

Appendix 4E

Preliminary financial report for the year ended 30 June 2019 as required by ASX listing rule 4.3A

RESULTS FOR ANNOUNCEMENT TO THE MARKET (All comparisons to year ended 30 June 2018)

	\$m	Up/down	Movement %
Revenue from ordinary activities	\$1,089.4	up	7.6%
Revenue from ordinary activities excluding interest income	\$873.3	up	3.7%
Profit after tax from ordinary activities (including significant items)	\$492.0	up	10.5%
Underlying profit after tax (excluding significant items)	\$492.0	up	5.7%

Dividend information

	Amount per share (cents)	Franked amount per share (cents)	Tax rate for franking credit
Interim 2019 dividend per share (paid 27 March 2019)	114.4	114.4	30%
Final 2019 dividend per share determined	114.3	114.3	30%
Special dividend per share determined	129.1	129.1	30%

Final dividend dates*

Ex-dividend date	5 September 2019
Record date	6 September 2019
Payment date	25 September 2019

* Dates are subject to final ASX Board approval

The Company's Dividend Reinvestment Plan (DRP) will not apply to the final dividend.

	30 June 2019	30 June 2018
Net tangible assets per security	\$7.53	\$7.79

Additional information supporting the Appendix 4E disclosure requirements can be found in the Annual Report which contains the Directors' Report and the 30 June 2019 Financial Statements and accompanying notes.

This report is based on the consolidated financial statements for year ended 30 June 2019 which have been audited by PricewaterhouseCoopers.



ASX

ASX Limited and its controlled entities

2019

YEARS
LISTED

ASX Limited
Annual Report



ASX

20

YEARS

LISTED

Contents

Who we are	2
FY19 highlights	3
Our Vision, Strategy and Execution	4
Chairman's letter	6
CEO's year in review	8
Operating and financial review	16
Corporate responsibility and sustainability	26
Corporate governance	36
Remuneration report	48
Directors' report	63
Auditor's independence declaration	65
Statutory report – financial statements	66
Key financial ratios	114
Transaction levels and statistics	115
Shareholder information	118
Directory	120

ASX Annual General Meeting

Tuesday 24 September 2019

10am (AEST)

ASX Auditorium, lower ground floor
Exchange Square, 18 Bridge Street, Sydney

It's 20 years since ASX became a listed company and we'd like to thank you, our shareholders, for your support. You've helped ASX provide the products, services and infrastructure that sit at the heart of Australia's financial markets.

1999

FINANCIAL YEAR

20

YEARS ON

\$568bn

\$2,069bn



Domestic market capitalisation

1,226

2,269



Number of listed entities

\$2.2bn

\$4.6bn



Daily equities turnover

\$38.4bn

\$237bn



Daily futures turnover

\$152.1m

\$863.8m



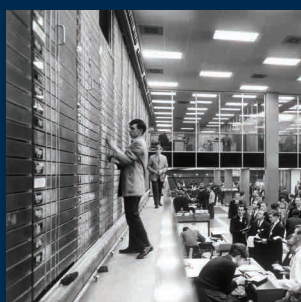
ASX revenue

\$9.65

\$82.37



ASX share price





Who we are

ASX operates at the heart of the globally attractive, deep and liquid Australian financial markets.

We have a proud history as an early and successful adopter of new technology. Today, we continue to embrace innovative solutions to make life easier for customers, help companies grow, create value for shareholders and support the Australian economy.

ASX is an integrated exchange offering listings, trading, clearing, settlement, technical and information services, and other post-trade services.

We operate markets for a wide range of asset classes including equities, fixed income, commodities and energy. We are a top 10 global securities exchange by value and the largest interest rate derivatives market in Asia.

Companies, corporates and issuers of capital from Australia and around the world engage with ASX to manage risk and to raise capital to grow. We operate liquid, transparent and reliable markets of integrity. The certainty of our clearing and settlement activities underpins the systemic stability of the Australian economy.

ASX also provides data and technology services to intermediaries, banks, information vendors and software developers to help them make informed decisions, offer services to their clients and connect with one another.

Through the expertise, experience and passion of our people, ASX works to ensure that our operations are built on the foundations of quality, security, resilience and trust.

More information about ASX can be found at www.asx.com.au.

FY19 highlights

For our customers



Uptime availability of the five main trading and post-trade systems for Australia's financial markets

100%



Average value of transactions settled electronically every day

Bonds \$56bn
Equities \$4.6bn
Futures \$237bn



Capital raised to help companies grow

\$86bn

For our shareholders



Statutory net profit after tax up 10.5% on last year or 12.6% on a like-for-like basis

\$492m



Total ordinary dividends up 5.7% on last year

228.7cps



Special dividend from sale of stake in IRESS

129.1cps

For our people



Employees proud to work at ASX

88%



Women as a percentage of our workforce

41%



Our people who feel ASX provides a work-life balance

80%

For Australia's financial markets



Corporate Governance Principles and Recommendations

4th
edition launched



Students and teachers nationwide registered to play ASX's sharemarket game

72,000



Revitalised interest rate benchmark with world-leading calculation methodology and robustness

BBSW

Our Vision, Strategy and Execution

Our vision

The world's most respected financial marketplace

Our strategy



Diverse ecosystem

Provide an open system to support partnerships, products and services across the Australian financial ecosystem



Innovative solutions and technology

Offer innovative solutions and technology to drive efficiency and deliver benefits to customers, employees and the wider financial marketplace



Enduring trust, integrity and resilience

Earn trust and deliver resilience by making sure our systems and processes are stable, secure, reliable and fair, and our people act with integrity towards the market and each other



Customer centric

Think deeply about how we can improve the experience for our customers, deliver them value and make their lives easier



Collaborative culture

Foster collaboration and agility within our businesses, across our teams and among our customers, regulators and other stakeholders

Our execution

FY19 progress



Diverse ecosystem

- Advanced reputation as a leading global exchange for mid-sized capital raisings with 23 new foreign listings and 16 new technology listings
- Maintained position as Australia's premier equity trading exchange with 89% (on-market) market share
- Broadened investor choice by adding 130 new mFund advisors and more than 60 new investment products
- Expanded the Australian Liquidity Centre (ALC) community with new customers and a 8.5% increase in the number of customer-to-customer connections
- Strengthened ASX's position as the home for A\$ denominated derivatives trading, clearing and settlement by growing the number of customers using our OTC Clearing, FlexClear and ASX Collateral services



Innovative solutions and technology

- Met all FY19 milestones for replacing our CHES post-trade system with a new, contemporary, synchronised and open technology solution, which remains on track for go-live in March-April 2021
- Commenced technical migration to the new and upgraded secondary data centre ahead of commissioning in FY20
- Continued to refresh technology infrastructure, including upgrading equity-related systems and ASX Net
- Launched new data science platform, ASX DataSphere, offering customers access to financial market data, ASX's governed, secure workspace, as well as data science tools and capabilities
- Established the DLT Solutions team to utilise ASX's distributed ledger technology expertise and infrastructure to deliver innovative solutions to customers in database management and workflow efficiency



Enduring trust, integrity and resilience

- Completed the implementation of Stronger Foundations initiatives in enterprise risk management and clearing risk management
- Strengthened risk awareness and accountability by fostering a culture of speaking up, with 90% of employees feeling comfortable to speak up on risk issues
- Rolled out seven training modules and new risk management dashboards to increase risk awareness and better inform risk management decisions
- Bolstered the quality of our listings compliance framework by consulting on major listing rule changes and helping develop the fourth edition of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*
- Continued investment in cyber security resilience initiatives



Customer centric

- Introduced five best practice principles to guide customer interactions
- Rolled out phase one of ASX's digital strategy to deliver customers a market-leading digital experience
- Improved ASX Online to enhance the experience for issuers, with rollout in FY20
- Continued development of open infrastructure offerings, including ASX DataSphere and DLT Solutions, to stimulate marketwide innovation and efficiencies



Collaborative culture

- 96% of employees assessed in their performance reviews as demonstrating ASX's BE values*
- Over 2,900 peer-to-peer acknowledgements reflecting ASX's BE values in action
- Designed an employee development framework to build critical capabilities for current and future skill needs
- Celebrated culturally diverse events as part of the employee-led Culture and Heritage group's inaugural year of activities
- Engaged with Chief Executive Women and Male Champions of Change to develop senior women leaders and promote gender equality

*See page 28 for further information on ASX's BE values.

Chairman's letter



"Having a diversified, well-capitalised and highly rated company at the heart of Australia's financial markets bolsters the confidence of all our stakeholders."

Rick Holliday-Smith
Chairman

Dear fellow shareholders,

The 2019 financial year (FY19) was another strong year of achievement for ASX. We delivered solid financial performance and continued to invest to strengthen our foundations, build trust and confidence in our brand, and position the company for future growth.

20 years as a listed company

The structural conditions that enabled ASX to achieve its FY19 result were put in place 20 years ago when we became the first exchange to demutualise and list on itself.

Becoming a public company heralded a fresh era of governance, efficiency and competitiveness for ASX. It introduced new shareholders to the company, enhanced our focus on customers and helped drive two decades of progress and innovation. This has benefited the Australian economy, with ASX now established as one of the world's leading exchanges for capital raising, trading, post-trade services and market quality.

Today, ASX has more than 46,000 shareholders and is one of Australia's leading listed companies with a value over \$16 billion.

ASX has enabled investors to build wealth while providing critical financial services infrastructure for the nation. We stand behind the clearing houses for the equity and futures markets, both of which are critical to Australia's systemic stability. We operate the main exchange-traded venues, manage the leading capital formation listings platform and offer significant technical, data and depository services. Having a diversified, well-capitalised and highly rated company at the heart of Australia's financial markets bolsters the confidence of all our stakeholders.

Financial highlights

In FY19, ASX's statutory profit after tax was \$492 million, up 10.5% (almost \$47 million) or up 12.6% on a like-for-like accounting basis compared to the same period last year. In FY18, we recognised a significant item of \$20.2 million for the non-cash impairment of ASX's long-term investment in Yieldbroker. There were no significant items in FY19.

Underlying FY19 profit after tax was up 5.7% compared to the same period last year, or 7.7% on a like-for-like accounting basis.

Statutory earnings per share (EPS) grew by 10.5% to 254.1 cents and underlying EPS rose 5.7% to 254.1 cents per share, up from 240.4 cents.

Our dividend for the second half of FY19 was 114.3 cents per share (cps), fully franked, bringing total ordinary dividends (interim and final) for FY19 to 228.7 cps, up 5.7% on the previous year. Our dividends remain 100% franked and we have continued to pay out 90% of underlying profit in dividends.

Special dividend

During the year, ASX sold its 18.6% shareholding in IRESS Limited (IRESS), realising proceeds of \$381 million and a post-tax gain of \$161 million. ASX had been a shareholder in IRESS since 2000. While it had been a good investment, the time was right to divest as both ASX and IRESS have successfully evolved and expanded beyond their early focus on the Australian equities market. In our view, ASX's shareholding no longer provided the strategic value it once did.

We are now returning the bulk of these funds, amounting to \$250 million, to our shareholders by way of a special dividend and retaining a portion to support our multi-layered growth strategy. The special dividend is 129.1 cps and will be paid on 25 September 2019.

Trust in our brand

Steady earnings growth and financial returns to shareholders have been constants across ASX's 20 years as a public company. Another constant has been our determination to deepen the trust stakeholders have in ASX.

ASX's licence to operate at the heart of Australia's financial markets depends on providing products, services and infrastructure that are valued, robust and reliable, while striving to make decisions that are fair, transparent and independent. We must act with integrity at all times.

Chairman's letter continued

These features are part of ASX's culture. We seek to fulfil these objectives while evolving and adapting. The recent Hayne Royal Commission Report highlights why this matters. While ASX was not involved directly, the Commission's work was relevant to the whole business community and its findings offer lessons for all. Foremost is to embed respect for customers and other critical stakeholders. This is key to building a successful and sustainable company. Businesses must be mindful of the impact our activities have on the community and be accountable for our actions. These are habits requiring renewal every day. And they are matters in which your ASX Board is deeply engaged.

Culture and values are at the centre of the fourth edition of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, launched in February 2019. ASX is a member of the independent Council, which brings together a wide range of business, shareholder and industry groups, offering their insights and perspectives on governance issues. The Council's work is 'of the market, by the market, for the market'. ASX rules require companies to report against the Council's recommendations within a flexible, non-mandatory, 'if not why not' disclosure framework.

The imperative that companies align their culture and values with reasonable community expectations to help promote trust in business, runs throughout the new edition of the Principles. Guidance is provided to help companies achieve this. Given the level of public interest in formulating the latest Principles, it's clear that recognition of this imperative is widespread.

ASX supports the adoption of best practice corporate governance standards and the need for the Principles to keep evolving to serve the interests of the broader community, including the millions of Australians who are the ultimate owners of many of our listed companies. These corporate governance Principles play an important role in keeping the standards of our market high.

