

SPIRENT COMMUNICATIONS PLC
Full year results for the year ended 31 December 2020
Robust strategy delivering growth and resilient financial performance

\$ million	2020	2019	Change (%)
Order intake ¹	539.4	532.0	+1
Revenue	522.4	503.6	+4
Adjusted operating profit ²	103.5	92.9	+11
Adjusted operating margin ³ (%)	19.8	18.4	+1.4pp
Adjusted profit before tax ⁴	103.6	93.9	+10
Adjusted basic earnings per share ⁵ (cents)	14.68	13.40	+10
Reported operating profit	95.7	88.6	+8
Reported profit before tax	95.8	89.6	+7
Basic earnings per share (cents)	13.84	12.79	+8
Closing cash	241.2	183.2	+32
Dividend per share ⁶ (cents)	6.04	5.39	+12
Special dividend per share ⁶ (cents)	7.50	-	-

Eric Updyke, Chief Executive Officer, commented:

“Our results today provide further evidence that our strategy is working. Our business model has proved resilient, we have successfully navigated a challenging environment and we delivered strong earnings growth, without any financial support, use of furlough schemes or staff reductions due to COVID-19. Our operational performance, continued margin progression and effective working capital management, along with the opportunities we see ahead, give us confidence to increase our dividend and today commit to a special dividend.”

“Our mission is Promise. Assured. – a commitment to ensure that our telecoms, government and enterprise customers are able to keep their connectivity promises to their customers. That promise has never been more important than during COVID – connecting families, enabling people to work from home and serving emergency services through the pandemic. I am particularly proud of the way that our team has worked extremely hard this year, in difficult conditions, to make sure our customers can deliver on those commitments. I would like to thank the global Spirent team for their ongoing dedication and commitment to ensure we delivered our agenda.”

“We enter 2021 in a position of strength. Earlier this month, we commenced our targeted M&A activity adding octoScope to our portfolio, firmly establishing Spirent as the Wi-Fi-test leader and strengthening our 5G portfolio. With an expanded high-quality management team, and a world-class customer base that trusts us and respects our expertise, I remain optimistic about our ability to seize opportunities and ensure we are well positioned for continued sustainable, profitable growth. OctoScope expands Spirent’s leading capabilities in Wi-Fi and 5G testing, underscoring our ability and intention to invest in our market-leading technology. Our strong financial platform affords us this great flexibility to evolve and grow our business both organically and via M&A, with a focus on our three key strategic pillars: Customer Centricity, Innovation for Growth and Operational Excellence.”

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Financial highlights – strong delivery despite a challenging environment

- Book to bill across the year was 103, with the orderbook building as we entered the new financial year.
- Revenue up 4 per cent, with strong demand for both lab and live assurance solutions and our new 5G device testing solutions and services.
- Continued R&D investment across the portfolio totalling \$103 million, 20 per cent of revenue.
- Adjusted operating profit increased by 11 per cent to \$103.5 million, with adjusted operating margin improving to 19.8 per cent, up from 18.4 per cent in 2019.
- Cash closed at \$241 million following another year of effective working capital management.
- 12 per cent increase in full year dividend. Final dividend of 3.87 cents per share to be paid in April 2021.
- Special dividend declared of 7.50 cents per share, representing a total cash payment of \$45 million to be made in April 2021 with \$4.5 million extra funding to the pension scheme (subject to exchange rate movements).

Operational highlights – continuing progress across segments

- Secured over 600 5G-related wins across all geographies and continue to be well positioned for sustainable 5G-driven growth across our solutions and services portfolio.
- Strategic initiatives implemented:
 - Creation of a Services team to drive new pipeline of prospects which has gathered momentum during the year.
 - Organisation strengthened including new CTO office and Corporate M&A team.
 - Go-to-market evolution with further sales and marketing initiatives.
 - Following early success, key customer account management programme expanded.
 - Merger of Connected Devices into Lifecycle Service Assurance to leverage and accelerate 5G offering.
- COVID-19 impact:
 - Handled robustly – resilient supply chain with no disruption for customer shipments.
 - Not accepted any support from lending institutions nor made any furlough or staff reductions.
 - Continued vigilance to monitor customer spending patterns.
 - Continued to innovate and have found new ways to engage optimally with, and stay close to, customers during this period.

Lifecycle Service Assurance

- Delivered strong revenue and profit growth with increased closing orderbook.
- Good growth in both lab (Landslide) and live (VisionWorks) assurance portfolios.
- Expanded Landslide products sales beyond North America with significant wins in both EMEA and APAC.
- Grew VisionWorks customer base: three new North American logos with material order wins.
- Secured new customers from the Enterprise market for network and emulation assurance.
- Growth in demand for our lab-based 5G network test solutions, with a growing funnel of new Test-as-a-Service (TaaS) and Lab-as-a-Service (Laas) opportunities.
- Continued to win multi-year deals creating longer visibility.
- On 4 March, we acquired octoScope, a US-based business delivering Wi-Fi test services and together with our own Wi-Fi technology makes us the world leader in this fast-growing market which will support 5G infrastructure development.

Networks & Security

- Maintained our market leadership position with our world-leading technology and solutions for high-speed Ethernet and Positioning, Navigation and Timing (PNT).
- We experienced some softness in 400G customer spending.
- Positioning maintained a high win rate for GNSS defence projects in the United States and won more emerging new business in APAC; US government lab closures mid-year created some order softness, with a noticeable pick up in the last quarter.
- Wi-Fi gained increasing importance during the pandemic and as the new Wi-Fi 6 standard rolled out globally.
- We won 5G security services business at a Tier-1 US service provider, partially offsetting some pandemic-related softness in the lab-based applications and security test space.

Connected Devices

- Scaling of 5G network deployments and subsequent demand for our device location test solutions in the second half, led to robust full year revenue growth and operating margin.
- Field test services demand increased as 5G devices coming to market scaled.
- Solid growth in our services offerings as we benefited from service providers' eagerness to evaluate the readiness of rapidly-evolving 5G technology and benchmark their networks' user experience versus competitors.
- Expansion of our served markets into the government space with wins into multiple tactical use cases.
- From 1 January 2021 Connected Devices has been merged with Lifecycle Service Assurance to exploit technical leverage and accelerate our 5G success by optimising our solutions and services portfolio across both labs and operational networks.

Summary and outlook

Our strategy to focus on applying our market-leading technology and expertise to address key customer business challenges continues to yield success. In 2020, Spirent delivered another year of robust revenue growth and a material increase in earnings and cash despite the challenges ensuing from the pandemic, whilst also increasing R&D investments in all segments of the business.

We remain focused on increasing visibility and decreasing cyclical risks in our portfolio by expanding our services and software offerings. Order intake grew to \$539 million with a book to bill ratio of 103, building the orderbook for delivery in future years.

5G is an important enduring driver for Spirent and we continue to benefit across the portfolio from customers seeking our market-leading expertise and solutions to develop, deploy and secure their 5G infrastructure and network equipment. In order to maintain and grow our 5G leadership position, and capitalise on the accelerating opportunity, we have therefore increased our R&D investments in all segments of the business.

We continue to carefully manage the impact of COVID-19 on our business, and despite the challenging environment, we are still delivering well against our previously communicated targets whilst maintaining a healthy level of investment to continue to develop our leading technologies to sustain momentum and deliver attractive returns for shareholders. As a result, the Board is confident that the Group will continue to see sustainable, profitable growth in 2021 and beyond.

Chief Executive Officer's review

Throughout 2020, I have been immensely proud of Spirent. None of us could have anticipated how disruptive 2020 would be to our lives. The way Spirent has responded is beyond inspiring. We never lost focus on our unwavering support to our customers.

The foundation we have built was tested by COVID-19. Spirent proved resilient and the response by all segments of the Group by all accounts was exemplary. Our employees continued innovating and our supply chain remained strong. We remain focused on sustainable, profitable growth and are well positioned to achieve our ambition.

Market overview

Our customers have promised a new generation of technologies that will change the world. Spirent is the trusted partner that makes technology work from the lab to the real-world so our customers can keep those promises. By leveraging Spirent's expertise, our customers can accelerate time to market, reduce complexity and cost, optimise user experience and harden cybersecurity defences.

Our key market drivers remain strong, including complex networks, Cloud migration, location assurance, cybersecurity threats, and, most prominently, 5G. In 2020, Spirent maintained our 5G leadership, working across the lifecycle to test, assure and automate networks.

Strategy

In order to realise our ambition to be the global leader and trusted partner for innovative technology test and assurance solutions, we are focused on three strategic priorities:

- 1) **Customer Centricity** – increasing our share with existing customers, driving solutions-selling and expanding our footprint into new areas.
- 2) **Innovation for Growth** – innovating to extend our thought leadership in key growth trends, growing recurring revenue streams and commencing target M&A.
- 3) **Operational Excellence** – providing the foundation for profitable growth, the right team in place to support our ambition and actively committing to sustainability.

The CEO programme to evolve our strategy and drive improvement initiatives concluded in 2020. The initiative resulted in development of market growth plans including acceleration of assurance to support our customers in the lab and live environment and a new focus on services opportunities. This was complemented by a marketing reorganisation and the evolution of the senior management team to support our plans. Exceptional costs in the year were \$3.1 million.

In March of 2021, we acquired octoScope, a US-based technology company that provides market-leading Wi-Fi test solutions to the wireless industry. The need for reliable and secure Wi-Fi is greater than ever and our teams look forward to working together to address an increasing range of complex Wi-Fi challenges for our customers. This acquisition supports our strategy of sustainable, profitable growth by establishing Spirent as the firm market leader in the expanding Wi-Fi space, adding to our 5G solution portfolio. octoScope brings to us an impressive and well-known customer base, providing us with the opportunity to further leverage our established global routes to market and trusted relationships with our key accounts.

Customer Centricity

We strive to create a more agile collaborative organisation, capable of solving bigger problems for our customers. It is our deep relationships and trusted partnerships with our customers that have propelled us forward. During the year, we have made progress to increase share with existing customers, drive solutions-based selling, and expand our footprint into new segments and geographies.

In a “Connected Everything” world, we supported over 1,100 customers across 49 countries in 2020. Spirent has a diversified customer base, with no single customer accounting for more than 7 per cent of total revenue in 2020. We continue to win new logos across all segments.

