabilities	(1.3)
Net assets of acquiree	3.7
Consideration paid	
Cash consideration	8.3
Goodwill	4.6

5. Goodwill

At 30 June 2022 an indicator of impairment was identified in respect of goodwill allocated to the IoT Solutions CGU; this indicator was revenue being lower than anticipated in the first half of 2022 as a result of short term supply chain challenges. As a result, a review for impairment was performed using updated cash flow forecasts derived from the five-year strategic growth plan forecasts which are then projected into perpetuity using a long term growth rate applicable to the market in which the CGU operates. No impairment losses have been recognised in the current or prior periods as recoverable amounts exceed the total carrying value of assets for the IoT Solutions CGU. There were no indicators of impairment identified in any other CGUs.

IoT Solutions CGU operates in markets with strong growth fundamentals. These forecasts exclude any potential benefits from the Virolens® rapid covid-19 screening device given operational trials and validation testing are ongoing and the wide range of possible outcomes.

IoT Solutions CGU shows headroom of £9.8 million above the £62.7 million carrying amount, including £27.7 million of goodwill. The growth rates assume that demand for our product remains broadly in line with the expected growth rates in the markets within which the business operates in the long-term future. Taking into account our expectation of future market conditions, we believe that the evolution of selling prices and cost measures put into place will lead to a sustained improvement in profitability. In accordance with IAS 36 'Impairment of Assets' the Group performed sensitivity analysis on the estimates of recoverable amounts and found that the excess of recoverable amount over the carrying amount of the IoT Solutions CGU would be reduced to £nil as a result of a reasonably possible change in assumptions. Sensitivity analysis has been carried out and a reasonably possible change in the discount rate and long-term growth rate from 13.0 per cent to 14.6 per cent or from 1.5 per cent to -1.1 per cent respectively would reduce headroom to £nil. A reduction in terminal revenue of 19.3 per cent and terminal operating profit of 2.7 per cent would reduce headroom to £nil.

A reduction in operating cash flow of 13.0 per cent in all forecast periods would also reduce headroom to £nil. Management does not consider that the relevant change in these assumptions would have a consequential effect on other key assumptions.

As described in note 4, on 7 January 2022 the Group acquired the Power and Control business of Ferranti Technologies Ltd, from Elbit System UK Ltd, resulting in goodwill recognised of £4.6 million. The goodwill recognised on acquisition represents the Group's view of the future earnings growth potential and the technical know-how in the acquired businesses.

	£million
Cost	
As at 31 December 2021	156.5
Additions	4.6
Net exchange adjustment	10.5
At 30 June 2022	171.6

6. Adjusting items

Restructuring costs charged in the period primarily relate to costs arising as part of the Group's self-help programme which began in 2020 and is expected to conclude in 2022.

Restructuring costs of £4.5 million comprise £2.6 million relating to the restructure of the North America Resistors business, which includes pre-production costs at our new Plano facility; £1.0 million relating to closure of our site in Lutterworth, UK, £0.7 million relating to the relocation of production facilities from Covina, USA to Kansas, USA and £0.2 million relating to the relocation of production facilities from Medina, USA to Minnesota, USA.

Prior period restructuring costs of £3.3 million comprise £2.0 million relating to the restructure of the North America Resistors business; £0.8 million relating to closure of our site in Lutterworth, UK and £0.5 million relating to the closure of our site in Tunis, Tunisia.

Pension costs of £1.0 million (2021: £0.6 million, relating to costs incurred as a result from UK pensions schemes having to equalise male and female members' benefits in respect of guaranteed minimum pensions) relate to costs associated costs associated with liability management exercises and cleansing of scheme data.with preparing the pension scheme for a buy in.

The prior period property disposal income of £1.3 million relates to the gain on the sale of property which was acquired through the acquisition of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California.

Acquisition and disposal related costs charged in the period comprise £3.1 million (2021: £2.5 million) of amortisation of acquired intangible assets; £0.2 million of acquisition costs and £0.4 million of integration costs relating to the acquisition of the Power and Control business of Ferranti Technologies Ltd. based in Oldham, UK; £0.1 million of integration costs of Torotel, Inc. (2021: £0.9 million); and £0.1 million (2021: £0.4 million) of costs of terminated acquisitions. The prior period also included £0.2 million of integration costs of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California.