Australia's regulators also play a vital role in maintaining high standards. ASX has a wide range of interactions with our regulators and we work in constructive partnership with them across all levels of our organisation. We share objectives to improve supervisory arrangements, strengthen systemic stability and maintain Australia's reputation for markets of integrity.

History of innovation

Another enduring element of ASX's culture is our willingness to innovate. We led the exchange world when we created the electronic CHES post-trade platform more than 20 years ago, and we're leading it again today with our project to replace CHES with a system enabled by distributed ledger technology (DLT). The new system will operate on contemporary technology, use global standards, offer new functionality, and provide the option for the market to access the benefits of DLT. We believe this innovation will reduce costs and complexity for the industry, and facilitate new business opportunities for intermediaries, issuers, investors and other users.

Our progress is being watched internationally and is an important bellwether for the technology's global adoption. In April we opened a test environment to enable our customers to interact and experiment with the new system. They are able to see some of the fresh functionality and compare various access options. We continue to work closely with our stakeholders and regulators, and remain on track to go live in March–April 2021.

Replacing CHES is our highest profile project but far from our only one. Our CEO Dominic Stevens elaborates on a range of other initiatives in his report. These growth initiatives sit alongside our extensive work effort to strengthen our foundations and our licence to operate activities. They include contemporising our technology infrastructure and operational risk management practices and processes, moving to a new secondary data centre to enhance operational resilience, and upgrading our ASX Net communications network.

Our balanced approach of investing in the integrity of our core businesses and pursuing growth initiatives should allow us to deliver appropriate returns to shareholders over the longer term without neglecting the expectations of the broader community we serve.

Board skills and experience

Ensuring the right mix of skills, diversity and experience on the Board is critical to overseeing a healthy, strongly performing and risk aware culture at ASX. The right mix is also vital for navigating the increasingly complex technology and risk environments we face every day.

We were pleased to welcome Peter Nash to the ASX Board in June 2019. Peter has over 30 years' experience in financial management, reporting, risk management and auditing. He has advised some of Australia's largest multinationals and held key leadership positions. He will stand for election at ASX's Annual General Meeting on 24 September 2019.

In my view, your Board is hardworking, informed and focused on serving the interests of ASX, its shareholders and other key stakeholders. I thank them for their commitment.

On behalf of the Board I congratulate the ASX team on its achievements in FY19. They have put in a strong year and are dedicated to our future success.

I also thank you, our shareholders, for your confidence in our company, especially the many who have been shareholders for the past 20 years.

ASX continues to strengthen its foundations and create opportunities for growth, while never losing sight of the important national responsibility that comes with its role.



Rick Holliday-Smith
Chairman

CEO's year in review



"We continue to take a long-term approach to ensure ASX remains at the forefront of financial markets innovation and a leader among its peers."

Dominic Stevens
Managing Director and Chief Executive Officer

Dear fellow shareholders,

In our 20th year as a listed company, ASX delivered another strong financial performance and made good progress on the execution of our technology-driven, customer-focused strategy. Alongside growing earnings, we continued to strengthen our relationships with customers, regulators and Australia's financial markets, while putting in place the foundations to develop both ASX and our industry into the future.

I am confident we are investing in, and growing, our business to deliver valuable outcomes for all our stakeholders, and importantly, to drive long-term sustainable earnings for shareholders.

FY19 financial performance

Operating revenue (as per ASX's segment reporting) increased by 6.5% on a like-for-like accounting basis to \$863.8 million, driven by pleasing performances from each of our four core businesses, specifically:

- Listings and Issuer Services delivered 5.5% revenue growth on a like-for-like accounting basis due to higher annual listing fees and a 5.3% increase in the total amount of capital raised
- Derivatives and OTC Markets was up 7.8%, reflecting the growth in futures trading and a record year for the OTC clearing business
- Trading Services delivered the strongest growth of 9.4%, as the number of cabinets and cross-connections within ASX's Australian Liquidity Centre (ALC) grew, and equities trading benefited from higher average daily volumes and increased use of ASX's Auctions
- Equity Post-Trade Services revenue grew 3.5%, resulting from the increased cash market trading activity throughout the year.

FY19 also benefited from a 25.7% increase in interest and dividend income. The increase was driven by higher lodged capital balances and increased investment spreads.

Operating expenses (as per ASX's segment reporting) grew by 9.9%, reflecting the injection of new people and skills to enhance ASX's foundations and pursue growth opportunities.

As forecast, capital expenditure was \$75.1 million as we continued to strengthen and upgrade ASX's technology capabilities through projects such as CHES replacement, the new secondary data centre, upgrades relating to equities trading and our investment in ASX DataSphere, our new open infrastructure data analytics platform.

Earnings before interest, tax, depreciation and amortisation (EBITDA) for the period was \$649 million, up 5.5% on the prior year, enabling a 5.7% increase in total ordinary dividends paid in FY19.

Building an ASX for the future

Since its inception, ASX has had a core commitment to provide innovative, critical financial markets services and infrastructure that are resilient, functional and reliable. This creates growth opportunities for our customers and for the wider financial services industry.

ASX's adoption of innovative technology in the 1980s and 1990s generated growth opportunities across our markets for several decades. In 1989, for example, the implementation of the SYCOM electronic trading platform allowed the futures exchange to offer after-hours electronic trading, giving customers more opportunities to transact. In 1994, the introduction of our CHES post-trade system moved Australia from paper-based to electronic share ownership, which continues to realise efficiencies throughout the financial services industry to this day.

We continue to take a long-term approach to ensure ASX remains at the forefront of financial markets innovation and a leader among its peers. Our technology-driven, customer-focused strategy is enabling ASX to build an exchange for the future.

We aim to make doing business easier and more efficient for our customers. This has the flow-on effect of benefiting issuers and investors, whom all intermediaries in the Australian financial markets are here to serve. Many of the initiatives, which will drive ASX in the 2020s and beyond, are outlined on the following pages.

CEO's year in review continued

Technology-driven

A contemporary, flexible and resilient operating platform

Key to positioning ASX for the next decade is putting in place a contemporary, flexible and resilient operating platform. This will enable ASX to offer more value-added products, services and infrastructure and help maintain the confidence of our users. The success of this platform is underpinned by the technology that powers it.

We recognise that to be successful in delivering new, technology-driven, value-added products and services, ASX must preserve the resiliency and reliability of our existing market infrastructure. We are doing this through a range of investments that include our:

- New secondary data centre that is currently being commissioned and will be rolled out during FY20, acting as a state-of-the-art backup to our primary site
- Upgrade of ASX Net, our communications network, which is on track to have all ASX services and third parties migrated to it by September 2019
- Refreshed cash equities trading hardware and software, which will be in place by 2020 and result in a more robust and contemporary platform
- Redesign of the ASX website that will improve interacting with ASX and enhance the experience for the five million-plus site visits each month.

Open infrastructure solutions

ASX is creating products and services that address the needs of our customers as well as our own. We call these 'open infrastructure solutions' that leverage our expertise, independence and infrastructure in multiple ways.

An example of where we've successfully done this is in the commissioning of the ALC. In 2012, ASX had three options when deciding to upgrade its primary data centre:

- Outsource to a third party specialist
- Build a data centre exclusively for ASX and to co-locate our low latency customers
- Invest in a facility that served both ASX and the wider marketplace.

We chose the third option, which delivered an open data centre and connectivity infrastructure solution to the financial markets.

Seven years on, the ALC is truly the technological heart of the Australian financial markets, with 134 financial and technology companies connecting to ASX and to each other via ASX. This has expanded our customer base and created additional revenue streams adjacent to our core businesses of trading, clearing and settlement.

ASX DataSphere, our data analytics offering launched in the second half of FY19, is another example of ASX providing an open infrastructure solution. Again, we could have outsourced our data analytics capability or built such capability for ourselves only.

Instead, we chose to build a governed, secure platform, offering access to ASX and third party data and analytical tools, as well as the workspace, computing power and storage to facilitate the analysis. This initiative not only enhances ASX's data analytical capabilities, but it also enables our customers to access that capability without having to develop their own.

We have also applied our open infrastructure approach to our most high profile project, the replacement of CHESSE, our equity post-trade system. Here we're creating a solution based on open, contemporary technology, which uses global standards and offers efficiency and innovation opportunities with permissioned, source-of-truth, synchronised data. In addition to being able to interact with ASX, customers (if they choose) will be able to interact with others who are on the permissioned network knowing that everyone is using the same accurate data.

For more detail on our CHESSE replacement project, please see pages 12 and 13.

Customer-led

Making business easier for our customers

All of our technology initiatives are designed to make business easier for our customers. The open infrastructure solutions mentioned earlier are capable of helping our customers create new products and services, improve operational efficiency, and reduce risks and costs.

Likewise, we expect our CHESSE replacement system, which will be enabled by distributed ledger technology (DLT), to provide significant value to the industry over the next 20 years, just as the implementation of CHESSE did in the 1990s. When electronic trading and CHESSE settlement began in the late 1980s and early 1990s respectively, few of us could have foreseen the tremendous growth in trading volumes and the efficiencies the dematerialisation of shares have brought about. In the same way, we are confident our customers will leverage the benefits of synchronised, source-of-truth data. In a system with no physicality, if you have perfect, synchronised information, there is little you cannot do.

Exactly how much value will be generated by this change is not yet clear. However, we know that the cost of Australia's \$2.7 trillion superannuation system alone is currently around \$22 billion per annum*. The annual cost to the system of settling equities via CHESSE on ASX is less than one-quarter of 1% of that number. It stands to reason that a new system providing synchronised, source-of-truth information securely to those who are entitled to see it, coupled with an ability for customers to build standardised business logic directly onto this source-of-truth, will make the whole industry more efficient. Even if the efficiency gain is 1% – and we expect it to be more – ASX would be adding value to our industry that is a multiple of the current value of settlement fees.

Importantly, the value created by a DLT-enabled CHESSE replacement is not limited to reducing costs through improved efficiency. Over the long-term, this infrastructure will provide a platform for our customers to innovate and develop their own value-added products and services.

* Rainmaker Consulting, Superannuation Industry Review, May 2017.

CEO's year in review continued

Leading the world

ASX's development of DLT is attracting attention domestically and from across the global financial services industry. It is probably the most watched technology project in the exchange world. Our confidence in our ability to embrace and make new technologies work comes from ASX's proven track record of having done it before, multiple times, over the last 20 years.

People-driven

Key to ASX's proud track record of delivering leading and innovative solutions has been the dedication of our people, the trust and integrity they uphold, and their skills and capabilities. These attributes continue to define ASX's culture.

Our BE values were introduced the previous year, having been developed collaboratively by management and staff. Twelve months on, I am pleased to report that our values of BE Open, BE Trustworthy, BE Original and BE The Example accurately reflect ASX's culture.

Over the past year we have continued to foster an environment that encourages innovation and accountability. For example, the actions of all employees are now assessed in the context of our four BE values, which have been incorporated into annual performance assessments.

During FY19, we expanded our workforce as we continued to invest in people and skills to maintain our strength and resilience, as well as pursue growth opportunities. This saw important new hires in data analytics, IT architecture and infrastructure, risk management and customer service.

Trust-enabled

Trust and integrity have always been hallmarks of ASX. In a post Hayne Royal Commission environment, they are even more valuable. Preserving and growing these qualities are critical to our success. I am determined that they will remain part of who we are.

On a daily basis we work hard to earn the trust of our customers, regulators and the wider marketplace. We are in the business of providing the products, services and infrastructure that allow the Australian financial services industry to grow, innovate and generate benefits for the whole community. I am confident we are progressing a strategy that will allow ASX to continue this proud tradition.

Looking to the next decade

ASX is in a strong position as we head into the next decade. We've made significant progress over the last three years, putting in place strong foundations from which ASX can confidently operate in the years ahead. With these in place we are pursuing exciting new growth opportunities for ourselves, our customers and the wider industry.

My thanks to our employees for their hard work and to our customers for their loyalty throughout the year. And to you, our shareholders, thanks for your ongoing support.



Dominic Stevens

Managing Director and Chief Executive Officer

BE Awards

During FY19, 40 BE Awards were presented, celebrating individual and collaborative efforts to live the ASX values. Below are four winning examples.



1. BE Original

Awarded to Vini Vivo for his work to enhance data-driven decision-making

Trading Services Analyst Vini Vivo was instrumental in delivering a new dashboard and analysis tool that enhanced ASX's ability to assess the trading activity of exchange-traded products (ETPs). In developing the tool, Vini took a fresh approach to thinking about ASX's management of the risk and regulatory requirements of ETPs. Vini is now employing his data science skills to develop new analytics products and services for ASX DataSphere.

2. BE The Example

Awarded to Ali Sayed for his commitment to customer centricity

Customer service is at the heart of how Technical Support Analyst Ali Sayed approaches every day. No matter how complicated the case, Ali takes the time to diagnose technical issues, understand and explain issues to the team, provide high-level detailed responses and communicate resolutions. His commitment to act with integrity, think deeply and broadly, and take responsibility allows ASX to better support and address the needs of our customers.