Spirent adapted well to remote working and 2020 forced us to be innovative in the ways we stayed connected with customers. In response, our marketing team accelerated its digital-first strategy, with a new corporate website and blog as well as a new social media programme. Digital outreach is vital in this environment and with these efforts our website traffic and social engagement has continually increased. Our sales team has adapted well, pivoting to more virtual connections, hosting many webinars and remote demos for customers.

Our key account programme continues to deliver great success. These accounts enable us to move from transactional buying centres into ones with broader business impact. We continued to strategically invest in and expand this programme, adding key European accounts to the model.

As we continue to expand our geographic outreach, we have enhanced our sales organisation in the South Asia Pacific region and added new leaders for our US government and hyperscaler business. We also appointed a leader to focus on leveraging strategic partnerships to drive growth.

With our solutions-based selling and continued push into increased software and services, Spirent is successfully increasing visibility while decreasing cyclicity. New services initiatives are gaining traction with customers. Our services portfolio, including Test-as-a-Service and Lab-as-a-Service, enables us to strategically partner with customers to automate, validate and optimise their networks.

At Spirent, we stand behind our customers' promise to deliver a new generation of technologies, from the lab to the real world.

Innovation for Growth

As a global leader in test and assurance, it is vital that we invest to stay ahead on key emerging technologies. To maintain our leadership in key areas, we invested 20 per cent of revenue on research and development in 2020.

We continue to invest for the future, extending our thought leadership in key growth areas, including assurance for 5G, location, services and Cloud. With 5G accelerating, Spirent successfully secured over 600 5G-related wins across all geographies and continues to be well positioned for sustainable 5G-driven growth across our solutions and services portfolio. Throughout 2020, we launched new solutions and services while adding feature functionality to our existing solutions to address evolving customer needs.

In addition to solutions and services, we are innovating our business models. To achieve sustainable, profitable growth, Spirent is developing and growing recurring revenue streams to decrease cyclicality. With our talented team and refreshed, solutions-selling mindset, we are expanding our software and service offerings. New strategic initiatives are gaining traction with growth in demand for our lab-based 5G network test solutions and a growing funnel of new Test-as-a-Service and Lab-as-a-Service opportunities. Continuing to win multi-year deals is providing the Group with enhanced visibility.

In recognition of our continued leadership, we were awarded the plc award for “Innovation in Technology” during the year.

Operational Excellence

Our dedication to operational excellence was a key differentiator during this pandemic. Due to our strong financial management, world-class supply chain and innovative team, we continued to deliver to our customers throughout 2020 and did not layoff or furlough any employees due to COVID-19.

We continue to maintain a strong balance sheet with \$241.2 million of cash and no bank debt. In addition to investing in innovation, we remain invested in our people. In 2020, we onboarded new senior leaders to energise and continue pushing our organisation forward.

As we focus on sustainable, profitable growth, we are improving and organising our business to support our positive momentum. In early 2021, we made some organisational changes to build an even stronger foundation for scale – breaking down barriers, better enabling solution selling and focusing on leading edge technology. To accelerate the momentum built in 2020, we are combining our Connected Devices business unit into our Lifecycle Service Assurance business unit effective 1 January 2021. This change will enable a more integrated set of user experience assurance solutions and solve bigger problems for our customers.

In addition, the appointment of a CTO (Chief Technology Officer) will ensure we drive effective investment across our technical portfolio and are optimally placed to develop business solutions for our customers in existing and new markets as they emerge.

The geopolitical landscape remained turbulent in 2020 with US/China trade challenges. We navigated regulatory changes throughout the year and continue to work closely with our customers. As we move into 2021, we are closely monitoring the effect of a new administration in the US as it relates to international trade.

Sustainability and corporate responsibility are essential to the success of our business. At Spirent, we are committed to embedding sustainability into our products, people and procurement via our FuturePositive programme. We are proud of the work we do to contribute to our communities.

We will continue evaluating and rationalising our portfolio to meet the needs of our customers. We will look to grow our portfolio both organically and inorganically to keep pace with those objectives and the markets that we serve.

Capital allocation

Our continued strong financial management has delivered another year of strong free cash flow and despite COVID-19 our balance sheet remains strong and working capital remains very efficient. Our ability to deliver robust cash conversion allows us to implement our capital allocation policy as we have previously stated, which is to continue to invest into R&D to maintain our leading market positions and also to support our growth agenda with inorganic investments where we see opportunities that support our strategic growth plans whilst still maintaining a sensible level of cash.

Business review

In 2020, Spirent operated in three strategic business segments: **Networks & Security**, **Lifecycle Service Assurance** and **Connected Devices**. The Group meets the needs and expectations of our customers and capitalises on the business opportunities created as they:

- develop innovative devices, applications, network equipment and networks; and
- operate those networks and services.

We improve network performance and end user experience in our connected world and help create our smarter future.

From 1 January 2021 Connected Devices has been merged with Lifecycle Service Assurance to exploit technical leverage and accelerate our 5G success by optimising our solutions and services portfolio across both labs and operational networks, this will be reflected in the results and segmental business review at the 2021 Half Year results.

Networks & Security

Networks & Security is a world leader in high-speed Ethernet/IP performance testing, in Wi-Fi and automotive Ethernet, and develops test methodologies, tools and services for virtualised networks and Cloud. We provide consulting services, test tools, methodologies and proactive security validation solutions. Our world leadership in global navigation satellite system (GNSS) simulation solutions and services is expanding into the positioning, navigation and timing (PNT) market.

\$ million	2020	2019	Change (%)
Revenue	314.7	319.9	(1.6)
Operating profit ¹	65.3	73.9	(11.6)
Operating margin ²	20.7%	23.1%	(2.4pp)

Notes

1. Before exceptional items of \$0.8 million charged in 2020 (2019: \$1.1 million).
2. Operating profit before exceptional items as a percentage of revenue.

Performance highlights

- We expect a longer 400G Ethernet test market duration, as some customers delayed spend from the last quarter of 2020 into 2021. We retain good momentum with all of our key customers to support their infrastructure developments whilst they manage their budgets carefully at this time.
- Our Wi-Fi test solution and service offerings delivered strong growth as Wi-Fi gained increasing importance during the pandemic and new standards (Wi-Fi 6/6E) rolled out.
- Significant 5G security services wins with a Tier-1 service provider, extending Spirent's involvement with them as they deploy their 5G environments.
- Despite some mid-year softening due to lab closure impacts from COVID-19, our Positioning business delivered another robust performance year, benefiting from good momentum in all market segments, particularly commercial customers in the Americas and across APAC.

Accomplishments

High-speed Ethernet/IP, Cloud and virtualisation

- We saw robust 400G Ethernet test growth, with key wins that affirmed our product and market leadership. The Ethernet Alliance used Spirent 400G and Flexible Ethernet (FlexE) solutions to conduct ground-breaking interoperability testing across technologies from 10G to 400G at the Optical Networking and Communication Conference & Exhibition (OFC) 2020.
- Our Wi-Fi business grew in 2020, driven by our leadership in testing Wi-Fi 6 technology. Our industry-first Spirent TestCenter Wi-Fi 6 test solution continued to accelerate development and deployment of the technology, access points, gateways and for end-to-end testing, and also won a 2020 Best of Interop Tokyo award.
- Our Automotive Ethernet business secured wins at leading automotive original equipment manufacturers in APAC and Americas, as we met the growing need for compliance to industry standards.
- As the exclusive software-defined wide area networking (SD-WAN) Authorised Certification and Test Partner for the MEF global industry forum, Spirent continued to enable the world's leading service and technology providers to validate that their SD-WAN services and products conform to the MEF 70 global standard.

Applications performance and cybersecurity

- As security validation for product development and network rollouts assumed new importance in a work-from-home world, we leveraged our extensive end-to-end automated security test capability across all network layers and segments to achieve growth in our core markets.
- We broadened our strategic engagement with global industry forum MEF and its 3.0 standards evolution, actively contributing to the security aspects of multiple SD-WAN and secure access service edge working groups.
- We continued our involvement with the NetSecOPEN initiative, as its open and transparent security performance testing standards and community-driven initiatives grew in acceptance and importance with the demise of a leading proprietary test lab.

Position, navigation and timing

- We continued to lead in supply of advanced large scale test systems to US Military contractors and to modernisation of the global positioning system (GPS). In collaboration with our Spirent Federal Systems partner, we provided test tools and support to the development and deployment of the Modernised Navstar Security Algorithm, a key element in GPS modernisation.
- We leveraged the system level expertise gained in military applications into increasingly-complex test architectures in the commercial segment. These ranged from large scale over-the-air applications in anechoic chambers, to multi-sensor/multi-signal field record and playback systems for automotive testing in demanding urban environments.
- We broadened our simulation capability beyond core GNSS technology, with increased focus in complementary PNT signals and sensors. This is allowing Spirent to support system level integrators where several PNT signals are 'fused' to provide an overall PNT output with increased availability, accuracy and integrity.
- We launched new high-density hardware for our flagship GSS9000 GNSS simulation platform which doubled capacity in the same footprint. Also new in 2020 were SimHIL, which allows autonomous vehicle developers to integrate our low-latency platform into third party automotive-specific simulation environments, and SimIQ, our first software-based simulation solution, enabling us to engage earlier in our customers' design cycle.

Lifecycle Service Assurance

Our Lifecycle Service Assurance solutions and outcome-driven services support customers as they develop, deploy and optimise new technologies and service delivery models. From lab environments to live production networks we radically reduce the time, costs and risks associated with bringing new technologies to market. Utilising our breadth of coverage, coupled with our automation and analytics, we bridge the gap between development and operations teams to drive operational excellence across any product or service lifecycle.

\$ million	2020	2019	Change (%)
Revenue	127.7	111.2	14.8
Operating profit ¹	32.9	18.1	81.8
Operating margin ²	25.8%	16.3%	9.5pp

Notes

1. Before exceptional items of \$0.7 million charged in 2020 (2019: \$0.4 million).
2. Operating profit before exceptional items as a percentage of revenue.