	Period ended 30 June 2022		Period ended 30 June 2021		Year ended 31 December 2021	
£million	Operating profit	Tax	Operating profit	Tax	Operating profit	Tax
As reported	8.9	(1.5)	9.3	(1.7)	19.3	(3.2)
Restructuring and other						
Restructuring	(4.5)	0.9	(3.3)	0.7	(9.7)	1.2
Property disposals	-	-	1.3	(0.3)	1.7	(0.2)
Pension restructuring costs	(1.0)	0.2	(0.6)	0.1	(1.5)	0.2
Pension increase exchange exercise	-	-	-	-	1.8	(0.2)
Other items	-	-	-	-	(0.1)	-
	(5.5)	1.1	(2.6)	0.5	(7.8)	1.0
Acquisition and disposal related costs						
Amortisation of intangible assets arising on business combinations	(3.1)	0.6	(2.5)	0.4	(5.1)	(0.3)
Torotel integration and acquisition costs	(0.1)	-	(0.9)	0.1	(1.5)	0.6
Covina integration and acquisition costs	-	-	(0.2)	-	(0.2)	0.1
Ferranti Power and Control acquisition and integration costs	(0.6)	0.2	-	-	(0.5)	0.2
Tax losses related to the transportation division	-	-	-	-	-	1.3
Other acquisition related costs	(0.1)	-	(0.4)	0.1	(0.4)	0.1
	(3.9)	0.8	(4.0)	0.6	(7.7)	2.0
Total items excluded from adjusted measure	(9.4)	1.9	(6.6)	1.1	(15.5)	3.0
Adjusted measure	18.3	(3.4)	15.9	(2.8)	34.8	(6.2)

7. Taxation

The half-year tax charge of £1.5 million (2021: £1.7 million) is based on a forecast effective tax rate of 22.8 per cent (2021: 19.6 per cent) on adjusted profit and a £1.9 million (2021: £1.1 million) credit on restructuring, asset impairments and acquisition related costs.

The enacted UK tax rate applicable since 1 April 2017 to current year profits is 19 per cent. On 24 May 2021 an increase in UK rate was enacted to occur from 1 April 2023 to 25 per cent.

8. Earnings per share

Basic earnings per share is calculated by dividing the profit attributable to the owners of the Company by the weighted average number of shares in issue during the period. The weighted average number of shares in issue is 175.7 million (30 June 2021: 174.7 million, 31 December 2021: 174.8 million). The calculation of the diluted earnings per share excludes 2,175,908 (2021: 4,516,660) share options whose effect would have been anti-dilutive. Adjusted earnings per share is based on the adjusted profit after interest and tax.

Pence	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Earnings per share			
Basic	2.3	3.3	7.3
Diluted	2.3	3.3	7.2

The numbers used in calculating adjusted earnings per share are shown below:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Profit for the year attributable to owners of the Company	4.1	5.8	12.8
Restructuring and other	5.5	2.6	7.8
Acquisition and disposal related costs	3.9	4.0	7.7
Tax effect of above items (see note 6)	(1.9)	(1.1)	(3.0)
Adjusted earnings	11.6	11.3	25.3
Adjusted earnings per share (pence)	6.6	6.5	14.5
Adjusted diluted earnings per share (pence)	6.5	6.4	14.2

9. Dividends

	2022 pence per share	2022 £million	2021 pence per share	2021 £million
Final dividend paid for prior year	3.80	6.7	4.70	8.2
Interim dividend declared for current year	-	-	1.80	3.2

The Directors have declared an interim dividend of 2.0 pence per share which will be paid on 13 October 2022 to shareholders on the register on 23 September 2022. Shares will become ex-dividend on 22 September 2022.

10. Fair value of financial instruments

IFRS 13 "Fair Value Measurement" requires an analysis of those financial instruments that are measured at fair value at the end of the period in a fair value hierarchy. In addition, IFRS 13 requires financial instruments not measured at fair value but for which fair value is disclosed to be analysed in the same fair value hierarchy:

- 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).