3. BE The Example

Awarded to Sarah Redfern for improving the new employee experience

HR Business Partner Sarah Redfern consistently goes above and beyond in her project delivery. Sarah's commitment to deliver her best was evident in her work to refresh ASX's new starter experience and orientation program, as well as in the implementation of a new partnership with HR OnBoard. Her efforts have significantly advanced ASX's employee on-boarding experience so that every new starter is engaged in ASX's vision and strategy, rules and policies, and approach to risk awareness from day one.

BE The Example team award

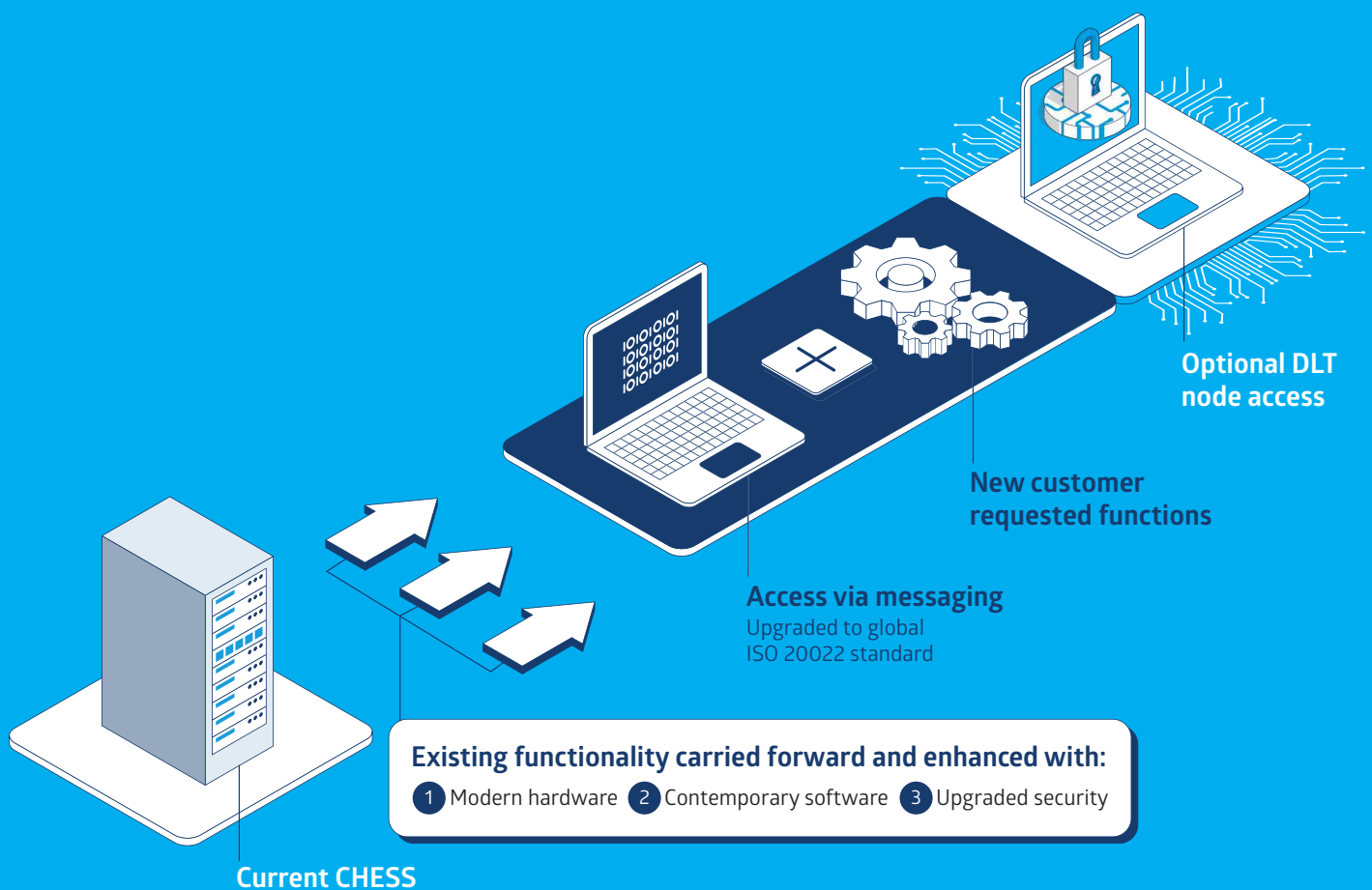
Awarded to ASX's Compliance Monitor (ACM) replacement team for making business easier for customers

The successful team replaced ASX's ACM platform with a new, integrated smart-form system that improved the interaction customers have with ASX. The new solution was developed collaboratively, blending subject matter experts from across the business. Together they leveraged ASX Online's functionality to provide an integrated experience with more flexibility for users. The new platform also enabled efficiencies in managing customer communications to be achieved.

Congratulations to the members of the winning team: Lyn Allsop-Guest, Chris Ansell, Michelle Cox, Rory Cunningham, Nicole Figueroa, Stafford Gallagher, Troy Hanington, Gary Harvey, Christine Heathcote, Upamani Hewamalage, John Johansson, Jerry Lai, Sue Lumb, Sally Lynch, Nicole Manfred, Jonathan O'Riordan, Liz O'Toole, Pooja Pavithran, Lisa Rubio, Neha Shrikhande, Nikki Swinson and Bill Woods.

The replacement of CHES

ASX has a long and proud history of innovation. We were a leader in automating markets and embracing electronic trading, in removing the need for paper-based share certificates, in demutualising and self-listing, and in merging equities and futures exchanges. We are again leading the exchange world, this time with the replacement of CHES and the use of distributed ledger technology (DLT).



ASX is in the midst of a significant renewal of key information systems and infrastructure. A major part of this transformation is the replacement of CHES – ASX's 25-year-old proprietary Clearing House Electronic Sub-register System.

We believe the replacement of CHES, together with a DLT capability, continues our history of innovating for the benefit of the market and our customers, and will support the growth of Australia's financial system for the next 25 years.

Why replace CHES?

It is usual for ASX, and for any exchange, to upgrade its core infrastructure. The current CHES system is 25 years old and it needs to be replaced. It is written in COBOL and uses a set of proprietary message formats (CHES messages) for communication with market users. While the performance and availability of CHES continues to serve the market well, the age of the application and the challenges associated with maintaining and developing it led ASX to start evaluating replacement options in 2015.

After significant exploration of the options, including using DLT, we are replacing CHES with a contemporary solution that delivers new functionality, will reduce risks and improve the efficiency of clearing and settlement, and other post-trade services, which our regulated businesses provide.

What system is replacing CHES?

ASX is developing a new system that will provide the clearing and settlement services offered by CHES today and other new services – including those requested by the market. It is being built in conjunction with Digital Asset (DA), a New York-based software company, on contemporary, open technology using the Digital Asset Modelling Language (DAML) – a new computer programming language.

The new system will provide upgraded security, resilience and performance; the ability to more efficiently implement enhancements; and will use the ISO 20022 protocol, which is the messaging standard being adopted by regulators and market infrastructures globally.

The new system also carries through the functionality of the existing equities clearing and settlement system, with the addition of new customer requested functions that were identified following an intensive 18-month stakeholder consultation process. Examples of new functions include the standardisation of investor registration details, additional bilateral settlement options, a range of improved automated corporate actions, and the option to receive investor CHES statements electronically.

How can users access the new system?

There are a number of different connection choices. Users can choose to connect via global standard ISO 20022 messaging, which will be an upgrade to the current suite of CHES messages. Or they can connect through a web browser, which will be the option most suitable for low activity users. Both of these options allow access to the new system in a way that is very similar to accessing CHES today.

Users also have the option to choose to connect to the distributed ledger by taking a DLT node, a new managed service that will be offered by ASX. Importantly, while the features of the new system are accessible through a DLT node, users do not need to take a DLT node if they prefer to access the system the traditional way.

What is DLT and DAML?

Distributed ledger technology – DLT, often referred to as 'blockchain' – is a suite of technologies that collectively create a new database architecture for record-keeping and the mutualisation of workflows across industries.

A distributed ledger is a database architecture that enables users to remain perfectly synchronised to source-of-truth data without the need for messaging and associated reconciliation.

ASX's distributed ledger will be secure, privately permissioned and operate behind ASX's perimeter firewalls. Users will be required to meet licence and regulatory obligations, and will only be able to access the information to which they are legally entitled. Through the design of the ledger, the privacy and security of users' data will be enhanced, with the system resiliency, tamper detection and cryptographic features of our DLT infrastructure making the ledger even more secure.

DAML, an acronym for the Digital Asset Modelling Language, is an open source smart-contracting computer programming language built to model assets and their workflows. DAML is particularly suitable for driving efficiency and innovation in financial markets, and enables rapid and efficient software development and delivery.

Why did ASX choose to provide DAML and build a distributed ledger connection option?

Having thoroughly explored and tested the benefits of DLT since 2015 – including the performance, security, scalability and resilience requirements necessary to operate critical market infrastructure – we believe that the option of connecting to a distributed ledger allows the market to use DAML to develop new services that improve the efficiency and standardisation of processes, reduce operational risk, and create new opportunities for growth and innovation.

Put simply, applications can be written more efficiently and will work on any DLT node. This is a powerful capability that can leverage investments in technology, reduce errors, simplify workflows and foster innovation for the benefit of the whole market.

What is the status of the CHES replacement project?

Following the decision to replace CHES in December 2017 and the finalisation of business requirements in September 2018, we are now in the build and test phase, and on track to deliver the replacement system and the distributed ledger in March-April 2021.

We are working closely with our regulators and customers, as well as their service providers, to help them get ready for the go-live of the new system.

What DLT-enabled opportunities exist beyond CHES replacement?

We are using the insights and experience of the CHES replacement project to think about how DLT-enabled solutions can deliver efficiencies and innovation to other areas of the Australian financial services industry. This work is being done by our newly created DLT Solutions team.

We believe in the transformative potential of DLT and want to help our customers unlock its value by developing better products and services and improving operational efficiency. This extends beyond equities into other asset classes and beyond clearing and settlement processes.

For the moment, however, our primary focus is on implementing the CHES replacement system.

ASX DataSphere

Unlocking the potential of financial markets data through shared infrastructure

Building on ASX's record of operating independent, reliable and resilient financial market infrastructure and systems, ASX's DataSphere is our data science platform.

Using ASX and third party data, ASX DataSphere gives ASX and our customers the ability to unlock value through insights and analysis in a secure and governed ecosystem.

Just like ASX's Australian Liquidity Centre, ASX DataSphere is an open infrastructure solution offering customers access to capabilities, systems and products without the sizeable upfront, start-up investment they would need to do it on their own.

Data governance

The latest data management technologies and industry-leading best practices ensure content is only used as approved by its owner.

Contributors get access to advanced capabilities in data ingestion, curation, discovery and security.

Content in

By placing data sets on ASX DataSphere's governed and trusted platform, ASX and third parties can enhance their value by offering them for analysis by ASX DataSphere customers.



Insights out

ASX DataSphere products provide customers with insights and analysis to help them gain competitive advantage, cost efficiencies and risk reduction. Using individual product-based pricing, ASX DataSphere products range from web-based dashboards and downloaded analytics-ready datasets to bespoke solutions for specific problems.

Commercial framework

A comprehensive licensing structure protects the rights and preferences of participants.

Contributors can participate in a revenue share scheme that scales with the success of a product.

ASX DataSphere web store

Access new insights and analytics-ready data from ASX and third parties.

Browse a growing catalogue of trading, clearing, settlement, reference, company and economic data and analytics across all ASX markets.

Product development

ASX DataSphere's product team can take a model and transform it into a finished product that can be easily consumed by end users.

Products are run, monitored and supported on the platform.

Data science

Connect to the state-of-the-art big data platform via scalable workspaces loaded with the latest data science tools.

You can perform comprehensive analytics from visualisations through to advanced machine learning and artificial intelligence.

Key



Operating and financial review



Operating and financial review

The Operating and Financial Review outlines ASX's activities, performance, financial position and main business strategies. It also discusses the key risks and uncertainties that could impact on ASX and its subsidiaries (together referred to as the Group), and its ability to achieve its financial and other objectives. The statements are prepared and audited in accordance with the *Corporations Act 2001* and Australian Accounting Standards, which comply with International Financial Reporting Standards (IFRS).

For the purposes of the Operating and Financial Review, the Listings and Issuer Services revenue, income tax expenses and all resulting profit measures for the prior comparative period (pcp) have been restated to retrospectively apply AASB 15 *Revenue from Contracts with Customers*. All analysis in this report is based on these restated numbers. The pcp has not been restated in the financial statements.

The pcp has been restated in the Operating and Financial Review to provide greater comparability of the company's performance in the year ending 30 June 2019 (FY19), as both the current and restated pcp reflect the new accounting policy to defer the recognition of initial and subsequent listing revenue over five and three years respectively. Prior to the adoption of AASB 15, this revenue was recognised on the date of the capital raising. The impact of the change in accounting policy is a decrease of \$11.8 million in Listings and Issuer Services revenue and the resulting EBITDA, EBIT and underlying profit before tax, a decrease in income tax expense of \$3.5 million and a decrease in the underlying profit after tax of \$8.3 million.