Performance highlights

- Robust orders growth throughout the year, with a healthy backlog entering 2021.
- Good growth achieved for both our lab assurance (Landslide) and live assurance (VisionWorks) solutions.
- Strong revenue growth as we closed out the first wave of outcome-driven services, in conjunction with traditional product and licensing revenues has driven operating margin up.
- Growth in demand for our lab-based 5G network test solutions, with a growing funnel of new Test (TaaS) and Lab (LaaS) as-a-Service opportunities.
- Strong demand for our operational network active service assurance solutions, with expansion of our US customer base as we added key new customers.

Accomplishments

Customer growth and market expansion

- In 2020 we experienced strong growth in both our lab (Landslide) and live (VisionWorks) assurance portfolios. This growth was global as we added five net-new Landslide customers in EMEA and APAC.
- We added three net-new customers in North America and APAC for VisionWorks, one of which is a major Tier-1 provider.
- Our Automation (Velocity) product paved the way for broader penetration of the enterprise market as we added two net-new enterprise customers in 2020.
- We made public announcements of Spirent Landslide 5G core network test engagements with China Telecom, Japan's Rakuten Mobile and Sri Lanka's Dialog Axiata during 2020.

Positive key business indicators

- In conjunction with customer growth and market expansion, key business indicators that support our long-term sustainable growth objective were also positive, including:
 - Significant year-on-year increase in pipeline creation and funnel coverage.
 - Strong increase in multi-year subscriptions and support contracts.
 - Funnel growth in newly established outcome-driven service offerings.

Recognition

- We won a 2020 Fierce Innovation Award from Fierce Telecom in the Artificial Intelligence/Analytics/Automation category for the unique ability of our industry-leading Velocity automation solution to scale customer development environments while dramatically reducing costs.
- For the fourth successive year, Spirent was a finalist for Light Reading's Leading Lights Outstanding Test & Measurement Vendor award. Nomination highlights included Spirent's continued leadership in 5G testing and assurance solutions, while expanding its market footprint through new and innovative Test-as-a-Service offerings.
- Spirent was also recognised by Leading Lights as a finalist in the Most Innovative SD-WAN Product Strategy category. Highlights included Spirent being at the forefront, in collaboration with MEF, of delivering the new MEF 3.0 SD-WAN standard.
- Spirent won a 2019 plc award in the UK for Innovation in Technology during the year, citing our leadership in the delivery of 5G by reducing the complexity and economics of testing, verification and delivery.

Connected Devices

Ubiquitous wireless connectivity drives our modern lifestyle. Our mission is to help those who build wireless devices and networks to meet their promise of delivering the very best end-user experience. Our live network testing and digital twins for network and radio systems let technology providers, manufacturers and service providers get to market faster with peak performance.

\$ million	2020	2019	Change (%)
Revenue	80.0	72.5	10.3
Operating profit ¹	14.5	9.5	52.6
Operating margin ²	18.1%	13.1%	5.0pp

Notes

1. Before exceptional items of \$0.2 million charged in 2020 (2019: \$0.3 million).
2. Operating profit before exceptional items as a percentage of revenue.

Performance highlights

- Strong revenue growth and good margins driven by the scaling of 5G network deployments and growth in the number of 5G smartphone models that require location testing.
- Double-digit growth in our services offerings as service providers are keen to evaluate the readiness of rapidly-evolving 5G technology and benchmark their user experience versus competitors.
- Innovative 5G lab solutions delivered to the market for millimetre-Wave (mmWave) antenna evaluation and for research into new 5G-enabled applications beyond traditional consumer use cases.
- Expansion of our served markets into the government space with wins into multiple tactical use cases.

Accomplishments

During 2020, the Connected Devices business unit advanced its strategic priorities with significant accomplishments.

Capitalising on new 5G technologies and deployment growth

- Our 5G test solution, used to evaluate the location performance of 5G smartphones, achieved good growth as it was adopted across the ecosystem by the world's leading chipset developers, smartphone manufacturers, test labs and Tier-1 mobile operators.
- Our innovative Vertex radio channel emulation solutions continued to be chosen by mobile infrastructure vendors and smartphone manufacturers to evaluate the over-the-air antenna performance of 5G mmWave and massive multiple-input multiple-output radio technology, as well as the network elements being developed for disaggregated Open Radio Access Network architecture.
- Our Umetrix Data solution became the go-to tool for market-pioneering 5G chipset vendors, field test organisations and service providers as they evaluated the dramatically-higher mobile data rates enabled by 5G.

Growing our service offerings

- As the 5G technologies required to achieve US nationwide coverage were implemented, leading mobile network operators turned to Spirent, with our expertise gained from involvement in 5G research and development, to evaluate the service readiness of these new deployments. These consultative services represent a new business direction, beyond device certification testing.
- During 2020, we navigated challenging field test conditions brought on by the COVID-19 pandemic and grew our Fit4Launch device acceptance test service business on the back of demand to test 5G services in new operating bands on a rapidly-growing number of 5G-enabled devices.
- The battle for cellular subscriber market share remains highly competitive and the industry places a high value on benchmarking the consumer's user experience versus alternate suppliers. As a trusted adviser to the industry, this has generated additional opportunities for Spirent's field test services.

Financial review

Group overview

We delivered another year of robust revenue and profit growth despite the macro-economic backdrop which gives us further confidence that our strategy is working. Our customers continue to invest in 5G related infrastructure and solutions, a trend we expect to continue. Our operational execution model remains robust and we continue to invest in our leading technology portfolio and our people.

Order intake at \$539.4 million, compared to \$532.0 million in 2019, resulted in a book to bill ratio of 103. In particular, Lifecycle Service Assurance delivered strong growth and we continue to win multi-year contracts increasing order backlog as we enter 2021.

Revenue grew by 3.7 per cent to \$522.4 million and was driven by strong demand for our assurance solutions in both the lab and live environments as the 5G networks continue to roll out. Connected Devices also delivered strong revenue growth driven by demand for our new 5G device testing, field testing and channel emulator sales. We experienced a small year-on-year decline in our Networks & Security operating segment primarily as a result of order intake delays within our high-speed Ethernet business as COVID-19 impacted customer spending patterns and lab closures for our Positioning products in the second half of the year.

Whilst continuing to manage the cost base effectively, we increased investment in product development across the portfolio targeting high-growth, high-margin areas. We also made further investment to expand our key account management programme and continued investment in our cross-portfolio services offerings to underpin future growth plans.

Gross margin remains strong at 73 per cent and adjusted operating profit grew 11.4 per cent to \$103.5 million, from \$92.9 million in 2019. Adjusted operating margin has increased by 1.4 percentage points to 19.8 per cent, from 18.4 per cent last year.

The CEO strategic review was concluded in the year with costs amounting to \$3.1 million charged to exceptional items (2019: \$1.8 million).

The Group's effective tax rate of 13.6 per cent is broadly consistent with 2019 (13.0 per cent). Adjusted basic earnings per share has increased by 9.6 per cent, up from 13.40 cents last year to 14.68 cents for 2020.

We retain a strong balance sheet and cash at bank closed at \$241.2 million, up \$58.0 million on the position at the end of last year, with free cash flow of \$102.6 million.

As a result of the strong financial performance, we propose a 12 per cent increase to the full year dividend per share, from 5.39 cents to 6.04 cents, and looking forward we maintain our progressive dividend policy ensuring that we sustain dividend cover of 2 to 2.5 times adjusted earnings. In addition, in line with our capital allocation policy, the Board has considered the Company's cash position and as a result is recommending a special dividend of 7.50 cents (5.40 pence) per share.

The following table shows summary financial performance for the Group:

\$ million	2020	2019	Change (%)
Order intake ¹	539.4	532.0	+1.4
Revenue	522.4	503.6	+3.7
Gross profit	383.4	368.6	+4.0
Gross margin (%)	73.4	73.2	+0.2pp
Adjusted operating costs ²	279.9	275.7	+1.5
Adjusted operating profit ²	103.5	92.9	+11.4
Adjusted operating margin ³ (%)	19.8	18.4	+1.4pp
Reported operating profit	95.7	88.6	+8.0
Effective tax rate ⁴ (%)	13.6	13.0	+0.6pp
Reported profit before tax	95.8	89.6	+6.9
Adjusted basic earnings per share ⁵ (cents)	14.68	13.40	+9.6
Basic earnings per share (cents)	13.84	12.79	+8.2
Free cash flow ⁶	102.6	100.1	+2.5
Closing cash	241.2	183.2	+31.7
Final dividend per share ⁷ (cents)	3.87	3.45	+12.2
Special dividend per share ⁷ (cents)	7.50	-	-

Notes

- Order intake represents commitments from customers to purchase goods and/or services that will ultimately result in recognised revenue.
- Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to \$7.8 million in total (2019: \$4.3 million).
- Adjusted operating profit as a percentage of revenue in the period.
- Effective tax rate is the adjusted tax charge, before tax on adjusting items, expressed as a percentage of adjusted profit before tax.
- Adjusted basic earnings per share is based on adjusted earnings as set out in note 6 of Notes to the full year consolidated financial statements.
- Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payment of lease liabilities and finance lease payments received.
- Dividends are determined in US Dollars and paid in Sterling at the exchange rate prevailing when the dividend is proposed.
 - The final dividend proposed for 2020 of 3.87 cents per Ordinary Share is equivalent to 2.78 pence per Ordinary Share.
 - The special dividend proposed for 2020 of 7.50 cents per Ordinary Share is equivalent to 5.40 pence per Ordinary Share.

Note on Alternative Performance Measures (APM)

The performance of the Group is assessed using a variety of performance measures, including APMs which are presented to provide users with additional financial information that is regularly reviewed by management. These APMs are not defined under IFRS and therefore may not be directly comparable with similarly identified measures used by other companies.

The APMs adopted by the Group are defined in the appendix. The APMs which relate to adjusted income statement lines are presented and reconciled to GAAP measures using a columnar approach on the face of the income statement and can be identified by the prefix 'adjusted' in the commentary. All APMs are clearly identified as such, with explanatory footnotes to the tables of financial information provided, and reconciled to reported GAAP measures in the Financial review or Notes to the full year consolidated financial statements.

Revenue

\$ million	2020	% of total	2019	% of total
Revenue by segment				
Networks & Security	314.7	60.3	319.9	63.5
Lifecycle Service Assurance	127.7	24.4	111.2	22.1
Connected Devices	80.0	15.3	72.5	14.4
	522.4	100.0	503.6	100.0
Revenue by geography				
Americas	276.2	52.9	266.1	52.8
Asia Pacific	189.2	36.2	187.8	37.3
Europe, Middle East and Africa	57.0	10.9	49.7	9.9
	522.4	100.0	503.6	100.0

Total Group revenue grew by \$18.8 million to \$522.4 million in 2020, an increase of 3.7 per cent over the prior year.