		30 June 2022		30 June 2021		31 December 2021	
£million	Fair value hierarchy	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Held at amortised cost							
Cash and cash equivalents	n/a	76.3	76.3	100.6	100.6	68.3	68.3
Trade and other receivables	n/a	87.0	87.0	74.3	74.3	74.9	74.9
Trade and other payables	n/a	(123.9)	(123.9)	(88.8)	(88.8)	(111.9)	(111.9)
Borrowings (excluding unsecured loan notes)	2	(119.9)	(119.9)	(187.0)	(187.0)	(73.2)	(73.2)
Unsecured loan notes	3	(75.0)	(57.8)	-	-	(75.0)	(71.5)
Held at fair value							-
Derivative financial instruments (assets)	2	2.8	2.8	6.6	6.6	4.6	4.6
Derivative financial instruments (liabilities)	2	(5.2)	(5.2)	(2.3)	(2.3)	(2.0)	(2.0)
Held at depreciated cost							-
Investment properties	3	-	0.7	1.1	1.8	-	0.7

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

- cash and cash equivalents, trade and other receivables and trade and other payables approximate to their carrying amounts largely due to the short-term maturities of these instruments;
- the fair value of borrowings is estimated by discounting future cash flows using rates currently available for debt and remaining maturities;
- the fair value of unsecured loan notes has been derived from available market data for borrowings of similar terms and maturity period;
- the fair value of derivative financial instrument assets (£2.8 million) and liabilities (£5.2 million) are estimated by discounting expected future cash flows using current market indices such as yield curves and forward exchange rates over the remaining term of the instrument (level 2);
- the fair value of deferred consideration for the acquisition of Power Partners Inc is based upon the estimated amount payable to the seller as a result of the expected performance of Power Partners Inc as forecast by the Group; and
- the fair value of investment properties are based on market valuations obtained through third party valuations (level 3).

11. Retirement benefit schemes

At 30 June 2022 the Group operated two defined benefit schemes in the UK (the TT Group (1993) scheme and Southern & Redfern Ltd Retirement Benefits Scheme) and overseas defined benefit schemes in the USA. These schemes are closed to new members and the UK scheme is closed to future accrual. Given the nature of the Company's control of the plan under the Scheme's rules, a pension surplus has been recognised under IFRIC 14.

The amounts recognised in the condensed consolidated statement of financial position are:

£million	30 June 2022	30 June 2021	31 December 2021
TT Group (1993)	95.0	65.4	78.4
Southern & Redfern	-	-	-
USA schemes	(3.4)	(4.2)	(3.9)
Net surplus	91.6	61.2	74.5

£million	30 June 2022	30 June 2021	31 December 2021
Fair value of assets	521.3	630.8	651.9
Defined benefit obligation	(429.7)	(569.6)	(577.4)
Net surplus recognised in the statement of financial position	91.6	61.2	74.5
Represented by			
Schemes in net surplus	95.0	65.4	78.4
Schemes in net deficit	(3.4)	(4.2)	(3.9)
	91.6	61.2	74.5

The costs recognised in the condensed consolidated income statement are:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Scheme administration costs	0.5	0.8	1.7
Past service cost/(net gain), settlements and other restructuring (excluded from adjusted operating profit)	1.0	0.6	(0.3)
Net interest credit	(0.7)	(0.2)	(0.9)

Amounts recognised in the consolidated statement of comprehensive income are a gain of £16.8 million (2021: gain of £27.6 million) which comprises a loss on schemes' assets of £126.4 million (2021: loss of £14.7 million) and a gain on the remeasurement of the schemes' obligations of £143.2 million (2021: gain of £42.3 million).

The decrease in the scheme obligation is due to increases in yields on corporate bonds in the half year, which also drove the decrease in the value of the liability hedging assets included in scheme assets.

The triennial valuation of the TT Group scheme as at April 2019 showed a net surplus of £0.3 million against the Trustee's funding objective compared with a deficit of £46.0 million at April 2016. We are currently awaiting the results of the April 2022 triennial valuation.