Business model and operating environment

ASX is a multi-asset class and integrated exchange group. The Group operates markets for cash equities and derivatives, and provides a full service offering including listings, trading, clearing, settlement, registry, and information and technical services. ASX operates a significant part of the infrastructure that supports Australia's financial markets.

The business is conducted through a number of regulated legal entities. ASX holds market operator licences and clearing and settlement licences to undertake its activities. ASX is subject to oversight by the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA).

ASX's activities and revenues are grouped into four key businesses, being Listings and Issuer Services, Derivatives and OTC Markets, Trading Services, and Equity Post-Trade Services. These are each discussed separately later in this report.

Group financial performance

Net profit after tax

Statutory net profit after tax (NPAT) for FY19 increased 10.5% on the prior year to \$492.0 million. Statutory earnings per share (EPS) were 254.1 cents, up 10.5% from the un-restated and previously reported EPS of 230.0 cents per share, reflecting the growth in earnings. FY18 included the non-cash impairment of \$20.2 million on the Group's investment in Yieldbroker. There were no significant items in FY19.

The Group's underlying NPAT, which excludes significant items, increased 5.7% on the prior year. Underlying EPS was up 5.7%.

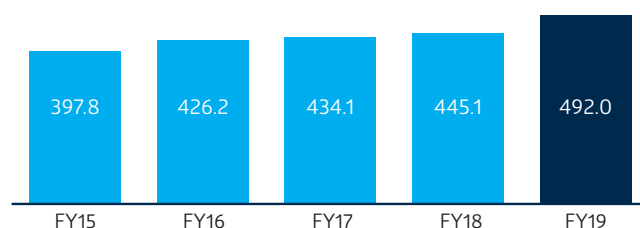
After restatement for AASB 15 for FY18, statutory NPAT increased 12.6% and underlying NPAT increased 7.7%.

Dividends

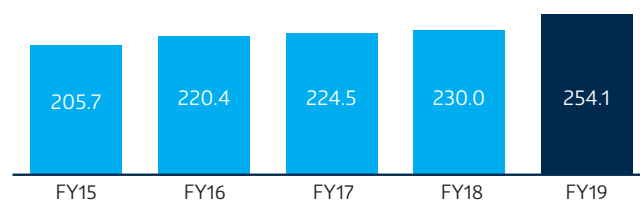
The Board's dividend policy is to pay 90% of underlying profit after tax. This is reviewed each time the Board considers payment of a dividend. Underlying profit reflects NPAT adjusted for any significant revenues or expenses such as those associated with major restructuring, transactions or other material items that are not commonly recurring.

ASX paid an interim dividend of 114.4 cents per share in March 2019 and directors have determined a final dividend of 114.3 cents per share. Total interim and final dividends per share for FY19 of 228.7 cents are 5.7% higher than the prior year (un-restated), and reflect the increase in underlying earnings. Proceeds from the sale of ASX's investment in IRESS Limited will be paid to shareholders as a special dividend of 129.1 cents per share. Both the final dividend and special dividend will be paid on 25 September 2019.

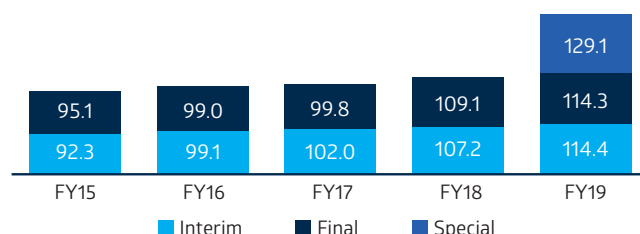
Statutory net profit after tax (\$million)



Statutory earnings per share (EPS) (cents)



Dividends per share (DPS) (cents)



Operating and financial review continued

Summary income statement for the year ending 30 June 2019

	FY19 ¹ \$m	FY18 ² \$m	Variance fav/(unfav)	
			\$m	%
Operating revenue	863.8	810.9	52.9	6.5
Operating expenses	(214.8)	(195.5)	(19.3)	(9.9)
EBITDA	649.0	615.4	33.6	5.5
Depreciation and amortisation	(47.8)	(47.6)	(0.2)	(0.5)
EBIT	601.2	567.8	33.4	5.9
Interest and dividend income	103.9	82.7	21.2	25.7
Profit before tax	705.1	650.5	54.6	8.4
Tax expense	(213.1)	(193.5)	(19.6)	(10.2)
Underlying profit after tax	492.0	457.0	35.0	7.7
Significant items after tax	-	(20.2)	20.2	-
Statutory profit after tax	492.0	436.8	55.2	12.6
Statutory earnings per share (cents)	254.1	230.0 ³		10.5
Underlying earnings per share (cents)	254.1	240.4 ³		5.7
Dividends per share (cents)	228.7	216.3 ³		5.7

¹ FY19 is in line with the Group segment reporting note.

² The comparative has been restated for the adoption of AASB 15. A reconciliation of the income statement and the restated comparative is provided in the table below.

³ The comparative has not been restated.

	FY18 \$m	Change in accounting policy \$m	Restated FY18 \$m
Operating revenues	822.7	(11.8)	810.9
Operating expenses	(195.5)	-	(195.5)
EBITDA	627.2	(11.8)	615.4
Depreciation and amortisation	(47.6)	-	(47.6)
EBIT	579.6	(11.8)	567.8
Interest and dividend income	82.7	-	82.7
Profit before tax	662.3	(11.8)	650.5
Tax expense	(197.0)	3.5	(193.5)
Underlying profit after tax	465.3	(8.3)	457.0
Significant items after tax	(20.2)	-	(20.2)
Statutory profit after tax	445.1	(8.3)	436.8

Operating revenue

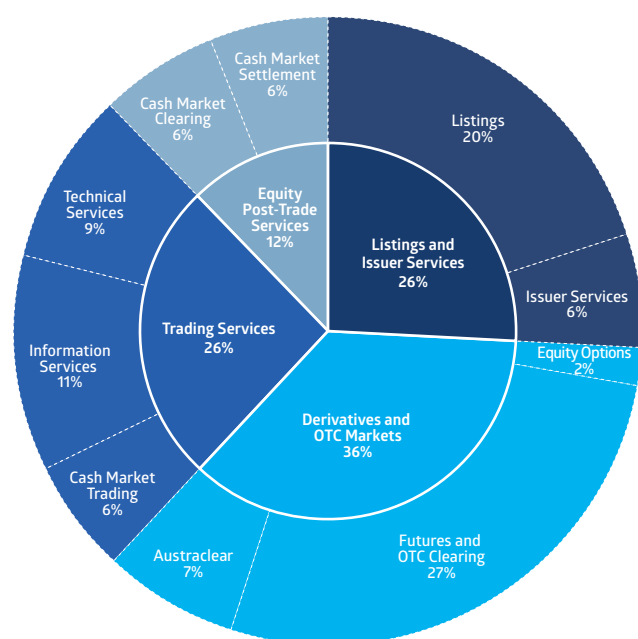
Operating revenue in FY19 increased 6.5% to \$863.8 million.

The key components of operating revenue:

- **Listings and Issuer Services** revenue increased 5.5%, resulting from strong capital raising in prior periods, higher market capitalisation and fee changes
- **Derivatives and OTC Markets** revenue increased 7.8%, reflecting a significant increase in activity, particularly futures trading and OTC Clearing
- **Trading Services** revenue increased 9.4%, resulting from higher cash market trading activity and increased cabinets and connections within the Australian Liquidity Centre (ALC)
- **Equity Post-Trade Services** revenue increased 3.5%, reflecting higher value cleared and settlement messages.

	FY19 \$m	FY18 \$m	Variance fav/(unfav)	
			\$m	%
Listings and Issuer Services	220.2	208.8	11.4	5.5
Derivatives and OTC Markets	308.6	286.4	22.2	7.8
Trading Services	229.6	209.9	19.7	9.4
Equity Post-Trade Services	108.4	104.8	3.6	3.5
Other revenue	(3.0)	1.0	(4.0)	-
Total operating revenues	863.8	810.9	52.9	6.5

Operating and financial review continued



Operating expenses

Operating expenses in FY19 were slightly above guidance provided to the market as a result of updated ASIC cost recovery charges. As reflected in the segment note, underlying operating expenses (excluding finance costs, depreciation and amortisation, and significant items) increased 9.9% to \$214.8 million.

	FY19 \$m	FY18 \$m	Variance fav/(unfav)	
			\$m	%
Staff	127.7	114.6	(13.1)	(11.5)
Occupancy	17.9	16.4	(1.5)	(9.5)
Equipment	30.7	27.9	(2.8)	(10.2)
Administration	22.5	22.4	(0.1)	(0.4)
Variable	8.4	7.9	(0.5)	(5.6)
ASIC levy	7.6	6.3	(1.3)	(19.3)
Total operating expenses	214.8	195.5	(19.3)	(9.9)

- Staff costs increased 11.5% to \$127.7 million. This reflects the hiring of 102 additional full-time equivalent (FTE) employees throughout the year, partly offset by higher levels of staff costs capitalised on projects compared to pcp. As at 30 June 2019, there were 689 FTE staff compared to 587 a year earlier. Additional headcount relates to the implementation of Stronger Foundations and licence to operate initiatives, as well as project demand hires to support both capital (including CHES replacement) and operational projects.
- Occupancy costs increased 9.5% to \$17.9 million, primarily due to the increase in our international data centre footprint and additional floor space as a result of higher FTEs.

- Equipment costs increased 10.2% to \$30.7 million, due to additional licensing and support costs associated with the development of ASX's data analytics platform (ASX DataSphere) and digital initiatives (redesign of ASX website).
- Administration costs were broadly flat.
- Variable costs increased 5.6% due to higher postage costs and the number of envelopes containing CHES statements increased by 4%.
- Regulatory fees increased 19.3% compared to pcp. During the second half of FY19, ASIC provided further guidance on the level of cost recovery for FY19, which resulted in a higher level of accruals in the current half. ASIC invoices the market six months after year-end close.
- Depreciation and amortisation expenses increased 0.5% to \$47.8 million, reflecting ASX's investment in technology of recent years.

Capital expenditure

The Group invested \$75.1 million in capital expenditure during the year, compared to \$54.1 million in the pcp. The increase on pcp is reflective of our ongoing investment in upgrading technology to support various initiatives and strengthen the resiliency of ASX services. FY19 expenditure included the continued investment in distributed ledger technology (DLT) for CHES replacement, a new secondary data centre, and ASX DataSphere.

Net interest income

	FY19 \$m	FY18 \$m	Variance fav/(unfav)	
			\$m	%
ASX Group net interest income	23.4	18.2	5.2	28.7
Net interest on collateral balances	75.4	50.3	25.1	49.7
Total net interest income	98.8	68.5	30.3	44.1
Dividend income	5.1	14.2	(9.1)	(63.6)
Interest and dividend income	103.9	82.7	21.2	25.7

Net interest and dividend income increased 25.7% to \$103.9 million. Net interest consists of two components: interest earned on ASX's cash balances and net interest earned from the investment of collateral balances lodged by participants.

Interest income on ASX's cash balances increased 28.7% to \$23.4 million due to higher balances and increased earning rates. Net interest earned from the investment of participant balances increased 49.7% to \$75.4 million. This increase was driven by a 18.4% increase in average collateral balances to \$8.2 billion, reflective of larger positions. Investment earnings on this portfolio averaged 51 basis points compared to 34 basis points above the official overnight cash rate.

Dividend revenue was down 63.6% to \$5.1 million due to the sale of ASX's shareholding in IRESS in February 2019.

Operating and financial review continued

Financial position

At 30 June 2019, the net assets of the Group were \$3,916.4 million, down 0.7 % from 30 June 2018.

Summary balance sheet for year ending 30 June 2019

	30 June 2019 \$m	30 June 2018 \$m	Variance increase/ (decrease)	
			\$m	%
Assets				
Cash	333.1	377.2	(44.1)	(11.7)
Other financial assets*	11,937.2	9,192.9	2,744.3	29.9
Intangibles (excluding software)	2,326.1	2,326.3	(0.2)	(0.0)
Investments	76.3	469.5	(393.2)	(83.7)
Other assets	657.6	557.1	100.5	18.0
Total assets	15,330.3	12,923.0	2,407.3	18.6
Liabilities				
Amounts owing to participants	10,801.0	8,495.8	2,305.2	27.1
Other liabilities	612.9	481.7	131.2	27.2
Total liabilities	11,413.9	8,977.5	2,436.4	27.1
Equity				
Capital	3,027.2	3,027.2	-	-
Retained earnings	801.7	666.7	135.0	20.2
Reserves	87.5	251.6	(164.1)	(65.2)
Total equity	3,916.4	3,945.5	(29.1)	(0.7)

* Includes other financial assets at amortised cost, financial assets at fair value through profit or loss, and available-for-sale financial assets.