The Networks & Security operating segment saw a slight decline in revenue of 1.6 per cent. We experienced some delay in high-speed Ethernet testing by service providers as COVID-19 impacted customer spending patterns and following lab and office closures for US government defence contractors, we experienced reduced demand mid-year for our Positioning products.

Revenue at Lifecycle Service Assurance increased 14.8 per cent year-on-year driven by demand for both our Landslide lab solution and VisionWorks live network solution, as customers invested to verify and assure 5G. We also experienced robust growth in order intake year-on-year, growing the orderbook as the value of multi-year deals increased over 2019.

Connected Devices delivered a strong performance with growth in revenue of 10.3 per cent, driven by increased demand for our 5G device test and strong demand for our field test Fit4Launch product.

Geographically, we saw growth in revenue in all regions and closed the year with a solid orderbook. The Asia Pacific region still makes up 36 per cent of our portfolio, where we had success during the year in securing new business outside of China.

Gross margin

\$ million	2020	%	2019	%
Networks & Security	229.6	73.0	232.3	72.6
Lifecycle Service Assurance	102.1	80.0	88.6	79.7
Connected Devices	51.7	64.6	47.7	65.8
	383.4	73.4	368.6	73.2

Gross margin for 2020 remains strong at 73.4 per cent (2019: 73.2 per cent). The Networks & Security and Lifecycle Service Assurance operating segments achieved an improvement in gross margin, benefiting from a higher proportion of software revenue. Connected Devices gross margin had a slight decline driven by increased services content.

Adjusted operating costs

\$ million	2020	2019
Product development	103.1	96.5
Selling and marketing	123.4	129.2
Administration ¹	53.4	50.0
Adjusted operating costs¹	279.9	275.7
Networks & Security	164.3	158.4
Lifecycle Service Assurance	69.2	70.5
Connected Devices	37.2	38.2
Corporate	9.2	8.6
Adjusted operating costs¹	279.9	275.7

Note

1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to \$7.8 million in total (2019: \$4.3 million).

Total Group adjusted operating costs were up \$4.2 million or 1.5 per cent in 2020 compared to last year. The emphasis remained on effective resource allocation and careful cost management.

The overall investment in product development increased year-on-year from \$96.5 million to \$103.1 million, maintaining our targeted 20 per cent of revenue, to maximise our mid-term growth potential. Investment in the sales and marketing organisation was targeted on expanding our key account management programme to drive incremental business with our most valuable customers and developing routes to market for our new technologies to a broadening customer base. Selling and marketing costs reduced by \$5.8 million, from \$129.2 million to \$123.4 million, mainly as a result of reduced travel which allowed investment opportunities into other areas as we continue to evolve the business structure to support growth.

In addition, the appointment of a CTO (Chief Technology Officer) will ensure we drive effective investment across our technical portfolio and are optimally placed to develop business solutions for our customers in existing and new markets as they emerge.

Corporate costs include improvement initiatives including a review of our go-to-market strategy and pricing approach to maximise our technical intellectual property.

Operating profit

\$ million	2020	Adjusted operating margin ^{1, 2} %	2019	Adjusted operating margin ^{1, 2} %
Networks & Security	65.3	20.7	73.9	23.1
Lifecycle Service Assurance	32.9	25.8	18.1	16.3
Connected Devices	14.5	18.1	9.5	13.1
Corporate	(9.2)		(8.6)	
Adjusted operating profit¹	103.5	19.8	92.9	18.4
Other items (charged)/credited in arriving at operating profit:				
Exceptional items	(3.1)		0.5	
Acquisition related costs	-		(0.1)	
Acquired intangible asset amortisation	(0.5)		(1.2)	
Share-based payment	(4.2)		(3.5)	
Reported operating profit	95.7		88.6	

Notes

1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to \$7.8 million in total (2019: \$4.3 million).
2. Adjusted operating profit as a percentage of revenue in the period.

Adjusted operating profit increased by \$10.6 million or 11.4 per cent to \$103.5 million in 2020, compared with \$92.9 million in 2019. Adjusted operating margin increased by 1.4 percentage points to 19.8 per cent, from 18.4 per cent in 2019.

Reported operating profit was up by \$7.1 million or 8.0 per cent to \$95.7 million (2019: \$88.6 million). Total adjusting items were higher in 2020 at \$7.8 million, compared to \$4.3 million in 2019, mainly due to income of \$2.3 million credited to exceptional items last year, see below.

Exceptional items

Costs of \$3.1 million have been charged to exceptional items in 2020, relating to the conclusion of a strategic review instigated by Spirent's CEO, appointed 1 May 2019, involving a number of initiatives designed to evolve the strategic direction of Spirent to maximise market opportunities by creating a more agile, customer-focused organisation. These include a strategic focus on recurring revenue streams over time, a strengthened leadership team and development of our sales and marketing structure to drive improved effectiveness to exploit our leading technologies.

In 2019, the Group recognised \$0.5 million of exceptional income in relation to:

- 1) a refund of \$2.3 million following a successful claim for reimbursement of VAT paid on imports with respect to a compliance dispute with French Customs concerning the valuation and classification of imports into France which commenced in 2011; and
- 2) \$1.8 million of costs associated with a strategic review instigated by Spirent's CEO, as described above, which continued and concluded in 2020.

Acquired intangible asset amortisation and share-based payment

As a result of some acquired intangible assets reaching the end of their useful economic lives and no longer being amortised, acquired intangible asset amortisation has continued to reduce, decreasing to \$0.5 million in 2020 from \$1.2 million in 2019.

Share-based payment has increased to \$4.7 million in 2020 (2019: \$3.9 million), of which \$4.2 million (2019: \$3.5 million) has been treated as an adjusting item. This increase reflects the incremental cost associated with new awards.

Currency impact

The Group's revenue and costs are primarily denominated in US Dollars or US Dollar-linked currencies. Currency exposures arise from trading transactions undertaken by the Group in foreign currencies and on the retranslation of the operating results and net assets of overseas subsidiaries.

The Group's income statement includes a foreign exchange loss, included in administration costs, of \$0.6 million (2019: \$0.6 million) arising from transacting in foreign currencies, primarily US Dollars in the United Kingdom, and the translation of foreign currency cash balances.

Forward foreign currency exchange contracts are entered into to manage the exposure arising from transacting in US Dollars in the United Kingdom.

Although the most significant currency exposure arises in relation to movements in Pound Sterling against the US Dollar, there are other less significant currency exposures, notably the Euro and Chinese Yuan.

Finance income and costs

Interest income of \$1.4 million was earned from cash on deposit (2019: \$2.7 million) and \$0.2 million (2019: \$0.1 million) of interest income was recognised in relation to the UK defined benefit pension plans. The decrease in bank interest received year-on-year reflected lower global interest rates. Surplus funds are held principally in the United Kingdom and United States on short-term or overnight deposit and earn market rates of interest.

Finance costs in 2020 were \$1.5 million (2019: \$1.8 million), \$1.4 million (2019: \$1.7 million) of which related to interest on lease liabilities.

Tax

The adjusted effective tax rate, being the adjusted tax charge expressed as a percentage of adjusted profit before tax, shown on the face of the consolidated income statement, was 13.6 per cent in 2020, slightly up from 13.0 per cent in 2019.

Spirent's effective tax rate continues to benefit from the United Kingdom Patent Box Scheme, the United States R&D Tax Credit, foreign tax credits and a current year recognition of deferred tax assets in the United States.

Going forward it is anticipated that Spirent's effective tax rate will be maintained at around 14-15 per cent if statutory tax rates do not materially change. As a large proportion of the Group's profit is

generated in the United States, the effective tax rate is exposed to changes in US tax legislation. The new administration has indicated their desire to increase corporate tax rates and other countries may also be considering raising their corporate tax rates. The UK budget announcements on 3 March 2021 included an increase to the UK corporation tax rate to 25 per cent, which is due to be effective from 1 April 2023. As a result, we will be closely monitoring all proposed corporate tax rates and other tax legislative changes for their impact on the Group's effective tax rate.

Earnings per share

Adjusted basic earnings per share was up 9.6 per cent to 14.68 cents (2019: 13.40 cents). Basic earnings per share was 13.84 cents (2019: 12.79 cents). There were 609.7 million (2019: 609.9 million) weighted average Ordinary Shares in issue. See note 6 of Notes to the full year consolidated financial statements on page 33 for the calculation of earnings per share.

Financing and cash flow

The Group delivered very strong cash generation in 2020, driven by higher operating profit and effective working capital management. Changes in working capital, reflected within cash flow from operations, benefited from our continued focus on improving trade receivables collection.

Free cash flow for 2020 increased year-on-year coming in at \$102.6 million, compared to \$100.1 million in 2019, resulting in a free cash flow conversion which represented 115 per cent of adjusted earnings (2019: 123 per cent).

Free cash flow is set out below:

\$ million	2020	2019
Cash flow from operations	132.0	124.9
Tax paid	(10.8)	(5.6)
Net cash inflow from operating activities	121.2	119.3
Interest received	1.5	2.6
Net capital expenditure	(9.0)	(11.9)
Payment of lease liabilities, principal and interest	(11.6)	(10.3)
Lease payments received from finance leases	0.5	0.4
Free cash flow	102.6	100.1

Free cash flow includes a net cash outflow in respect of exceptional items charged in 2019 and 2020 of \$3.1 million (2019: \$5.5 million in respect of exceptional items charged in 2018 and 2019).

Tax payments made in the year increased year-on-year to \$10.8 million (2019: \$5.6 million). In addition to the increase in profits that resulted in higher tax payments in 2020, the timing of when tax payments are due also impacts the amount of tax cash paid in 2020. \$3.8 million of tax paid in 2020 related to the prior year (2019: \$1.3 million). Net capital expenditure of \$9.0 million was slightly down on the prior year (2019: \$11.9 million). Capital expenditure in the period was predominantly incurred on demonstration and test equipment.