As the scheme was fully funded at the 2019 triennial valuation date, there is no requirement for the Company to pay deficit repair contributions. In addition to the statutory funding objective, the Trustee and Company have agreed to move towards a 'self-sufficiency' funding target with the ultimate goal of moving the scheme to buy-in. To support the scheme's long-term goal the Company has agreed to pay additional fixed contributions of £5.5 million, £5.7 million and £4.4 million to be paid in the years 2022 and to 2023 respectively.

The Group has set aside £0.6 million (31 December 2021: £0.6 million) to be utilised in agreement with the Trustee for reducing the long-term liabilities of the scheme. The total payments made in period ended 30 June 2022 in respect of UK schemes was £nil million (30 June 2021: £2.7 million).

12. Reconciliation of net cash flow to movement in net debt

£million	Net cash	Lease liabilities	Borrowings	Net debt
As at 1 January 2021	69.0	(15.9)	(137.0)	(83.9)
Cash flow	(4.6)	-	-	(4.6)
Repayment of borrowings	-	-	4.6	4.6
Proceeds from borrowings	-	-	(18.8)	(18.8)
Payment of lease liabilities	-	1.9	-	1.9
New leases and reassessment of lease liabilities		(6.9)	-	(6.9)
Amortisation of loan arrangement fees	-	-	(0.2)	(0.2)
Exchange differences	0.5	-	0.1	0.6
As at 30 June 2021	64.9	(20.9)	(151.3)	(107.3)
Cash flow	1.8	-	-	1.8
Repayment of borrowings	-	-	82.3	82.3
Proceeds from borrowings	-	-	(77.6)	(77.6)
Payment of lease liabilities	-	2.0	-	2.0
New leases and reassessment of lease liabilities	-	(3.9)	-	(3.9)
Net movement in loan arrangement fees	-	-	0.4	0.4
Exchange differences	0.5	0.2	(0.9)	(0.2)
At 1 January 2022	67.2	(22.6)	(147.1)	(102.5)
Cash flow	(6.7)	-	-	(6.7)
Businesses acquired	-	(0.2)	-	(0.2)
Repayment of borrowings	-	-	109.5	109.5
Proceeds from borrowings	-	-	(141.3)	(141.3)
Payment of lease liabilities	-	1.9	-	1.9
New leases and reassessment of lease liabilities	-	(0.6)	-	(0.6)
Accrued loan arrangement fees	-	-	0.5	0.5
Accelerated amortisation of loan arrangement fees	-	-	(0.5)	(0.5)
Amortisation of loan arrangement fees	-	-	(0.3)	(0.3)
Exchange differences	3.2	(1.9)	(3.1)	(1.8)
At 30 June 2022	63.7	(23.4)	(182.3)	(142.0)

In June 2022 the Group signed a four year £147.4 million multi-currency revolving credit facility with a syndicate of banks comprising Barclays Bank, Bank of Ireland, Comerica Bank, Fifth Third Bank and National Westminster Bank to replace the existing facility. The facility has the option of a one year extension which expires in May 2023 and an uncommitted incremental accordion facility of £32.6 million.

The interest margin on the facility is based on the Group's compliance with financial covenants (net debt/EBITDA adjusted to exclude the items not included within underlying profit) and is payable on a variable floating rate basis above GBP SONIA, USD SOFR or EURIBOR depending on the currency of the loan.

13. Share capital

During the period the Company issued 134,804 ordinary shares as a result of share options being exercised under the Sharesave scheme and Share Purchase plans. The aggregate consideration received in respect of all new issues of shares was £0.2 million, which was represented by a £0.2 million increase in share premium.

During the period grants of awards were made under the LTIP for the issue of shares in 2025. An award is a contingent right to receive shares in the future, subject to continued employment and the achievement of predetermined performance criteria. During the period grants of awards were made under the 2022 LTIP scheme for the issue of up to 1,709,577 shares in 2025.