Investments

Investments for the period were down \$393.2 million or 83.7% on the prior year, primarily due to the sale of our shareholding in IRESS. Investments are detailed below. The movement reflects the change in fair value of these investments:

- 19% shareholding in IRESS was sold in February 2019. IRESS is a listed entity providing financial market and wealth management technology solutions
- 46% shareholding in Yieldbroker Pty Limited, an unlisted entity operating licensed electronic markets for trading Australian and New Zealand debt securities
- 7% shareholding in Digital Asset Holdings LLC, an unlisted US-domiciled technology entity
- 49% shareholding in Sympli, a joint venture established to provide electronic property conveyancing and settlement services.

Amounts owing to participants

Amounts owing to participants were up \$2,305.2 million or 27.1% compared to the prior year, reflecting an increase in the open positions held in interest rate and equity index futures, as well as equity margins and OTC derivative positions. ASX holds these collateral positions to cover cash market and derivatives exposures as part of its clearing operations.

The increase in participant balances results in a corresponding increase in cash and other financial assets, as the balances are invested by ASX.

Listings and Issuer Services

Business model and operating environment

ASX, through its listing rules and infrastructure, provides a facility for companies to list, raise capital and have their securities publicly traded.

The Group provides a range of services to issuers of capital, including the generation of issuer holding statements and other shareholder and sub-register services. ASX also lists debt securities (including government debt securities) and exchange-traded investment products.

The Group earns revenue from listed entities for initial listing, annual listing, secondary capital raisings, and for issuer services. The main drivers of revenue in this category include the:

- Number of listed entities and their market value
- Number and value of initial public offerings (IPOs)
- Level of corporate actions, such as secondary capital raisings
- Number of holding statements.

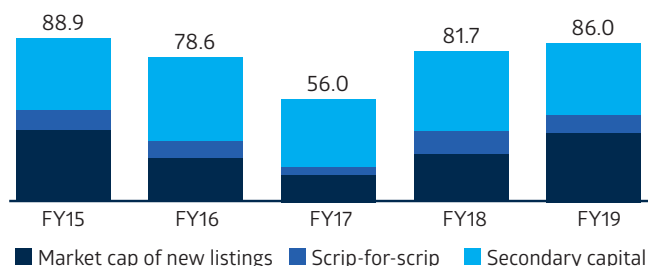
Results of operations

Listings and Issuer Services revenue was \$220.2 million, up 5.5% reflecting:

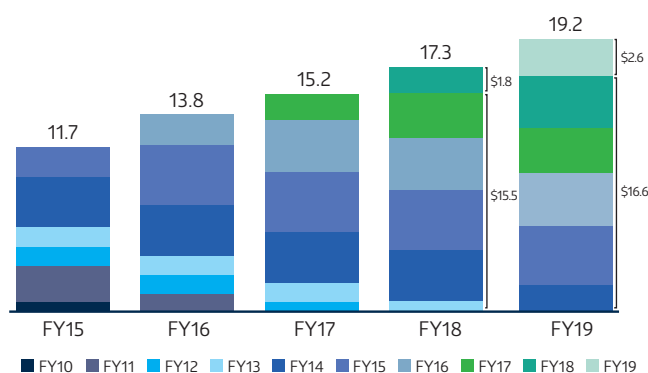
- **Annual listing** revenue up 9.3% to \$93.8 million. An increase in the number of listed entities billed, along with growth in market capitalisation and annual fee changes resulted in the increase in revenue
- **Initial listing** revenue up 11.6% to \$19.2 million. With the adoption of AASB 15, revenue was primarily initial listings revenue generated over the last five years. Historical revenues accounted for \$16.6 million and \$2.6 million of revenue related to strong capital raising in the current period. While there were fewer IPOs, 111 compared to 137 in the pcp, the amount of capital raised was up 45.6% to \$37.4 billion which generated \$22.1 million in revenue, which will be amortised over five years
- **Secondary capital raisings** revenue up 5.8% to \$51.2 million. With the adoption of AASB 15, revenue was primarily secondary listings revenue generated over the last three years. Historical revenues accounted for \$41.2 million, weaker capital raising in the current period contributing a further \$10.0 million. Secondary capital raised was down 13.2% compared to pcp generating revenue of \$54.4m (down 7.6% on pcp), which will be amortised over three years
- **Other listings** revenue down 14.8% to \$6.9 million. Fewer re-instatements, 11 compared to 31 in the pcp, resulted in revenue being down \$1.5 million. Initial and secondary debt raisings were also down \$0.2 million on pcp. This is offset by stronger exchange-traded products (ETP) revenues, up \$0.5 million as funds under management (FUM) balances increased year-on-year
- **Issuer services** revenue marginally down 0.2% to \$49.1 million. The number of CHES holding statements was down 2.5%. Other issuer-related CHES messages were also down compared to pcp.

Operating and financial review continued

Total capital raised (\$billion)

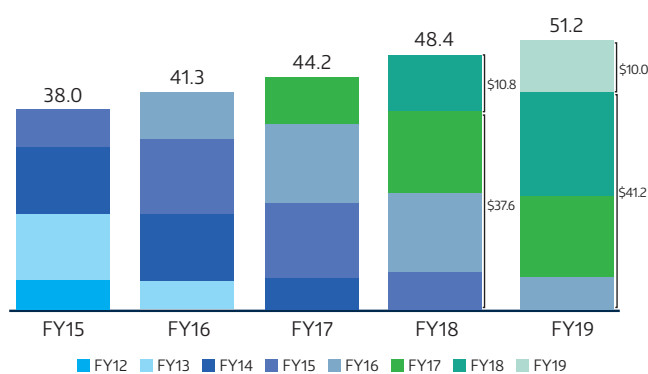


Initial listing fee revenue contribution per year under AASB 15 (\$million)



Colours represent the year in which revenue was generated and the periods over which it will be amortised.

Secondary listing fee revenue contribution per year under AASB 15 (\$million)



Colours represent the year in which revenue was generated and the periods over which it will be amortised.

Business strategies

ASX has implemented a range of initiatives in recent years aimed at enhancing the attractiveness of Australia as a place to list and raise capital. These include updates to the listing rules to maintain the high standards of being listed on ASX.

ASX has been successful in increasing the number of foreign companies and those from the technology sector listed on the exchange. ASX has 275 foreign entities and 202 technology companies listed.

In order to broaden the choice for customers, ASX has a range of products and asset classes available for issuers and investors. Some of the investment products that complement traditional equities include:

- Bonds – ASX provides the ability for clients to trade Australian Government bonds on exchange in the same way as equity trading
- ETPs – in recent years ASX has increased the number and range of ETPs. The value of ETPs listed on ASX increased 30.0% to \$50.9 billion in FY19
- Managed funds (mFund) – mFund allows investors to apply for and redeem unlisted managed funds using their broker platform. At 30 June 2019, there were 219 funds available on mFund with a market capitalisation of \$937.2 million, 38.4% up on the pcp.

Derivatives and OTC Markets

Business model and operating environment

ASX offers exchange-traded derivatives, including the trading and clearing of futures and options on futures on interest rate, equity index, agricultural and energy contracts, as well as exchange-traded options over individual securities. The number of contracts traded is the primary revenue driver.

Through the licensed ASX Clear (Futures), ASX provides central counterparty clearing (CCP) of these exchange-traded derivatives as well as clearing of over-the-counter (OTC) derivatives. This entity provides risk management services supported by clearing participant collateral and funds provided by both ASX and participants, which are available in the event participants fail to meet their obligations. Through a process known as novation, the CCP assumes the credit risk of all trades centrally cleared and thus facilitates an efficient and orderly clearing and settlement function for the market.

Austraclear provides settlement, depository and registry services for debt securities and cash transactions. ASX's model for debt securities settles transactions on a trade-by-trade basis, which provides for certainty of settlement. The number of transactions is the main revenue driver.

Depository services are provided through the Austraclear central securities depository (CSD). These securities consist of fixed income securities including government bonds. Settlement of transactions on these securities occurs through real-time gross settlement (RTGS). The value of securities held is the main revenue driver.

Registry services are provided whereby Austraclear facilitates security registration and the subsequent cash transfers associated with the terms of the individual securities. The main drivers of registry revenue are the number and value of securities held in the registry.

ASX Collateral service allows customers of ASX to utilise collateral held in Austraclear to meet obligations to other customers or to ASX's clearing subsidiaries. The value of collateral balances managed is the main revenue driver.

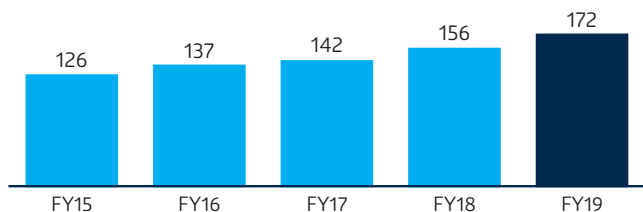
Operating and financial review continued

Results of operations

Derivatives and OTC Markets revenue was \$308.6 million, up 7.8% reflecting:

- **Futures and OTC** revenue up 9.6% to \$232.9 million. The increase in revenue was due to a 9.9% rise in futures volumes and 53.8% growth in OTC clearing value. Proprietary trading volume rose following increased activity by existing traders and the addition of new trading participants. The value cleared through the OTC clearing service was \$9.7 trillion, compared to \$6.3 trillion in pcp. Proprietary trading and interest rate and OTC rebate schemes were up 14.1%, or \$11.2 million, following higher trading activity
- **Equity options** revenue down 9.2% to \$19.9 million. Subdued activity resulted in lower index options volumes, down 9.5%, and single stock option volumes, down 7.8%
- **Austraclear** revenue up 7.4% to \$55.8 million. The increase was primarily due to higher balances in the depository, and increased transactions and growth in the ASX Collateral service across the period. At 30 June 2019, the value of assets in the ASX Collateral service was down marginally to \$22.4 billion compared to \$23.5 billion in the pcp. Average balances throughout the year however were up 9.9% on pcp to \$21.9 billion.

ASX futures and options on futures contract volume (million)



Business strategies

Through ASX's Austraclear platform, ASX delivers collateral efficiency to customers with its collateral management service. This service allows customers to utilise collateral held in ASX's Austraclear debt registry to meet obligations to other customers (mainly repo transactions) or to ASX's clearing subsidiaries.

The OTC Clearing service includes A\$ and NZ\$ interest rate swaps and client clearing. Notional open interest at the end of June 2019 was \$7.2 trillion, up 91% on the pcp.

In FY18, ASX invested in a joint venture, Sympli, which has been established as an electronic lodgement network operator (ELNO). Sympli is approved to operate as an ELNO in Victoria, Queensland and New South Wales, and is targeting integration with the first bank for the purposes of document lodgement with financial settlement in the third quarter 2019.

Trading Services

Business model and operating environment

Trading Services comprises the trading of securities in the cash market, as well as the information and technical services offered by ASX.

Cash market comprises the trading of equities, warrants, exchange-traded funds and listed debt securities. The value of turnover transacted on the ASX market is the primary revenue driver.

Information services includes the provision of real-time market data for the cash and derivative markets, and the provision of indices, company news, and index and other reference data. The main revenue drivers are the number of end users accessing real-time market data and customer enterprise agreements for the provision of data.

Technical services consists of four main categories of services to facilitate market connectivity and access to ASX and third-party services by customers. These are:

- ASX's distribution platform, hosting of customer infrastructure within the ALC and ASX Net site management
- Connection services to facilitate connectivity to the ALC
- ASX service access including access and sessions for market data products and clearing and settlement systems
- Market access to trading sessions, liquidity cross-connects and order entry, as well as trade gateways.

Revenue drivers for each category consist of the volume of services used by customers, such as the number of connections to ASX markets or the number of cabinets hosted in the ALC.

Results of operations

Trading Services revenue was \$229.6 million, up 9.4% reflecting:

- **Cash market trading** revenue up 12.9% to \$51.7 million. The increase in revenue resulted from:
 - Higher on-market trading value of \$4.6 billion per day, up 11.7%. ASX's share of on-market trading averaged 88.6% in FY19, up 2% on the average of 86.6% in the pcp
 - Auctions and Centre Point value was up 21.3% on pcp, both of which have higher associated revenues. Auctions accounted for 28.6% of the on-market value while Centre Point usage was 9.7%. Together, these accounted for 55.7% of ASX trading revenue, up from 53.3% in the pcp
- **Information services** revenue up 6.9% to \$96.3 million. The increase in revenue resulted from:
 - Additional revenues from futures data pricing and fee changes to certain data services
 - Increased index royalties from S&P, additional bank bill swap rate (BBSW) distribution, annual fee increases and one-off audit recovery revenue
- **Technical services** revenue up 10.3% to \$81.6 million. The increase in revenue was due to:
 - Increased cabinet hosting with 324 cabinets at 30 June 2019, up from 301 a year earlier, and strong growth in the number of cross-connections within the ALC. The number of ALC cross-connections grew from 984 to 1,068 during the year.