In 2020, the final dividend for 2019 and an interim dividend for 2020, totalling \$33.6 million, were paid. This compared to total dividends of \$28.6 million paid in 2019. In addition, 4.1 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of \$11.9 million (2019: 4.0 million shares at a cost of \$8.6 million).

Following these payments, cash and cash equivalents closed at \$241.2 million at 31 December 2020, compared with \$183.2 million at 31 December 2019. There continues to be no bank debt.

Defined benefit pension plans

The Group operates two funded defined benefit pension plans in the United Kingdom, both of which are closed to new entrants.

The accounting valuation of the funded defined benefit pension plans at 31 December 2020 gave rise to a net surplus of \$13.0 million, compared with a net surplus of \$11.6 million at 31 December 2019. The 31 December 2020 position has benefited from contributions paid to the plans in the year of \$6.7 million (2019: \$6.6 million) partially offset by a net actuarial loss of \$5.3 million (2019: gain of \$2.7 million), arising due to a reduction in the discount rate.

The latest triennial actuarial valuation dated 31 March 2018 indicated a deficit of £22.5 million, calculated on a technical provisions basis using more prudent assumptions than the accounting valuation, particularly in relation to discount rate, inflation and demographic. A deficit reduction plan has been agreed with the Trustees which requires the Company to pay an annual contribution of £5.0 million, increasing in line with CPI, through to June 2023 (or earlier if self-sufficiency is reached). In addition, the Company will fund the plan by an amount equal to 10 per cent of any special dividend paid during that period amounting to \$30 million or over.

Additionally, there is a liability for an unfunded plan of \$0.7 million (31 December 2019: \$0.7 million).

The Group also operates a deferred compensation plan for employees in the United States. As at 31 December 2020, the deferred compensation plan deficit amounted to \$5.7 million (2019: \$4.8 million). The key financial assumptions include a discount rate used to discount plan liabilities of 2.1 per cent (2019: 2.9 per cent) and an expected investment yield of 6.4 per cent (2019: 6.4 per cent).

Balance sheet

The consolidated balance sheet is set out on page 25.

Overall, net assets have increased by \$40.5 million to \$442.8 million at 31 December 2020, from \$402.3 million at 31 December 2019. Much of the increase arises from the change in cash and cash equivalents, which have grown by \$58.0 million to \$241.2 million (2019: \$183.2 million).

In terms of non-current assets, these have decreased by \$4.2 million. The UK defined benefit pension plan surplus has increased by \$1.4 million to \$13.0 million and property, plant and equipment reduced by \$3.7 million.

Current assets have increased by \$49.3 million, primarily reflecting the increase in cash. Strong cash collection has decreased receivables by \$10.6 million year-on-year on increased revenue, with closing days sales outstanding at 57 having declined from 61 days at 31 December 2019; an outstanding achievement in a difficult pandemic environment.

Liquidity and dividend policy

The Board's intention continues to be maintaining a cash positive balance sheet over the medium to long term. This should allow the Company to maintain a strong capital position in the face of business risks, trading fluctuations and working capital demands.

The strong cash generation of the Group allows continued investment into R&D to maintain our market-leading positions and inorganic investments where opportunities support our growth plans. If and when it is deemed appropriate, the Company may take on modest gearing to fund inorganic investments.

The Board will regularly review the Company's balance sheet in light of current and expected trading performance and cash generation, working capital requirements and expected organic and inorganic investments. To the extent the Company has excess cash, it will consider returning such cash to shareholders. The Board will consider from time to time the appropriate mechanism for returning surplus cash to shareholders.

The Board has implemented a progressive dividend policy maintaining cover in the range of 2 to 2.5 times adjusted earnings.

Dividend

The Board is recommending the payment of a final dividend for 2020 of 3.87 cents (2.78 pence) per share which, together with the interim dividend of 2.17 cents (1.67 pence) per share paid in September 2020, brings the full year dividend to 6.04 cents (4.45 pence) per share, a dividend cover of 2.4 times adjusted earnings. This is a 12 per cent increase compared to the full year dividend for 2019. In Sterling terms this represents an increase of 4 per cent.

Special dividend

The Board has also considered the Company's cash position in line with the policies outlined above. As a result, it has decided to recommend a special dividend of 7.50 cents (5.40 pence) per share which equates to a cash distribution of circa \$45 million and an additional pension funding contribution of \$4.5 million (subject to exchange rate movements).

Subject to approval by shareholders at the Annual General Meeting on 28 April 2021, the final and special dividends will be paid on 30 April 2021 to shareholders on the register at 19 March 2021. Payment to ADR holders will be made on 7 May 2021. In total, the payment of the final and special dividends for 2020 will consume approximately \$69 million of cash (subject to exchange rate movements).

Operating segments

Following a review of how our organisational structure supports our growth plans, effective 1 January 2021, the Connected Devices business will be merged into our Lifecycle Service Assurance segment to provide comprehensive end-to-end lab and live solutions to customers. Going forward the combined business will be reported as a single Lifecycle Service Assurance segment.

Events after the balance sheet date

On 4 March 2021, Spirent acquired octoScope, Inc (octoScope), a company based in the United States for an initial cash consideration of \$55 million, subject to customary purchase price adjustments. Contingent consideration of up to \$18 million is payable based on annual revenue growth targets for 2021 and 2022 and retention of key staff. The transaction was funded by surplus cash in the Group.

octoScope provides market-leading accurate, repeatable and automated wireless test solutions and methodologies to the wireless industry. Its test solutions leverage patented technology to provide automated Wi-Fi and 5G testing in emulated real-world environments, including the Wi-Fi 6 and 6E technologies.

octoScope will be incorporated into our Lifecycle Service Assurance operating segment along with our emerging Wi-Fi revenue stream currently residing in our high-speed Ethernet business within the Networks & Security operating segment.

Consolidated income statement

\$ million	Notes	Year ended 31 December 2020			Year ended 31 December 2019		
		Adjusted	Adjusting items ¹	Reported	Adjusted	Adjusting items ¹	Reported
Revenue	3	522.4	-	522.4	503.6	-	503.6
Cost of sales		(139.0)	-	(139.0)	(135.0)	-	(135.0)
Gross profit		383.4	-	383.4	368.6	-	368.6
Product development	3	(103.1)	-	(103.1)	(96.5)	-	(96.5)
Selling and marketing		(123.4)	-	(123.4)	(129.2)	-	(129.2)
Administration		(53.4)	-	(53.4)	(50.0)	-	(50.0)
Other items		-	(7.8)	(7.8)	-	(4.3)	(4.3)
Operating profit		103.5	(7.8)	95.7	92.9	(4.3)	88.6
Other items (charged)/credited in arriving at operating profit:							
Exceptional items	4	-	(3.1)	(3.1)	-	0.5	0.5
Acquisition related costs	11	-	-	-	-	(0.1)	(0.1)
Acquired intangible asset amortisation		-	(0.5)	(0.5)	-	(1.2)	(1.2)
Share-based payment		-	(4.2)	(4.2)	-	(3.5)	(3.5)
Other items		-	(7.8)	(7.8)	-	(4.3)	(4.3)
Finance income		1.6	-	1.6	2.8	-	2.8
Finance costs		(1.5)	-	(1.5)	(1.8)	-	(1.8)
Profit before tax		103.6	(7.8)	95.8	93.9	(4.3)	89.6
Tax	5	(14.1)	2.7	(11.4)	(12.2)	0.6	(11.6)
Profit for the year attributable to owners of the parent Company		89.5	(5.1)	84.4	81.7	(3.7)	78.0
Earnings per share (cents)	6						
Basic		14.68		13.84	13.40		12.79
Diluted		14.53		13.71	13.23		12.63

Note

1. Adjusting items comprise exceptional items, acquisition related costs, amortisation of acquired intangible assets, share-based payment, tax on adjusting items and any over/under provision in respect of prior year tax.

The performance of the Group is assessed using a variety of non-GAAP alternative performance measures which are presented to provide additional financial information that is regularly reviewed by management. Adjusting items are identified and excluded by virtue of their size, nature or incidence as they do not reflect management's evaluation of the underlying trading performance of the Group. The alternative performance measures are presented in the appendix.

Consolidated statement of comprehensive income

\$ million	Note	Year ended 31 December	
		2020	2019
Profit for the year attributable to owners of the parent Company		84.4	78.0
Other comprehensive income/(loss)			
Items that may subsequently be reclassified to profit or loss:			
– Exchange differences on retranslation on foreign operations		1.0	1.9
Items that will not subsequently be reclassified to profit or loss:			
– Re-measurement of the net defined benefit pension asset	9	(5.3)	2.7
– Income tax effect of re-measurement of defined benefit pension asset		1.0	(0.5)
– Re-measurement of the deferred compensation liability	9	(0.3)	(0.4)
– Income tax effect of re-measurement of the deferred compensation liability		0.1	0.1
		(4.5)	1.9
Other comprehensive income/(loss)		(3.5)	3.8
Total comprehensive income for the year attributable to owners of the parent Company		80.9	81.8

Consolidated balance sheet

\$ million	Notes	At 31 December	
		2020	2019
Assets			
Non-current assets			
Intangible assets		159.9	160.3
Property, plant and equipment		25.8	29.5
Right-of-use assets		23.3	26.0
Trade and other receivables		6.8	6.9
Assets recognised from costs to obtain a contract		0.3	0.3
Defined benefit pension plan surplus	9	13.0	11.6
Deferred tax asset		23.7	22.4
		252.8	257.0
Current assets			
Inventories		22.3	20.6
Trade and other receivables		132.3	142.8
Assets recognised from costs to obtain a contract		0.6	0.5
Other financial assets		0.2	0.1
Current tax asset		0.4	0.5
Cash and cash equivalents		241.2	183.2
		397.0	347.7
Total assets		649.8	604.7
Liabilities			
Current liabilities			
Trade and other payables		(73.6)	(81.8)
Contract liabilities		(65.1)	(55.5)
Lease liabilities		(8.2)	(8.5)
Current tax liability		(2.1)	(3.8)
Provisions	8	(6.2)	(4.8)
		(155.2)	(154.4)
Non-current liabilities			
Trade and other payables		(1.0)	(1.0)
Contract liabilities		(18.8)	(13.6)
Lease liabilities		(20.0)	(24.5)
Deferred tax liability		(2.0)	-
Defined benefit pension plan deficit	9	(6.4)	(5.5)
Provisions	8	(3.6)	(3.4)
		(51.8)	(48.0)
Total liabilities		(207.0)	(202.4)
Net assets		442.8	402.3
Capital and reserves			
Share capital		27.9	26.8
Share premium account		27.6	26.6
Capital redemption reserve		18.0	17.4
Other reserves		12.5	15.2
Translation reserve		11.1	10.1
Retained earnings		345.7	306.2
Total equity attributable to owners of the parent Company		442.8	402.3