14. Related party transactions

Transactions between the company and its subsidiaries have been eliminated on consolidation and are not disclosed in this note. No related party transactions have taken place during the six months ended 30 June 2022 that have affected the financial position or performance of the Group.

15. Subsequent events

There were no subsequent events to report between the balance sheet date of 30 June 2022 and the date of issue of these financial statements.

Reconciliation of KPIs and non IFRS Measures

In accordance with the Guidelines on APMs issued by the European Securities and Markets Authority (ESMA), additional information is provided on the APMs used by the Group below.

To assist with the understanding of earnings trends, the Group has included within its financial statements APMs including adjusted operating profit and adjusted profit. The APMs used are not defined terms under IFRS and therefore may not be comparable to similar measures used by other companies. They are not intended to be a substitute for, or superior to, GAAP measures. Management uses adjusted measures to assess the operating performance of the Group, having adjusted for specific items as detailed in note 6. They form the basis of internal management accounts and are used for decision making, including capital allocation, with a subset also forming the basis of internal incentive arrangements. By using adjusted measures in segmental reporting, this enables readers of the financial statements to recognise how incentive performance is targeted. Adjusted measures are also presented in this announcement because the Directors believe they provide additional useful information to shareholders on comparable trends over time. Finally, this presentation allows for separate disclosure and specific narrative to be included concerning the adjusting items; this helps to ensure performance in any one year can be more clearly understood by the user of the financial statements.

Income statement measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted operating profit	Operating profit	Adjusting items as disclosed in note 6	Operating profit from continuing operations excluding the impacts of significant restructuring programmes; significant one-off items including property disposals, certain one off pension costs, business acquisition and divestment related activity; and the amortisation of intangible assets recognised on acquisition. Business acquisition and divestment related items include the writing off of the pre-acquisition profit element of inventory written up on acquisition, other direct costs associated with business combinations and adjustments to contingent consideration related to acquired businesses. Costs arising from significant changes in footprint (including movement of production facilities) and significant costs of management changes are also excluded. To provide a measure of the operating profits excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Adjusted operating margin	Operating profit margin	Adjusting items as disclosed in note 6	Adjusted operating profit as a percentage of revenue. To provide a measure of the operating profits excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Adjusted earnings per share	Earnings per share	See note 8 for the reconciliation and calculation of adjusted earnings per share	The profit for the year attributable to the owners of the Group adjusted to exclude the items not included within adjusted operating profit divided by the weighted average number of shares in issue during the year. To provide a measure of earnings per share excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.

Income statement measures continued:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted diluted earnings per share	Diluted earnings per share	See note 8 for the reconciliation and calculation of adjusted diluted earnings per share	The profit for the year attributable to the owners of the Group adjusted to exclude the items not included within adjusted operating profit divided by the weighted average number of shares in issue during the year, adjusted for the effects of any potentially dilutive options. To provide a measure of earnings per share excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Prior year revenue and adjusted operating profit at constant currency	Revenue and operating profit	See note APM 1	Revenue and adjusted operating profit for the prior year retranslated at the current year's foreign exchange rates.
Organic revenue	Revenue	See note APM 2	This is the percentage change in revenue from continuing operations in the current year compared to the prior year, excluding the effects of currency movements, acquisitions and disposals. This measures the underlying growth or decline of the business. To provide a comparable view of the revenue growth of the business from period to period excluding acquisition impacts.
Adjusted effective tax charge	Effective tax charge	See note APM 3	Tax charge adjusted to exclude tax on items not included within adjusted operating profit divided by adjusted profit before tax, which is also adjusted to exclude the items not included within adjusted operating profit. To provide a tax rate which excludes the impact of adjusting items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Return on invested capital	None	See note APM 4	Adjusted operating profit for the year divided by average invested capital for the year. Average invested capital excludes pensions, provisions, tax balances, derivative financial assets and liabilities, cash and borrowings and is calculated at average rates taking 12 monthly balances. This measures how efficiently assets are utilised to generate returns with the target of exceeding the cost to hold the assets