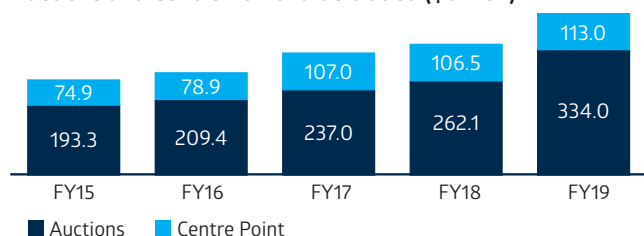
Business strategies

The Trading Services strategy is to provide innovative services to maximise the attractiveness of trading on ASX, and to meet the needs of a varied customer base. This includes providing leading price discovery and liquidity access execution types, such as Auctions and Centre Point.

Operating and financial review continued

The Centre Point order type is an example of ASX innovation following feedback from end investors. The various Centre Point order types provide customers with optionality and control over how their orders are executed.

Auctions and Centre Point value traded (\$billion)



ASX DataSphere is ASX's open data infrastructure solution offering customers the ability to unlock value through insights and analysis in a secure and governed ecosystem. ASX's broad range of data combined with other data sources, provides the ability to offer additional data and analytics to a range of users.

In January 2017, ASX expanded its data offerings when it became the administrator for, and provider of, the BBSW interest rate benchmark. During FY18, ASX strengthened the integrity of this benchmark by introducing a new calculation methodology following consultation with the market and regulators. In FY19, ASX explored new benchmark data opportunities to expand our current service offering.

Within the information and technical services offerings, ASX's strategy is predominantly driven by the needs of clients in equities and derivatives. These requirements include the hosting of hardware and connectivity, as well as low latency (high speed) services to access information and ASX's trading platforms.

Demand for information services is impacted by the level of market activity and the number of users accessing ASX market data. ASX's services are tailored to meet changing customer requirements such as electronic usage of data. ASX provides enterprise licences for large users of data that offer pricing certainty to customers along with standard monthly royalty plans.

ASX's success in expanding its technical services follows the investment in the ALC and communications network (ASX Net). ASX will continue to invest in its product and service offerings in order to become the leading provider for the financial community.

Equity Post-Trade Services

Business model and operating environment

ASX's clearing and settlement infrastructure provides risk management services through its CCP and delivery-versus-payment settlement of cash market trades. ASX's post-trade operations are backed by significant Australian-based capital and collateral, and are overseen by Australia's regulators. Through a process known as novation, the CCP assumes the credit risk of all trades centrally cleared and thus facilitates an efficient and orderly clearing and settlement function for the market.

Cash market clearing

The CCP supports these risk management activities with collateral lodged by clearing participants and ASX funds in the clearing guarantee fund. These collateral and guarantee fund resources can be called upon if a clearing participant does not meet its obligation to finalise a trade that has been novated to the CCP. The main revenue driver is the value of equity securities centrally cleared.

Cash market settlement

Cash market settlement is conducted through the Clearing House Electronic Sub-register System (CHES). This system registers the title (ownership) of shares. ASX's model for cash market settlement maximises efficiency through the netting of settlement obligations in each individual security and the netting of all payment obligations, while minimising the risk of settlement failure. The main driver of settlement revenue is the number of settlement messages, which can be impacted by a number of variables including the level of transactions and the netting efficiency.

Results of operations

Equity Post-Trade operating revenue was \$108.4 million, up 3.5% reflecting:

- **Cash market clearing** revenue up 4.9% to \$54.4 million. This resulted from an increase in the value of trades centrally cleared in the market of 9.0%, as the total value traded in the market was higher. An average of \$4.9 billion on-market value was centrally cleared each day by ASX Clear and no calls were made on the clearing guarantee fund in the current or prior year. Strong year-on-year activity resulted in a clearing revenue rebate of \$2.5 million. No rebate was paid in the pcp
- **Cash market settlement** revenue up 2.1% to \$54.0 million. The number of messages increased year-on-year, with the main message type 10.1% higher than the previous year. The settlement revenue rebate was \$0.9 million compared to \$0.6 million in the pcp.

Business strategies

ASX is the sole provider of cash market clearing and settlement services to the Australian market.

ASX's Equity Post-Trade strategy is to innovate to improve the efficiency of clearing and settlement, so to allow our customers to offer new products and services to benefit issuers and investors.

In December 2017, ASX announced it would replace the CHES post-trade platform using distributed ledger technology. In 2018, the New Scope and Implementation Plan consultation paper set out the enhancements that ASX plans to deliver, which include new functional business requirements captured through the stakeholder working group process. The customer development environment (CDE) was opened at the end of April 2019. CDE supports early access development and low volume transaction and functional testing. The next milestone will be industry-wide testing, expected in July 2020. Further details on this initiative are included on page 12.

Operating and financial review continued

Risk

Like any business, ASX faces risks and uncertainties. Some come from outside the organisation, some from within. Some we can control by taking mitigating actions to reduce their impact and others we accept, as they provide attractive returns.



Risk management is a critical component of ASX's day-to-day operations and our ability to achieve long-term success. A concentrated focus on risk management reduces the risk of negative outcomes and increases the likelihood of ASX achieving its strategic and financial goals.

Accountability for risk management is held at all levels across the organisation, from the Board, down through executive management, to individual team members. ASX believes embedding a culture of risk awareness is critical to ASX's long-term success. ASX proactively engages employees on the understanding and importance of risk management. This includes the identification and management of current and emerging risks in their day-to-day activities and speaking up about any concerns they may have.

Our approach

ASX has a Board-approved Risk Appetite Statement that describes the types of risk we encounter in our business, along with our tolerance for outcomes that impact on our customers, shareholders and the wider financial market community. Complementing this is a governance structure, commencing at the Board and flowing down through executive level management committees to individuals, which clearly articulates roles and responsibilities for managing risk within the organisation. This is underpinned by the 3 Lines of Defence risk management framework.

The table below describes ASX's key risks and how we respond to them.

Risk	The risk and its impact	How we are responding
<p>Regulation, market structure and competition</p> 	<p>ASX operates in highly regulated markets. Changes in regulations and/or market structure can impact on ASX or its customers and the environment in which we operate.</p> <p>Examples of how ASX's business could be impacted include if:</p> <ul style="list-style-type: none"> • New competitors commenced operation in Australia • Regulatory requirements were changed for certain important services • ASX's products or services did not meet industry expectations in terms of quality or value. 	<ul style="list-style-type: none"> • We regularly engage with government, regulators and industry participants on market structure issues to promote the best industry-wide efficiency outcomes. • We constantly engage with our customers to seek feedback on the quality and value of our products and services, and continually look for ways to improve these. • We monitor the performance of individual products and services against those available elsewhere to support ASX's ability to deliver a strong value proposition. • We consider the impact of ASX-driven change on our customers. • We invest in technology enabling us to stay at the forefront of innovative products and services. • We constantly engage with government on the future direction of policy impacting our business.
<p>Economic environment and market activity</p> 	<p>ASX's business can be impacted by the level of market activity. Market activity levels are influenced by economic performance, government policy, and general financial market conditions in Australia and overseas.</p> <p>Slowing economic conditions or a lessening of general market volatility can lead to a reduction in activity and revenues.</p> <p>Examples of how ASX's business could be impacted if there was a slowdown in the Australian economy include:</p> <ul style="list-style-type: none"> • Fewer new listings • Less secondary capital raisings • Decline in the volume and value of equities traded • Slowdown of growth rates associated with data products and/or technical services. 	<ul style="list-style-type: none"> • We continue to build resilience into our business model through the diversification of revenue streams. • We have been growing those services that have annuity-style revenue streams. • We have been focusing on enhancing our reputation as a listing venue with emphasis on both technology and foreign companies. • We continually look to introduce new domestic and international participants to our trading markets and clearing and settlement facilities.

Operating and financial review continued

<p>Operational excellence</p> 	<p>The resilience, continuity and quality of our operational processes are critical to our ability to operate.</p> <p>This risk arises when failures in our people, processes, systems or controls impact on the delivery of our products or services to our customers.</p> <p>The occurrence of such a failure may result in reduced customer service, the inability to provide services, reduced revenues, increased costs, fines or regulatory issues.</p>	<ul style="list-style-type: none"> • We have people, processes, systems and controls in place designed to meet our operational benchmarks. • We regularly assess how we can make improvements to the resilience and reliability of our operational processes. • We regularly consider the effectiveness of our controls. • We monitor customer complaints for feedback on where we could improve performance. • We have business continuity plans that are regularly tested. • We have an incident management framework requiring that timely attention be paid to rectifying incidents as they occur. • We undertake resource planning and have staff training and retention programs.
<p>Technology availability</p> 	<p>ASX operates critically important financial market infrastructure which is expected to be open and available at all relevant business times.</p> <p>A risk to ASX arises where infrastructure and technology are unreliable and have slow recoverability. Issues that would heighten this risk are the prevalence of ageing infrastructure, systems or applications that are near their end of life, and a significant increase in cyber attack activity.</p> <p>The risk may result in reduced ability or an inability to deliver ASX's trading, clearing and settlement services, reduced customer service, reduced revenues, unplanned remediation or replacement costs or further licence conditions.</p>	<ul style="list-style-type: none"> • We regularly monitor our systems availability against targets and test to understand maximum throughput capacity. • We monitor the health of critical systems and have contingency plans in place for disruptions. • We replace ageing technology in a phased and planned manner. Recent examples include the replacement of SYCOM with NTP, the announcement to replace CHESSE with a DLT solution and upgrading our secondary data centre. • We constantly engage with our vendor partners who provide some of our critical systems and applications. • We have a regular disaster recovery testing program in place. • We have a cyber security strategy in place and continually look to improve our capability.
<p>Counterparty default risk</p> 	<p>This risk arises in our licensed clearing and settlement facilities when a participant fails to meet its contractual obligations to any of the facilities.</p> <p>Depending on the size and complexity of the defaulting counterparty, the default could lead to extremely volatile conditions in global financial markets. This, along with ASX's default management strategy, will determine the size of any possible loss sustained by ASX.</p>	<ul style="list-style-type: none"> • As part of our regulatory framework, ASX has the financial resources in place to withstand the concurrent default of our two largest participants under extreme market conditions. • We enforce minimum financial and operating criteria for participants. • We require participants to provide collateral in the form of initial margin, and to make regular, frequent and at least daily variation margin payments. • We hold pre-funded default risk financial resources. • We have technology and risk policies and procedures to constantly monitor and manage counterparty exposures. • We have default management strategies that are regularly fire-drilled. • We have recovery plans for extreme default scenarios.
<p>Investment returns</p> 	<p>Financial losses may arise from investment decisions taken in relation to the management of collateral balances received from clearing and settlement activity, from the investment of ASX's own capital, or the clearing and settlement facilities pre-funded default capital resources.</p> <p>ASX also makes equity investments in support of its broader business objectives (e.g. Yieldbroker, Digital Asset, Sympli).</p>	<ul style="list-style-type: none"> • We have investment limits in place under which ASX is required to invest its funds in highly rated counterparties, with short-term maturities. • We closely monitor financial markets activity, performance and sentiment to inform investment decisions. • We monitor the business strategy and financial performance of companies that we have invested in, and follow the prescribed accounting treatment in terms of impairment or loss recognition should that be necessary.
<p>Reputation and stakeholder confidence</p> 	<p>The ongoing success of ASX is highly dependent on its reputation for trust, integrity and resilience in everything that we do.</p> <p>Reputation risk arises in a wide variety of situations, for example, where ASX is perceived to have not acted with integrity or failed to deliver resiliency in its activities.</p> <p>Any outcome that causes detriment to this reputation has the potential to damage ASX's future business prospects through reduced business volumes or regulatory impact or intervention.</p>	<ul style="list-style-type: none"> • We aspire to be the world's most respected financial marketplace. • Understanding the importance of our reputation and protecting it is at the centre of everything we do. • ASX considers the possible reputation risk in all its business activities and decisions. • We have refreshed our company values and focus on trustworthy behaviours. • We have regular and open engagement with customers and wider stakeholders to seek feedback on our performance. • We have regular interaction with our regulators and government at management, CEO and Board level to facilitate thorough coverage of issues. • We regularly engage with media so they understand the role ASX plays.

A photograph of the Exchange Centre building facade at 20 Bridge Street. The building is a modern structure with a dark, reflective surface. The text 'EXCHANGE CENTRE' and '20 BRIDGE STREET' is mounted on the wall in large, metallic, three-dimensional letters. In the foreground, several people are walking on the sidewalk, their figures blurred due to a long exposure, suggesting a busy urban environment. The background shows a city street with traffic lights and other buildings under a clear sky.

EXCHANGE CENTRE
20 BRIDGE STREET

Corporate responsibility and
sustainability

Corporate responsibility and sustainability

Our corporate responsibility and sustainability approach

Our approach

For ASX, sustainability is about taking steps today to ensure that our strong financial and operational performance and commitment to integrity continue into the future, and that we are prepared for the opportunities and challenges ahead.