Consolidated statement of changes in equity

\$ million	Notes	Attributable to the equity holders of the parent Company						Total equity
		Share capital	Share premium account	Capital redemption reserve	Other reserves	Translation reserve	Retained earnings	
At 1 January 2019		26.0	25.7	16.8	17.5	8.2	257.7	351.9
Profit for the year		-	-	-	-	-	78.0	78.0
Other comprehensive income ¹		-	-	-	-	1.9	1.9	3.8
Total comprehensive income		-	-	-	-	1.9	79.9	81.8
Share-based payment		-	-	-	-	-	3.9	3.9
Tax credit on share incentives		-	-	-	-	-	1.9	1.9
Equity dividends	7	-	-	-	-	-	(28.6)	(28.6)
Employee Share Ownership Trust	13	-	-	-	-	-	(8.6)	(8.6)
Exchange adjustment		0.8	0.9	0.6	(2.3)	-	-	-
At 1 January 2020		26.8	26.6	17.4	15.2	10.1	306.2	402.3
Profit for the year		-	-	-	-	-	84.4	84.4
Other comprehensive income/(loss) ²		-	-	-	-	1.0	(4.5)	(3.5)
Total comprehensive income		-	-	-	-	1.0	79.9	80.9
Share-based payment		-	-	-	-	-	4.7	4.7
Tax credit on share incentives		-	-	-	-	-	0.4	0.4
Equity dividends	7	-	-	-	-	-	(33.6)	(33.6)
Employee Share Ownership Trust	13	-	-	-	-	-	(11.9)	(11.9)
Exchange adjustment		1.1	1.0	0.6	(2.7)	-	-	-
At 31 December 2020		27.9	27.6	18.0	12.5	11.1	345.7	442.8

Notes

1. The amount included in other comprehensive income for 2019 of \$1.9 million represents re-measurement gains on the net defined benefit pension asset of \$2.7 million, net of a tax charge of \$0.5 million, and re-measurement losses on the deferred compensation liability of \$0.4 million, net of a tax credit of \$0.1 million. The amount included in the translation reserve of \$1.9 million represents other comprehensive income related to the translation of foreign operations.
2. The amount included in other comprehensive income/(loss) for 2020 of \$4.5 million represents re-measurement losses on the net defined benefit pension asset of \$5.3 million, net of a tax credit of \$1.0 million, and re-measurement losses on the deferred compensation liability of \$0.3 million, net of a tax credit of \$0.1 million. The amount included in the translation reserve of \$1.0 million represents other comprehensive income related to the translation of foreign operations.

Consolidated cash flow statement

\$ million	Notes	Year ended 31 December	
		2020	2019
Cash flows from operating activities			
Cash flow from operations	10	132.0	124.9
Tax paid		(10.8)	(5.6)
Net cash inflow from operating activities		121.2	119.3
Cash flows from investing activities			
Interest received		1.5	2.6
Purchase of intangible assets		(0.5)	(2.0)
Purchase of property, plant and equipment		(9.5)	(10.9)
Proceeds from the sale of property, plant and equipment		1.0	1.0
Lease payments received from finance leases		0.5	0.4
Acquisition of business	11	-	(1.9)
Net cash used in investing activities		(7.0)	(10.8)
Cash flows from financing activities			
Lease liability principal repayments		(10.2)	(8.6)
Lease liability interest paid		(1.4)	(1.7)
Dividend paid	7	(33.6)	(28.6)
Share purchase into Employee Share Ownership Trust	13	(11.9)	(8.6)
Net cash used in financing activities		(57.1)	(47.5)
Net increase in cash and cash equivalents		57.1	61.0
Cash and cash equivalents at the beginning of the year		183.2	121.6
Effect of foreign exchange rate changes		0.9	0.6
Cash and cash equivalents at the end of the year		241.2	183.2

Notes to the full year consolidated financial statements

1 Financial information presented

The financial information contained in this document does not constitute the Group's statutory accounts for the year ended 31 December 2020.

The Group financial statements have been prepared in accordance with International Accounting Standards in conformity with the requirement of the Companies Act 2006 and International Financial Reporting Standards (IFRS) as adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union. The comparative financial information is based on the statutory accounts for the year ended 31 December 2019 which have been delivered to the Registrar of Companies. The report of the auditors on those accounts was unqualified, did not draw attention to any matters by way of emphasis and did not contain a statement made under Section 498 of the Companies Act 2006.

The full year announcement was approved by the Board of Directors on 11 March 2021.

2 Accounting policies

The accounting policies adopted and methods of computation used are consistent with those applied in the consolidated financial statements for the year ended 31 December 2019.

New accounting standards

There have been no applicable new standards, amendments to standards and interpretations effective from 1 January 2020 that have been applied by the Group which have resulted in a significant impact on its consolidated results or financial position.

Presentation

A new line item, 'Contract liabilities', has been added to the Group's balance sheet in order to present the Group's contract liabilities arising under IFRS 15 'Revenue from Contracts with Customers'. Deferred income, a separate line item in the Group's balance sheet, has been reclassified to 'Contract liabilities' together with the 'Payments received on account' balance from 'Trade and other payables – current'. The presentation of the comparative amounts in the Group's balance sheet has also been amended to reflect this change. The impact of the reclassifications is set out below.

\$ million	Decrease/(increase) at 31 December 2019	Decrease/(increase) at 1 January 2019
Current liabilities		
Deferred income	53.2	55.2
Trade and other payables	2.3	1.0
Contract liabilities	(55.5)	(56.2)
	-	-
Non-current liabilities		
Deferred income	13.6	14.4
Contract liabilities	(13.6)	(14.4)
	-	-

The related cash flow movement in 2019 was also reclassified using the appropriate corresponding line item within the 'Cash flow from operating activities' category in the Group's consolidated cash flow statement. This reclassification had no impact on the Group's net assets, income statement or net cash flow from operating activities reported in 2019.

2 Accounting policies *continued*

Going concern

In adopting the going concern basis for preparing the consolidated financial statements, the Directors have considered the Group's principal risks and uncertainties, including the potential impact of the COVID-19 pandemic on the Group and any longer-term impact to the global economy. In 2020, the COVID-19 pandemic has not had a significant impact on the Group's trading performance and the Group has continued to operate effectively.

The Directors have also considered sensitivities in respect of potential downside scenarios, including stress testing the latest cash flow projections that cover a period of 12 months from the date of these consolidated financial statements. In these scenarios, the Group has more than sufficient headroom in its available resources.

At 31 December 2020, the Group had cash of \$241.2 million and external debt only in relation to its lease liabilities.

The Directors have reviewed the detailed financial projections for the period ending 31 December 2021, as well as the business plan and cash flows for the three months ending 31 March 2022. The Directors have also considered the period to the end of 2023 which forms part of the Group's longer term viability assessment. In addition, they have considered the principal risks faced by the Group, the potential impact of COVID-19, the sensitivity analysis and the Group's significant financial headroom and are satisfied that the Group has adequate financial resources to continue in operational existence for the foreseeable future, a period of at least 12 months from the date of approval of this report. Accordingly, the going concern basis of accounting continues to be used in the preparation of the consolidated financial statements.

3 Operating segments

The Group's organisational structure is based on differences in the products and services offered by each segment and information regularly reviewed by the Group's Chief Executive Officer, its chief operating decision maker, is presented on this basis. The Group's operating segments follow this structure.

The Group's reportable operating segments are Networks & Security, Lifecycle Service Assurance and Connected Devices. The Group evaluates adjusted operating profit before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment. Finance income and finance costs are not allocated to the reportable segments. Corporate is not an operating segment and costs are separately reported and not allocated to the reportable segments. Information on segment assets and segment liabilities is not regularly provided to the Group's Chief Executive Officer and is therefore not disclosed below. There is no aggregation of operating segments.

In early 2021, some organisational changes were made to build an even stronger foundation for scale – breaking down barriers, better enabling solution selling and focusing on leading edge technology. To accelerate the momentum built in 2020, the Group is combining the Connected Devices operating segment into the Lifecycle Service Assurance operating segment effective 1 January 2021. This change will enable a more integrated set of user experience assurance solutions and solve bigger problems for customers. Going forward, Lifecycle Service Assurance and Connected Devices will be reviewed and managed as one segment. The Group's revised reported operating segments will be Networks & Security and Lifecycle Service Assurance.

The Group disaggregates revenue from contracts with customers by nature of products and services and primary geographical markets as this best depicts how the nature, amount, timing and uncertainty of the Group's revenue and cash flows are affected by economic factors.