Statement of financial position measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Net debt	Cash and cash equivalents less borrowings and lease liabilities	Reconciliation of net cash flow to movement in net debt (note 12)	Net debt comprises cash and cash equivalents and borrowings including lease liabilities. This is additional information provided which may be helpful to the user in understanding the liquidity and financial structure of the business.
Leverage (bank covenant)	Cash and cash equivalents less borrowings	N/A	Leverage is the net debt defined as per the banking covenants (net debt (excluding lease liabilities) adjusted for certain terms as per the bank covenants) divided by EBITDA excluding items removed from adjusted profit and further adjusted for certain terms as per the bank covenants. Provides additional information over the Group's financial covenants to assist with assessing solvency and liquidity.
Net capital and development expenditure (net capex)	None	See note APM 5	Purchase of property, plant and equipment net of government grants (excluding property disposals), purchase of intangibles (excluding acquisition intangibles) and capitalised development. A measure of the Group's investments in capex and development to support longer term growth.
Dividend per share	Dividend per share	Not applicable	Amounts payable by dividend in terms of pence per share. Provides the dividend return per share to shareholders.

Statement of cash flows measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted operating cash flow	Operating cash flow	See note APM 6	Adjusted operating profit, excluding depreciation of property, plant and equipment and amortisation of intangible assets less working capital and other non-cash movements. An additional measure to help understand the Group's operating cash generation.
Adjusted operating cash flow post capex	Operating cash flow	See note APM 7	Adjusted operating cash flow less net capital and development expenditure. An additional measure to help understand the Group's operating cash generation after the deduction of capex.
Working capital cashflow	Cashflow - inventories payables, provisions and receivables	See note APM 8	Working capital comprises of three statutory cashflow figures: (increase)/decrease in inventories, increase/(decrease) in payables and provisions, and (increase)/decrease in receivables. This definition includes the movement of any provisions over trade receivables. To provide users a measure of how effectively the group is managing its working capital and the resultant impact on liquidity.
Free cash flow	Net increase/ decrease in cash and cash equivalents	See note APM 9	Free cash flow represents cash generated from trading after all costs including restructuring, pension contributions, tax and interest payments. Cashflows to settle LTIP schemes are excluded. Free cash flow provides a measure of how successful the company is in creating cash during the period which is then able to be used by the Group at its discretion.
Cash conversion	None	See note APM 10	Adjusted operating cash flow post capex (less any property disposals which were part of restructuring programmes) divided by adjusted operating profit Cash conversion measures how effectively we convert profit into cash and tracks the management of our working capital and capital expenditure.
R&D cash spend as a percentage of revenue	None	See note APM 11	R&D cash spend and R&D investment as a percentage of revenue excludes Global Manufacturing Solutions which is a manufacturing services business and therefore has no R&D. To provide a measure of the company's expenditure on R&D relative to its overall size which may be helpful in considering the Group's longer term investment in future product pipeline.

APM 1 – Prior year revenue and adjusted operating profit at constant currency:

	Six months ended 30 June 2021			
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total
2021 revenue	68.2	109.6	57.8	235.6
Foreign exchange impact	2.0	5.7	2.4	10.1
2021 revenue at 2022 exchange rates	70.2	115.3	60.2	245.7

	Six months ended 30 June 2021					
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
2021 adjusted operating profit	3.6	8.5	7.4	19.5	(3.6)	15.9
Foreign exchange impact	0.4	0.8	0.5	1.7	(0.1)	1.6
2021 adjusted operating profit at 2022 exchange rates	4.0	9.3	7.9	21.2	(3.7)	17.5

APM 2 - Organic revenue:

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Six months ended 30 June Total
2022 revenue	68.8	135.3	65.1	269.2
Acquisitions	3.7	-	-	3.7
2022 revenue (excluding acquisitions)	65.1	135.3	65.1	265.5
2021 revenue	68.2	109.6	57.8	235.6
Foreign exchange impact	2.0	5.7	2.4	10.1
2021 revenue at 2022 exchange rates	70.2	115.3	60.2	245.7
Organic revenue increase (%)	(7%)	17%	8%	8%