ASX's vision is to be the world's most respected financial marketplace. This requires balancing sustainable action with the pursuit of financial returns. To achieve this vision, ASX needs the trust and support of all its stakeholders and the wider Australian community.

Trust and integrity

The level of trust our customers, shareholders, regulators, governments and the broader community have in ASX's products, services and infrastructure is critical to our ability to support a stable and sustainable business.

ASX earns the trust of its stakeholders by:

- Providing products, services and infrastructure that are valued, robust and reliable
- Making decisions that are fair, transparent and independent
- Being accountable and acting with integrity at all times.

Affirming, preserving and deepening that trust is the role of each ASX employee.

Re-establishing the market's confidence in Australia's bank bill swap rate (BBSW) through the implementation of a new, world-leading calculation methodology, is one example of how we have strengthened the integrity of Australia's financial markets in recent years.

ASX implemented the new methodology with the cooperation of customers and regulators to revitalise this important interest rate benchmark.

Robust and resilient markets

ASX provides services and infrastructure that are critical to the operation of Australia's financial markets and economy. Ensuring their robustness and resilience, including the reliability of our systems to remain open despite external shocks, is key to creating long-term value for our customers and shareholders. This requires contemporary and capable technology, skilled and dedicated people, as well as having in place comprehensive, clear and communicated processes and policies to support the running of fair, orderly and transparent markets.

Our commitment to robustness and resilience is evident by our continued investment to upgrade and evolve our technology infrastructure. Recent investments include the rollout of ASX's new futures trading platform, the replacement of CHES and a new secondary data centre.

Risk management

Assessing our risk position for the short, medium and long-term is crucial to managing our business. We believe that our ability to deliver long-term value to all stakeholders is influenced by our risk management activities. ASX's risk management and internal control framework is tailored to reflect our business operations, so that we can identify, consider and manage risks as they arise.

Over the past two years, ASX has enhanced our clearing risk management tools and processes as part of the Stronger Foundations program. This has included working constructively with our regulators. These improvements strengthen our internal risk management capability and help promote stability and confidence within Australia's financial markets.

Details of our material business risks and our response to them are set out in the Operating and Financial Review on pages 16 to 25.

Corporate governance

Corporate governance is a broad-ranging term which, among other things, encompasses the rules, relationships, policies, systems and processes whereby authority within organisations is exercised and maintained¹. Delivering our stakeholders transparency and good governance is essential to the long-term sustainability of ASX. Well-executed corporate governance increases organisational accountability and drives company performance. Good corporate governance promotes shareholder confidence and is crucial for our ability to compete for capital.

See page 32 to learn more about ASX's involvement in the development of the fourth edition of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations* released in February 2019.

Our corporate responsibility and sustainability activities aim to:

- Create an engaged and supported workforce
- Adopt responsible business practices
- Build enduring trust, integrity and resilience in Australia's financial markets
- Minimise our impact on the environment.

We believe that ongoing assessment and management of our environmental, social and governance (ESG) risks have a meaningful impact on our ability to create long-term value for all stakeholders.

Around the world, investors are increasingly focused on how companies manage their ESG activities and reporting. In meeting the evolving ESG environment, ASX is reviewing and refreshing its reporting approach. We look forward to updating you on this work in FY20.

Our people

Achieving ASX's vision to be the world's most respected financial marketplace requires our employees to be accountable and to act with integrity. By investing in ASX's workforce and employee experience we can enable our people to do and be their best.

¹ As defined by Australian Institute of Company Directors.

Corporate responsibility and sustainability continued

We do this by providing our people with:

- A strong set of values that guides behaviours and the way we interact with each other, our customers, regulators and other stakeholders
- An accountable culture that is inclusive and respectful of the customers we serve and the broader Australian community
- The skills and capabilities required to execute our strategy now and in the future
- An opportunity to develop and progress their careers and to contribute to our vision.

A values-based organisation

ASX is committed to building an engaged, skilled and responsible workforce guided by our company values and focused on executing our strategy. To do this we:

- Make clear the behaviours we expect of employees
- Commit to protecting the confidentiality of employees who wish to raise matters concerning the integrity of ASX
- Strive to create a diverse and inclusive workplace
- Have a strategy to attract and retain talent through our remuneration practices and training and development programs
- Provide a safe, enjoyable workplace and programs that support employee wellbeing.

Values-driven behaviour

ASX's BE values articulate the types of behaviours and personal interactions we expect at ASX. They represent what we stand for as an organisation and help guide the actions and decision-making of our people. They are **BE Open**, **BE Trustworthy**, **BE Original**, **BE The Example**.

Our BE values were developed collaboratively by management and staff, who were asked to describe what kind of company culture we have, as well as which behaviours were key to our long-term success.

Our BE values are turned into actions through the behaviours mentioned in the graphic below and are celebrated through our BE Awards program.

Management and the Board monitor ASX's culture and employee behaviour through regular staff surveys and our performance review process. Results are reviewed by the Remuneration Committee of the Board.

Some of the key findings of the staff surveys undertaken in FY19 included:

- 80% of employees believe the BE values reflect what it means to work at ASX
- 95% of employees are confident they know how to live the BE values
- 83% of employees see the BE values demonstrated in their teams.

Maintaining a high standard of integrity in our workforce and engendering trust among our stakeholders are central to our ability to operate successfully at the heart of Australia's financial marketplace. We work hard to instill and reinforce a culture of acting lawfully, ethically and responsibly.

ASX's Code of Conduct, Anti-bribery and Corruption, and Whistle-blower Protection policies set out the conduct we expect of our staff to meet our standards and those of our stakeholders and the broader Australian community. They are available on ASX's website.

Code of Conduct

ASX has a Code of Conduct underpinned by our values. The Code of Conduct applies to all our people, including directors, employees and contractors. It sets the standards for how we work at ASX and outlines the importance of our values to anyone dealing with ASX. The Code requires our people to act in a way that is guided by ASX's values – including acting in the best interests of ASX and with honesty, integrity and fairness.

Anti-bribery and corruption

ASX's Anti-bribery and Corruption policy states our requirements for the management of gifts and benefits. It requires employees to report all gifts above a specified threshold. The Audit and Risk Committee receives periodic reports on these disclosures.

To enhance our position of trust and independence, during the annual review of this policy in FY19 the threshold for declaring gifts was lowered from \$200 to \$100. In addition, gifts over \$400 are now prohibited unless approved by the CEO.

BE Open
Trustworthy
Original
The Example

FOR THE BENEFIT OF OURSELVES,
OUR CUSTOMERS AND THE MARKETS

- Open**
 - Create transparency
 - Welcome new ideas
 - Seek input
 - Promote diversity
- Trustworthy**
 - Embrace change
 - Think deeply and broadly
 - Be curious
 - Fuel innovation
- Original**
 - Act with integrity
 - Take responsibility
 - Say what you mean
 - Do what you say
- The Example**
 - Own it
 - Speak up
 - Do your best
 - Enjoy yourself

Corporate responsibility and sustainability continued

Whistleblower Protection policy

ASX's Whistleblower Protection policy supports employees who report non-compliant, suspicious or unethical conduct. It formalises ASX's commitment to protecting the confidentiality and position of employees who wish to raise matters concerning the integrity of ASX.

During FY19, this policy was updated to reflect proposed new legislation, with the remaining changes to be implemented in FY20.

Training

ASX requires staff to complete regular training and attest to their understanding of, and compliance with, ASX's policies including the Code of Conduct and Anti-bribery and Corruption policy.

During FY19, over 2,500 hours of mandatory e-learning modules were undertaken. Topics assessed included:

- Code of Conduct*
- Conflicts*
- Licence to operate
- Data breach
- Workplace diversity and inclusion
- Workplace health and safety.

*Included material relating to gifts and entertainment/anti-bribery and whistleblowing.

In addition to undertaking training, ASX's Executive team and General Managers are required to provide a 'policy adherence' attestation in areas including ASX's Code of Conduct, Conflicts Handling, Group Dealing Rules, Use of Social Media and Internet and Email Use.

A diverse and inclusive work environment

ASX knows that a diverse and inclusive work environment improves performance.

We support a workplace where employees have equal access to career opportunities, training and benefits. We treat employees fairly and respectfully and ensure they are not judged by their gender, age, ethnicity, race, cultural background, religion, sexual orientation, disability or caring responsibilities.

Our focus on gender equality

We promote gender equality as a priority.

ASX was again recognised as an Employer of Choice for Gender Equality by the Australian Government's Workplace Gender Equality Agency (WGEA), a citation we have held since 2014.

We have a target of 40% female representation for all management levels. ASX is working towards achieving this target, with an overall representation of females in management of 39% at 30 June 2019.

ASX reviews the pay of employees each year to ensure that males and females are paid equitably.

The FY19 review concluded that there was no systematic pay gap between male or female employees performing the same roles. While this is a positive outcome overall, there are always individual cases where this is not true and ASX identified a few men and women in this category. These gaps were closed in the 2019 remuneration review.

The issue of gender pay is a part of a larger challenge to achieve true diversity within our organisation. To encourage greater representation of women at all levels in the organisation, we:

- Set gender diversity targets. Achievement against the targets is monitored by the Remuneration Committee
- Require gender-balanced shortlists when recruiting all roles
- Embed gender equality targets as part of an executive's balanced score card and review the executive's achievement against these targets when determining their short-term incentive
- Undertake annual pay equity reviews and make adjustments where a gap is identified
- Participate in the Chief Executive Women Leaders Program that provides individual coaching for participants
- Support Male Champions of Change
- Support ASX's Our Women's Network, an employee-led networking group that champions equal opportunities and representation in the workforce.

The following table illustrates ASX's gender diversity at various levels within the organisation as at 30 June 2019.

Reporting	Target	FY19	FY18
Diversity % of women			
On the Board	40%	30%	33%
Executive committee roles	40%	29%	21%
Management executive roles	40%	42%	46%
Management/team leader roles	40%	39%	42%
Total % of women in management position roles	40%	39%	41%
Professional/technical roles	40%	38%	41%
Administrative roles	50%	79%	83%
Across the entire organisation	40%	41%	44%

Supporting working families

ASX implements gender-neutral policies to help build an inclusive workplace, such as offering flexible working conditions to allow employees to balance their work and personal lives. We enable employees to change their work hours and place of work, set up a job share arrangement, take career breaks and parental leave, or purchase additional leave.

In FY19, 80% of employees said they had the flexibility to balance work life responsibilities.

ASX's parental leave policy provides 16 weeks' paid leave for primary carers and four weeks' paid leave for secondary carers. Superannuation contributions foregone during unpaid parental leave are paid as a one-time contribution on return to work up to a maximum of 36 weeks.

Corporate responsibility and sustainability continued

In FY19, two-thirds of the employees who took parental leave were female and one third were male. Graduated return to work options are available to support employees' transition back to the workplace.

Attracting and retaining talent

We continue to evolve our offerings to employees to ensure we attract and retain high performing professionals. In addition to remuneration, we offer flexible working arrangements, learning, development and leadership training, a wide range of employee benefits, and opportunities for employees to contribute to their broader community.

ASX's market competitiveness as an employer was tested throughout the year as we recruited for a diverse range of roles. Pleasingly, the strength of our brand and the opportunity to work on industry-leading projects continues to sustain our ability to attract talented employees, particularly in the competitive technology sector.

Remuneration

ASX employees receive a competitive fixed remuneration package. Subject to performance, employees also participate in a Short-Term Incentive Plan that rewards individual behaviours and performance with ASX shares and/or cash, depending on the role. Details about our remuneration practices and policies are included in the Remuneration Report on pages 48 to 62.

ASX provides the opportunity for all employees to be shareholders. During the year, ASX employees had the opportunity to acquire ASX shares under a \$1,000 General Employee Share Plan. In FY19, this offer was accepted by 60% of staff.

Learning and development

We believe that our long-term sustainability is supported by high performing individuals who seek to improve their skills and performance. ASX offers learning and development programs at all levels of the organisation to help staff advance their skills and careers.

Over the last three years, ASX has taken a neuroleadership approach to personal and leadership development. In FY19, we provided opportunities for 58 leaders, approximately 10% of the workforce, to participate in three programs, which are aligned with ASX's values and designed to positively influence our culture.

ASX also participates in the Chief Executive Women Leaders Program, which provides development and networking opportunities and individual coaching for participants. In FY19, two participants completed the program, taking our overall participation in the program to 43 since its inception in 2006.

Safety

ASX is committed to the health and safety of all employees, visitors and contractors. Employees are encouraged to identify and address potential causes of workplace risk, injury and illness. The Audit and Risk Committee receives quarterly updates on ASX's compliance with workplace health and safety (WHS) laws.

Our WHS performance was audited in FY19 by an independent third party, with no adverse findings. ASX's management commitment, continual improvement and wellbeing were acknowledged as good practices.

ASX's FY19 lost-time injury frequency rate (the number of lost time injuries per one million hours worked) was very low at less than 0.04. This is in line with FY18.

Prevention of harassment and discrimination

ASX works to prevent discrimination and harassment in the workplace through education and awareness. Each year, employees must complete regular online training and assessments.