3 Operating segments *continued*

\$ million	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	Total
2020					
Revenue					
Nature of products and services					
Sale of hardware and software	261.4	81.9	35.2	-	378.5
Maintenance and support services	53.3	45.8	44.8	-	143.9
	314.7	127.7	80.0	-	522.4
Primary geographical markets					
Americas	143.9	89.5	42.8	-	276.2
Asia Pacific	132.0	23.6	33.6	-	189.2
Europe, Middle East and Africa	38.8	14.6	3.6	-	57.0
	314.7	127.7	80.0	-	522.4
Profit before tax					
Total reportable segment profit before exceptional items	65.3	32.9	14.5	(9.2)	103.5
Exceptional items <i>note 4</i>	(0.8)	(0.7)	(0.2)	(1.4)	(3.1)
Total reportable segment profit	64.5	32.2	14.3	(10.6)	100.4
Unallocated amounts:					
– Acquired intangible asset amortisation					(0.5)
– Share-based payment					(4.2)
Operating profit					95.7
Finance income					1.6
Finance costs					(1.5)
Profit before tax					95.8
Other information					
Product development	59.4	29.8	13.9	-	103.1
Intangible asset amortisation – other	-	-	0.9	-	0.9
Depreciation of property, plant and equipment	7.7	2.3	2.0	0.2	12.2
Depreciation of right-of-use assets	5.1	1.8	1.2	0.3	8.4

3 Operating segments *continued*

\$ million	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	Total
2019					
Revenue					
Nature of products and services					
Sale of hardware and software	272.0	67.8	32.6	-	372.4
Maintenance and support services	47.9	43.4	39.9	-	131.2
	319.9	111.2	72.5	-	503.6
Primary geographical markets					
Americas	141.0	85.5	39.6	-	266.1
Asia Pacific	143.3	15.2	29.3	-	187.8
Europe, Middle East and Africa	35.6	10.5	3.6	-	49.7
	319.9	111.2	72.5	-	503.6
Profit before tax					
Total reportable segment profit before exceptional items	73.9	18.1	9.5	(8.6)	92.9
Exceptional items <i>note 4</i>	(1.1)	(0.4)	(0.3)	2.3	0.5
Total reportable segment profit	72.8	17.7	9.2	(6.3)	93.4
Unallocated amounts:					
– Acquisition related costs <i>note 11</i>					(0.1)
– Acquired intangible asset amortisation					(1.2)
– Share-based payment					(3.5)
Operating profit					
Finance income					2.8
Finance costs					(1.8)
Profit before tax					
					89.6
Other information					
Product development	56.0	27.6	12.9	-	96.5
Intangible asset amortisation – other	-	-	0.9	-	0.9
Depreciation of property, plant and equipment	9.2	2.7	2.7	0.1	14.7
Depreciation of right-of-use assets	4.4	1.7	1.1	0.3	7.5

Inter-segment revenue is eliminated in the above periods. All of the Group's revenue arose from contracts with customers.

Generally, revenue from the sale of hardware and software is recognised at a point in time and revenue from maintenance and support services is recognised over time.

Europe, Middle East and Africa includes United Kingdom revenue of \$8.7 million (2019: \$8.2 million).

Americas includes United States revenue of \$262.6 million (2019: \$252.4 million).

Asia Pacific includes China revenue of \$106.1 million (2019: \$114.1 million).

Revenues are attributed to regions and countries based on customer location.

No one customer accounted for 10 per cent or more of total Group revenue in either 2020 or 2019.

4 Exceptional items

\$ million	2020	2019
CEO strategic review	3.1	1.8
French Customs refund	-	(2.3)
	3.1	(0.5)

In 2019, the Group incurred \$1.8 million of costs associated with a strategic review, instigated by Spirent's new CEO, involving a number of initiatives designed to evolve the strategic direction of Spirent to maximise marketing opportunities by creating a more agile, customer-focused organisation. These included a strategic focus on building recurring revenue streams over time, such as services; a strengthened leadership team and development of our sales and marketing structure to drive improved effectiveness to exploit our leading technologies. This review has concluded in 2020 with a further \$3.1 million being incurred. This charge comprised employee severance costs of \$1.7 million (2019: \$1.1 million), recruitment costs of \$0.2 million (2019: \$0.3 million) and consulting costs of \$1.2 million (2019: \$0.4 million).

In 2019, the Group received a refund amounting to \$2.3 million following a successful claim for reimbursement of VAT paid on imports with respect to a compliance dispute with Direction Générale des Douanes et Droits Indirects (French Customs) concerning the valuation and classification of imports into France which commenced in 2011. Refer to note 8 for further information.

The tax effect of exceptional items is a credit of \$0.6 million (2019: \$0.2 million charge). There will be a total net cash outflow of \$3.1 million in respect of exceptional items charged in 2020, \$2.6 million of which was paid in 2020 (2019: \$0.5 million inflow with \$1.0 million received in 2019). The cash outflow in 2020 in respect of exceptional items charged in 2019 was \$0.5 million (2019: \$6.5 million).

The total cash outflow in respect of exceptional items is reported within cash flows from operating activities in the consolidated cash flow statement.

5 Tax

\$ million	2020	2019
Current income tax		
UK tax	1.7	0.3
Foreign tax	10.2	9.2
Amounts (overprovided)/underprovided in prior years	(0.6)	0.3
Total current income tax charge	11.3	9.8
Deferred tax		
Recognition of deferred tax assets	(0.2)	(1.5)
Reversal of temporary differences	0.9	3.5
Adjustments in respect of prior years	(0.6)	(0.2)
Total deferred tax charge	0.1	1.8
Tax charge in the income statement	11.4	11.6

The tax charge for the year ended 31 December 2020 was \$11.4 million (2019: \$11.6 million). This was after a prior year tax credit of \$1.2 million and a tax credit on the adjusting items of \$1.5 million (2019: prior year charge of \$0.1 million and tax credit on adjusting items of \$0.7 million). Excluding the prior year and tax charge on adjusting items, the effective tax rate was 13.6 per cent (2019: 13.0 per cent).

6 Earnings per share

Basic

Earnings per share is calculated by dividing the profit for the year attributable to owners of the parent Company by the weighted average number of Ordinary Shares outstanding during the year.

Diluted

Diluted earnings per share is calculated by dividing the profit for the year attributable to owners of the parent Company by the weighted average number of Ordinary Shares outstanding during the year plus the weighted average number of Ordinary Shares that would be issued on the conversion of all dilutive potential Ordinary Shares into Ordinary Shares.

\$ million	2020	2019
Profit for the year attributable to owners of the parent Company	84.4	78.0
Number million		
Weighted average number of Ordinary Shares in issue – basic	609.7	609.9
Dilutive potential of employee share incentives	6.1	7.5
Weighted average number of Ordinary Shares in issue – diluted	615.8	617.4
Cents		
Earnings per share		
Basic	13.84	12.79
Diluted	13.71	12.63

Adjusted

The Group is disclosing adjusted earnings per share attributable to owners of the parent Company in order to provide a measure to enable period-on-period comparisons to be made of its performance. The following items are excluded from adjusted earnings:

- exceptional items;
- acquisition related costs;
- acquired intangible asset amortisation;
- share-based payment;
- tax effect on the above items; and
- prior year tax (adjustments made to provisions in respect of prior years).

6 Earnings per share *continued*

A reconciliation is provided below:

	2020		2019	
	\$ million	EPS cents	\$ million	EPS cents
Profit for the year attributable to owners of the parent Company	84.4	13.84	78.0	12.79
Exceptional items charge/(credit) <i>note 4</i>	3.1		(0.5)	
Acquisition related costs <i>note 11</i>	-		0.1	
Acquired intangible asset amortisation	0.5		1.2	
Share-based payment	4.2		3.5	
Tax effect on the above items	(1.5)		(0.7)	
Prior year tax (credit)/charge	(1.2)		0.1	
Adjusted basic	89.5	14.68	81.7	13.40
Adjusted diluted		14.53		13.23

There were no Ordinary Share transactions that occurred after 31 December that would have significantly changed the number of Ordinary Shares or potential Ordinary Shares outstanding at the period end if those transactions had occurred before the end of the reporting period in either year.

7 Dividends paid and proposed

\$ million	2020	2019
Declared and paid in the year		
Equity dividend on Ordinary Shares		
Final dividend 2019 of 3.45 cents (2.70 pence) per Ordinary Share (2018: 2.73 cents (2.08 pence))	20.6	16.7
Interim dividend 2020 of 2.17 cents (1.67 pence) per Ordinary Share (2019: 1.94 cents (1.59 pence))	13.0	11.9
	33.6	28.6
Proposed for approval at AGM (not recognised as a liability at 31 December)		
Equity dividend on Ordinary Shares		
Final dividend 2020 of 3.87 cents (2.78 pence) per Ordinary Share (2019: 3.45 cents (2.70 pence))	23.5	20.6
Special dividend 2020 of 7.50 cents (5.40 pence) per Ordinary Share (2019: nil)	45.6	-
	69.1	20.6

The Directors are proposing a final dividend in respect of the financial year ended 31 December 2020 of 3.87 cents per Ordinary Share (2.78 pence) (2019: 3.45 cents (2.70 pence)), which will absorb an estimated \$23.5 million of shareholders' funds (2019: \$20.6 million). The Directors are also proposing a special dividend of 7.50 cents per Ordinary Share (5.40 pence) (2019: nil), which will absorb an estimated \$45.6 million of shareholder's funds (2019: nil). The final dividend and special dividend will be paid on 30 April 2021 to Ordinary shareholders who are on the Register of Members at close of business on 19 March 2021. Payment will be made to ADR holders on 7 May 2021. No liability is recorded in the financial statements in respect of these dividends.

Dividends are determined in US Dollars and paid in Pound Sterling. The exchange rate for determining the amount of the final dividend and special dividend to be paid for 2020 was \$1.39: £1 (2019: \$1.28: £1).

8 Provisions

\$ million	Lease provisions	Restructuring provisions	Other provisions	Total
At 1 January 2019	3.0	-	10.4	13.4
Charged in the year	0.1	1.3	0.9	2.3
Asset retirement obligation	0.4	-	-	0.4
Released in the year	-	-	(0.3)	(0.3)
Utilised in the year	-	(0.9)	(6.5)	(7.4)
Unwind of discount	0.1	-	-	0.1
Exchange difference	-	-	(0.3)	(0.3)
At 1 January 2020	3.6	0.4	4.2	8.2
Charged in the year	0.1	1.3	1.1	2.5
Asset retirement obligation	0.2	-	-	0.2
Released in the year	(0.1)	-	(0.1)	(0.2)
Utilised in the year	(0.3)	(0.9)	(0.1)	(1.3)
Unwind of discount	0.1	-	-	0.1
Exchange difference	0.1	-	0.2	0.3
At 31 December 2020	3.7	0.8	5.3	9.8
\$ million				
			2020	2019
Current			6.2	4.8
Non-current			3.6	3.4
			9.8	8.2

The lease provisions are for the continuing obligations under leases in respect of property dilapidation and reinstatement provisions. The Group expects these provisions to be utilised over one to ten years. Other provisions comprise environmental provisions related to property disposed of, provisions relating to legal claims and a provision relating to a Notice of Recovery received from French Customs, discussed below. The Group expects these provisions to be utilised in less than one year.