APM 3 – Effective tax charge:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Adjusted operating profit	18.3	15.9	34.8
Net interest	(3.3)	(1.8)	(3.3)
Adjusted profit before tax	15.0	14.1	31.5
Adjusted tax	(3.4)	(2.8)	(6.2)
Adjusted effective tax rate	22.8%	19.6%	19.6%

APM 4 – Return on invested capital:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Adjusted operating profit	18.3	15.9	34.8
Adjusted operating profit H2 prior year (adjustment required for half year only)	18.9	14.3	-
Average invested capital	415.7	364.4	382.4
Return on invested capital	8.9%	8.3%	9.1%

APM 5 - Net capital and development expenditure (net capex):

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Purchase of property, plant and equipment	(5.1)	(6.0)	(14.6)
Proceeds from sale of investment property, plant and equipment and capital grants received	0.2	5.8	9.3
Capitalised development expenditure	(1.0)	(1.0)	(1.9)
Purchase of other intangibles	(0.1)	(0.2)	(0.5)
Net capital and development expenditure	(6.0)	(1.4)	(7.7)

APM 6 - Adjusted operating cash flow:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Adjusted operating profit	18.3	15.9	34.8
Adjustments for:			
Depreciation	6.8	6.7	13.6
Amortisation of intangible assets	1.1	1.3	2.5
Share based payment expense	2.5	1.5	3.8
Other items	0.3	1.2	1.1
Increase in inventories	(39.1)	(9.6)	(42.6)
Increase in receivables	(8.4)	(17.5)	(15.7)
Increase in payables and provisions	14.5	6.6	42.0
Adjusted operating cash flow	(4.0)	6.1	39.5
Special payments to pension funds	-	(2.7)	(5.5)
Restructuring and acquisition related costs	(7.0)	(6.4)	(15.0)
Net cash generated from operations	(11.0)	(3.0)	19.0
Net income taxes paid	(1.3)	(2.0)	(4.7)
Net cash flow from operating activities	(12.3)	(5.0)	14.3

APM 7 - Adjusted operating cash flow post capex:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Adjusted operating cash flow	(4.0)	6.1	39.5
Purchase of property, plant and equipment	(5.1)	(6.0)	(14.6)
Proceeds from sale of property, plant and equipment and government grants received	0.2	5.8	9.3
Capitalised development expenditure	(1.0)	(1.0)	(1.9)
Purchase of other intangibles	(0.1)	(0.2)	(0.5)
Adjusted operating cash flow post capex	(10.0)	4.7	31.8

APM 8 – Working capital cashflow:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Increase in inventories	(39.1)	(9.6)	(42.6)
Increase in receivables	(8.4)	(17.5)	(15.7)
Increase in payables and provisions	14.5	6.6	42.0
Items reported within other items in the statutory cashflow:			
Increase in provisions over trade receivables	-	1.6	1.6
Working capital cashflow	(33.0)	(18.9)	(14.7)

APM 9 – Free cash flow:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Net cash flow from operating activities	(12.3)	(5.0)	14.3
Net cash flow from investing activities	(14.3)	(1.9)	(8.2)
Add back: Acquisition of business	8.3	0.5	0.5
Payment of lease liabilities	(1.9)	(1.9)	(3.9)
Interest paid	(3.3)	(2.0)	(4.0)
Free cash flow	(23.5)	(10.3)	(1.3)

APM 10 – Cash conversion:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Adjusted operating profit	18.3	15.9	34.8
Adjusted operating cash flow post capex	(10.0)	4.7	31.8
Exclude: Property disposal proceeds as part of restructuring programmes	-	(5.8)	(9.1)
Adjusted operating cash flow post capex and excluding property disposals	(10.0)	(1.1)	22.7
Cash conversion	-55%	-7%	65%

APM 11 - R&D cash spend as a percentage of revenue:

£million	Six months ended 30 June 2022	Six months ended 30 June 2021	Year ended 31 December 2021
Revenue (excluding GMS)	133.9	126.0	256.1
R&D cash spend	5.4	5.8	11.4
R&D cash spend as a percentage of revenue	4.0%	4.6%	4.5%