In 2018, the Group made a provision for \$8.9 million following the receipt of a Notice of Recovery from the Direction Générale des Douanes et Droits Indirects (French Customs) in relation to the valuation and classification of duty on certain imports into France. This dispute commenced with enquiries in 2011. The import regulations changed on 1 January 2017 and no liability exists after that date. During the period in question, Spirent adopted a duty tariff based on World Customs Organisation guidelines which conflicted with European Union regulation. In 2019, the Group paid \$6.5 million in relation to this claim, of which \$2.3 million was later recovered (note 4), but strongly refutes the basis of it and reserves the right to challenge it in the courts at some future date.

9 Defined benefit pension plans

The Group has ongoing obligations in relation to two funded defined benefit pension plans in the United Kingdom. In addition, there is a United Kingdom unfunded plan and a deferred compensation plan in the United States.

The most recent actuarial valuations, at 31 March 2018, of the funded defined benefit pension plans' assets and the present value of the plans' obligations, using the projected unit credit method, have been used and updated at 31 December 2020 as the basis for the accounting valuation.

The assets and liabilities on the balance sheet are as follows:

\$ million	2020	2019
Schemes in net asset position		
UK defined benefit pension plan – Staff Plan	11.2	10.3
UK defined benefit pension plan – Cash Plan	1.8	1.3
	13.0	11.6
Schemes in net liability position		
UK unfunded plan	(0.7)	(0.7)
US deferred compensation plan	(5.7)	(4.8)
	(6.4)	(5.5)
Net pension plan surplus on the balance sheet	6.6	6.1

The assets and liabilities in the funded defined benefit pension plans were as follows:

\$ million	2020	2019
Fair value of defined benefit pension plans' assets	328.1	291.1
Present value of defined benefit pension plans' obligations	(315.1)	(279.5)
Net UK funded defined benefit pension plan surplus on the balance sheet	13.0	11.6

The key financial assumptions are as follows:

%	2020	2019
Inflation - RPI	3.0	3.0
Inflation - CPI	2.2	2.2
Rate of increase in pensionable salaries	2.2	2.2
Rate of increase for pensions in payment:		
– Pre-2001 service	3.5	3.6
– 2001 to 5 April 2005 service	2.9	2.9
– Post-5 April 2005 service	2.1	2.0
Rate of increase in deferred pensions	2.2	2.2
Rate used to discount plan liabilities	1.3	2.1

An operating charge of \$0.8 million (2019: \$0.7 million) and finance income of \$0.2 million (2019: \$0.1 million) have been recognised in the income statement.

9 Defined benefit pension plans *continued*

The Group also operates a deferred compensation plan for employees in the United States. The plan has elements of a defined benefit pension retirement obligation and therefore is required to be valued in accordance with IAS 19 'Employee Benefits'. At 31 December 2020, the deferred compensation deficit amounted to \$5.7 million (31 December 2019: \$4.8 million). A re-measurement loss of \$0.3 million (31 December 2019: \$0.4 million) was recognised directly in the statement of comprehensive income.

10 Reconciliation of profit before tax to cash generated from operations

\$ million	2020	2019
Profit before tax	95.8	89.6
Adjustments for:		
Finance income	(1.6)	(2.8)
Finance costs	1.5	1.8
Intangible asset amortisation	1.4	2.1
Depreciation of property, plant and equipment	12.2	14.7
Depreciation of right-of-use assets	8.4	7.5
Loss on the disposal of property, plant and equipment	0.1	0.2
Share-based payment	4.7	3.9
Changes in working capital:		
(Increase)/decrease in inventories	(1.5)	7.0
Decrease/(increase) in receivables	10.7	(4.4)
(Decrease)/increase in payables	(9.0)	17.3
Increase/(decrease) in contract liabilities	13.7	(1.6)
Increase/(decrease) in provisions	1.0	(5.4)
Defined benefit pension plan employer contributions net of plan administration expenses paid by the plan and past service cost	(6.0)	(5.9)
Deferred compensation plan	0.6	0.9
Cash flow from operations	132.0	124.9

11 Business combinations

There were no business combinations in 2020.

On 31 May 2019, Spirent acquired a key business from Integrated Navigation Systems Limited (INS), a company based in United Kingdom, for cash consideration of \$1.9 million. The acquired business is reported within the Group's Networks & Security operating segment. INS develops and supplies the Group with a system for recording GNSS and Wi-Fi signals. The business acquisition enabled Spirent to streamline its supply chain process and improve gross margin on this product line.

The acquisition gave rise to a current technology intangible asset of \$1.0 million and goodwill of \$0.9 million.

Acquisition related costs were \$0.1 million and were expensed to other items within the income statement.

12 Fair value

The Directors consider that the carrying amounts of the financial instruments included within trade and other receivables, trade and other payables and contractual provisions approximates their fair value.

Corporate owned life insurance, included within trade and other receivables, is designated as financial assets at fair value through profit or loss, and is at Level 1 in the fair value hierarchy as the valuation of the linked investments is based on quoted prices in active markets, amounted to \$3.6 million at 31 December 2020 (31 December 2019: \$3.0 million).

13 Employee Share Ownership Trust

During the year, 4.1 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of \$11.9 million, and 2.8 million shares were transferred from the Employee Share Ownership Trust to satisfy options exercised under the Spirent employee share plans (2019: 4.0 million shares purchased and placed at a cost of \$8.6 million, and 3.0 million shares transferred).

14 Events after the balance sheet date

On 4 March 2021, Spirent acquired 100 per cent of the issued share capital of octoScope, Inc (octoScope), a company based in the United States for an initial cash consideration of \$55 million, subject to customary purchase price adjustments. Contingent consideration of up to \$18 million is payable based on revenue growth targets for 2021 and 2022 and retention of key staff. The transaction was funded by surplus cash in the Group.

octoScope provides market-leading accurate, repeatable and automated wireless test solutions and methodologies to the wireless industry. Its test solutions leverage patented technology to provide automated Wi-Fi and 5G testing in emulated real-world environments, including the Wi-Fi 6 and 6E technologies.

octoScope will be incorporated into our Lifecycle Service Assurance operating segment along with our emerging Wi-Fi revenue stream currently residing in our high-speed Ethernet business within the Networks & Security operating segment.

Given the proximity to the approval of the consolidated financial statements, the acquisition accounting has not yet been completed.

Appendix

Alternative Performance Measures (APM)

The performance of the Group is assessed using a variety of APMs which are presented to provide users with additional financial information that is regularly reviewed by management. The APMs presented are not defined under IFRS and therefore may not be directly comparable with similarly identified measures used by other companies.

In management's view, the APMs reflect the underlying performance of the Group and provide an alternative basis for evaluating how the Group is managed and measured on a day-to-day basis. Such APMs are non-GAAP measures and should not be viewed in isolation or as an alternative to the equivalent GAAP measure.

The APMs and key performance indicators are aligned to the Group's strategy and collectively are used to measure the performance of the Group and form the basis of the metrics for Director and management remuneration. The Group's key performance indicators are presented within the Strategic Report of its 2020 Annual Report.

Order intake

Order intake represents commitments from customers to purchase goods and/or services from Spirent that will ultimately result in recognised revenue.

Order intake is a measure of operating performance used by management to assess whether future activity levels are increasing or slowing and therefore how effective we have been in the execution of our strategy. Order intake is a key performance indicator used to measure Group, operating segment and regional performance for internal reporting purposes.

Book to bill

Book to bill is the ratio of orders booked to revenue billed in the period and is a measure of the visibility of future revenues at current levels of activity. Book to bill is a key performance indicator used to measure Group and operating segment performance for internal reporting purposes.

Adjusted operating profit

Adjusted operating profit is reported operating profit excluding exceptional items, acquisition related costs, amortisation of acquired intangible assets and share-based payment. Management uses adjusted operating profit, in conjunction with other GAAP and non-GAAP financial measures, to evaluate the overall operating performance of the Group as well as each of the operating segments and believes that this measure is relevant to understanding the Group's financial performance, as specific items (adjusting items) are identified and excluded by virtue of their size, nature or incidence, as they do not reflect the underlying trading performance of the Group. The exclusion of adjusting items from adjusted operating profit is consistent from period to period.

Adjusted operating profit is also used in setting Director and management remuneration targets and in discussions with the investment analyst community.

Adjusted operating margin

Adjusted operating margin is adjusted operating profit as a percentage of revenue. It is a measure of the Group's overall profitability and how successful we are in executing on our overall strategy, and demonstrates our ability to improve margin through efficient operations and cost management, whilst being mindful of the need to invest for the future.

Adjusted basic earnings per share

Adjusted basic earnings per share (EPS) is adjusted earnings attributable to owners of the parent Company divided by the weighted average number of Ordinary shares outstanding during the year. Adjusted earnings is reported profit before tax excluding exceptional items, acquisition related costs, amortisation of acquired intangible assets, share-based payment, tax on adjusting items and over/under provisions in respect of prior year tax.

Adjusted basic EPS is a measure of how successful we are in executing on our strategy and ultimately delivering increased value for shareholders. Adjusted basic EPS is also used in setting Director and management remuneration targets and in discussions with the investment analyst community. The Group sets out the calculation of adjusted basic EPS in note 6 of Notes to the full year consolidated financial statements.

Product development spend as a percentage of revenue

Product development as a percentage of revenue in the period. It is a measure of how much the Group is investing to support further organic growth initiatives in line with the strategic objectives, whilst driving improved productivity and effectiveness.

Free cash flow

Free cash flow is cash flow generated from operations, less tax and net capital expenditure, lease liability principal repayments and lease liability interest paid, and interest received and lease payments received from finance leases.

Free cash flow is a measure of the quality of the Group's earnings and reflects the ability to convert profits into cash and ultimately to generate funds for future investment. It gives us financial strength and flexibility and the ability to pay sustainable dividends to our shareholders. Free cash flow is an important indicator of overall operating performance as it reflects the cash generated from operations after capital expenditure, financing and tax which are significant ongoing cash flows associated with investing in the business and financing operations.

Free cash flow excludes corporate level cash flows that are independent of ongoing trading operations such as dividends, acquisitions and disposals and share repurchases and therefore is not a measure of the funds that are available for distribution to shareholders.

A reconciliation of cash generated from operations, the closest equivalent GAAP measure, to free cash flow is provided within the Financial review on page 19.

Free cash flow conversion

Free cash flow conversion is the ratio of free cash flow to adjusted earnings, presented as a percentage.

Free cash flow conversion is a measure used in conjunction with free cash flow to assess the Group's ability to convert profit into cash and ultimately to generate funds for future investment.