Employee-led networking groups

Employee-led networking groups (ENG) are developed, chaired and run by employees. Each group raises awareness and provides education for ASX employees.

There are two ENG's currently:

- Our Women's Network (OWN) champions equal opportunities and representation in the workforce. This group has been instrumental in securing ASX's accreditation as an Employee of Choice for Gender Equality
- The Culture and Heritage group, formed in FY19, celebrates and promotes the diversity of ASX by encouraging employees to tell their personal stories, share their heritage and history at work, and celebrate diverse cultural events.

A third ENG is soon to be established focused on ASX's community engagement and giving activities.

ASX supports the development of these groups through:

- The provision of resources and guidance on the governance, structure and goals of the group
- Financial support to enable events, communication and raising awareness of the aims of the ENG
- Executive sponsorship to advocate for the ENG and provide mentorship to ENG leaders.

Charitable giving

ASX understands that the engagement of our employees can be strengthened by helping them support their communities. ASX encourages its employees to make donations to their chosen charities through a workplace giving program, with ASX matching the donations. In FY19, the workforce giving program was utilised by 10% of the ASX workforce.

Wellbeing

ASX has a wellbeing program to support employees balance their work, personal and family life. Wellness programs are designed to improve the physical or mental health of our employees, which in turn strengthens their resilience as employees. We offer subsidised activities such as yoga, pilates, meditation, lunchtime sport and a walking club.

Our workforce

We recognise that balancing costs and productivity influences employee workloads and motivation levels, as well as the ability for management to operate the business and pursue growth opportunities.

Corporate responsibility and sustainability continued

In FY19, our permanent workforce grew 17% as we added resources in the areas of change and risk management, IT engineering and infrastructure, customer service, compliance, data analytics and business development. These resources have been deployed across the business allowing the execution of a range of technology enhancements and growth opportunities.

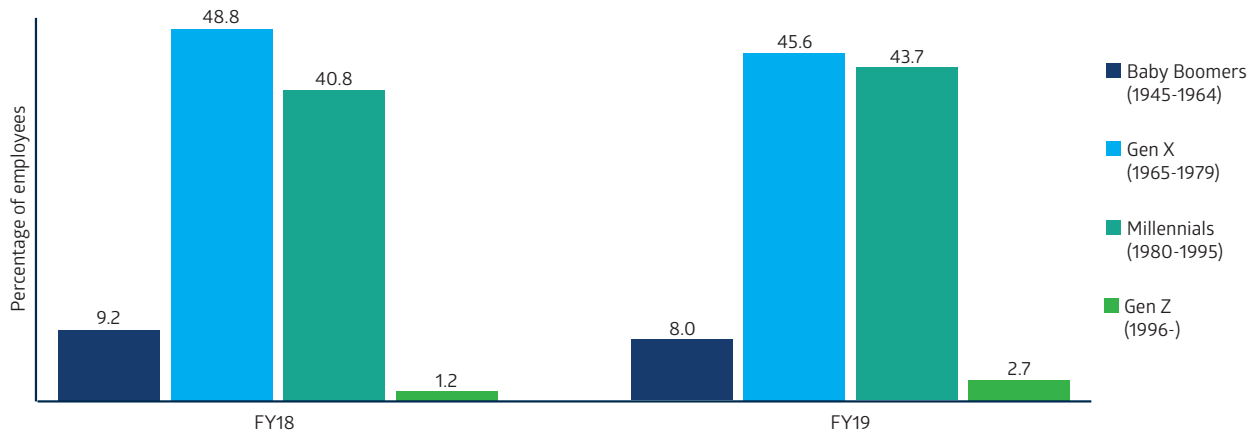
ASX also augmented our project delivery capability with an uplift in contractors, which now stands at approximately 7% of the permanent workforce. Strategic partnerships with technology consulting firms further enhanced the skills and capabilities of the organisation.

FY19 voluntary turnover remained consistent with the previous year at 12%, which is slightly below the diversified financials industry average of 13% as measured by the Australian-based Financial Institutions Remuneration Group.

Voluntary turnover is at a level that allows workforce stability while enabling ASX to introduce new skills and talent.

Having the right resources in place is also an important factor to build an engaged workforce. In FY19 we saw an increase in the number of our workforce who were born between 1980 and 1995. This group is often described as Millennials. The increase is consistent with the technology-led aspect of our strategy.

The below chart outlines the demographic split of the organisation as at 30 June 2019.



ASX in the community

Volunteering

ASX provides opportunities for employees to volunteer in their local community. This may be through the choice of the employee or via organised ASX volunteer days.

One of the ASX-organised volunteer days in FY19 was at the Exodus Foundation, which included preparing and serving food and beverages, creating emergency food parcels, and cleaning for disadvantaged and homeless people at the Ashfield Mission. Another, was at Hammond Care, where ASX volunteers visited dementia patients and helped with gardening, mulching and painting.



From left to right: Christopher Noone, Andrew McLeod, Ben Jackson, Sanjya Mistry, Christina D'Amico, Renee Service, Nehali Dani and Michelle Wang.

Fundraising

Throughout the year, ASX held a range of fundraising activities, bringing together employees from all areas of the business. The activities provide financial support for organisations aligned to the values of our employees, while also raising awareness about issues that impact on their lives. In 2019, we hosted the Biggest Morning Tea and Loud Shirt Day on behalf of the Cancer Council and the Shepherd Centre. These are two organisations that have helped our employees, their friends and families significantly.



From left to right: Lisa Banh (ASX), Phil Burge (Cancer Council), Dan Chesterman (ASX), Tim Hogben (ASX), Radim Zajicek (ASX), Angela Moffatt (Shepherd Centre), Hannah Phillips (Shepherd Centre) and Elly Unicomb (Shepherd Centre).

Corporate responsibility and sustainability continued

ASX in our industry

Good governance is a significant driver of shareholder value. ASX is committed to maintaining and promoting high standards of corporate governance for ourselves and for the 2,200 plus entities listed on our exchange.

Leadership in corporate governance

ASX convenes the ASX Corporate Governance Council. The Council was established in 2002 and is an independent body that brings together various business, shareholder and industry groups. ASX nominates the Chair (currently Elizabeth Johnstone), contributes one member to the Council and provides executive support.

ASX Corporate Governance Council		
		
AUSTRALIAN INSTITUTE of COMPANY DIRECTORS		
		
		
		
		

The ASX Corporate Governance Council publishes a principles-based framework for corporate governance practices – the *Corporate Governance Principles and Recommendations* – that serves as a relevant and practical guide for listed entities, investors and the wider Australian community.

ASX's listing rules require that listed entities disclose the extent to which they have followed the recommendations set by the Council during the relevant reporting period. Where companies have not followed a recommendation, they must provide an explanation ('if not, why not' reporting). These reporting requirements bring transparency to the corporate governance practices of listed companies which in turn enables investors to make informed investment decisions.



New edition of the Corporate Governance Principles

The ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations* were introduced in 2003. A second edition was published in 2007 and a third in 2014.

In February 2019, the Council released a fourth edition of the *Principles and Recommendations* to ensure they continue to reflect local and international expectations about good corporate governance. The new edition included changes to address culture and values issues, and expanded recommendations and commentary on gender diversity and environmental and social risks, especially risks associated with climate change.

Sustainable Stock Exchanges initiative

ASX is a partner exchange in the United Nations' Sustainable Stock Exchange (SSE) initiative. The SSE is a peer-to-peer learning platform for exploring how exchanges, in collaboration with investors, regulators and companies, can enhance corporate transparency on ESG issues and encourage sustainable development.

ASX proudly supports International Women's Day by participating in SSE's global 'ringing the bell for gender equality' initiative. For the fifth year in a row, ASX was the first of the 75 participating exchanges to ring the bell in celebration of International Women's Day. The bell ringing took place at an event hosted by ASX and 100 Women in Finance, Sydney branch, which brought together senior female leaders in the investment management industry to share their experiences and advice with future leaders.



From left to right: Alicia Vidler and Louise Walker, co-chairs of the Sydney Committee for 100 Women in Finance, ringing the bell for International Women's Day 2019.

Corporate responsibility and sustainability continued

Responsible and ethical business practices

Fraud and security

Across the global financial services industry, fraud-related incidents and cyber attacks are on the rise. At ASX, our dedicated information security and risk team proactively monitor, manage and mitigate these threats.

ASX employs a range of risk-based security controls and procedures, as well as prevention strategies. These activities occur at various levels throughout the organisation.

As a market operator and provider of clearing and settlement facilities, ASX is subject to the risk of fraud – either internally by staff or externally by third parties targeting customers using ASX's name or infrastructure. To mitigate these risks we have fraud prevention and detection procedures in place.

Our fraud control framework enables executive management and business units to prevent, detect and respond to potential fraud. The framework is a combination of embedded fraud controls and general staff awareness, supported by regular business unit and independent fraud risk assessment.

Supporting ASX's efforts are our employees, who are given training and support to actively help mitigate the impact of cyber crime, particularly in relation to phishing emails and ransomware attacks.

Employee-focused activities undertaken in FY19 included:

- Workshops on how to identify phishing emails
- Quarterly emails reminding employees what to look for
- Simulation-based face-to-face training
- Induction training for new employees.

Taxation

Taxation is an important component of our corporate responsibility and enterprise risk management framework.

We adopt a low risk tax strategy with our activities and tax compliance obligations, and apply the following principles:

- Meet all taxation obligations in accordance with applicable legislation and requirements
- Adopt a conservative approach in the interpretation of applicable taxation legislation
- Seek professional tax advice or a tax ruling from the Australian Tax Office in circumstances where the potential taxation outcome is uncertain
- Do not enter into transactions or structures with the primary objective of reducing tax liabilities.

ASX is a signatory to the voluntary Tax Transparency Code issued by the Australian Government Board of Taxation.

ASX's Tax Transparency Report is released to the market at the time of its Annual Report and published on ASX's website. The report provides further detail on our approach to tax and discloses the amount of income tax paid. ASX's total tax contribution in FY19 was \$335.5 million.

Our suppliers

ASX aims to partner with suppliers that share our ESG standards. We are committed to fostering responsible practices in our supply chain, while ensuring that our sourcing and supplier relationships deliver value.

Material suppliers must comply with ASX's Supplier Code of Conduct, which includes minimum expectations across key ESG areas. These expectations include:

- Compliance with all relevant laws and regulations relating to bribery and corruption, workplace health and safety, environmental management, employment practices, diversity and regulatory requirements
- Be an Equal Employment Opportunity employer providing fair pay and working conditions for employees, and not use forced, bonded or involuntary labour
- Regular, public reporting of environmental measures
- Have a business continuity plan that is maintained and tested to minimise business impacts in the event of a major disruption.

ASX reserves the right to carry out assessments of the practices of our suppliers to ensure alignment with this Code.

All material procurement tenders incorporate an ESG assessment. This reduces third party risk by requiring that minimum ESG practices are in place and it supports ASX's ability to partner with suppliers who actively pursue responsible supply chain practices.

As part of our Stronger Foundations initiative, ASX has begun a program to update and enhance its supply chain management policies and processes. Expected to be completed in FY20, this work will reflect the Board and management's principle to respect human rights across all of ASX's operations, including its supply chain. This work will also enable ASX to meet the reporting requirements of the Australian Government's Modern Slavery Act in 2020.

Recognition

ASX has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. The FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices.



FTSE4Good

Corporate responsibility and sustainability continued

Conflict and compliance handling arrangements

Managing conflicts of interest

ASX has well-established arrangements to address the potential for actual and perceived conflicts. These include:

- Governance arrangements, including for ASX's self-listing
- Customers, competitor and supplier arrangements
 - licence obligations (including the 'review party' framework)
 - information handling standards.

Arrangements are also in place for handling competitively sensitive information about other market operators that use services provided by ASX's clearing and settlement facilities. ASIC is ASX's listing authority and monitors ASX's own compliance with the listing rules.

ASX has an enterprise compliance function whose responsibilities include reviewing ASX's compliance with our conflict and information handling standards and reporting on these matters to the Audit and Risk Committee.

Compliance and enforcement arrangements

ASX Group licensed entities have arrangements for monitoring and enforcing compliance by listed entities and participants with ASX's operating rules, and for handling conflicts between the licensed entities' commercial interests and their licence responsibilities.

ASX's conflict handling arrangements are set out in our conflict handling policy which is available on our website.

ASX's Audit and Risk Committee and the boards of ASX licensed entities have oversight of the performance of these functions.

Environment

ASX is committed to minimising its own environmental footprint and supporting a smooth and orderly transition to a low carbon economy.

Climate change

As a technology-based services and infrastructure company, ASX is not materially exposed to direct climate change risks.

We are a diverse, customer-orientated organisation offering a range of activities that include the issuance, trading, clearing and settlement of equity, debt, futures and other derivative instruments, as well as the provision of technical and data services.

ASX's equity market has over 2,200 listed companies that participate in a wide-range of activities throughout Australia and across the world. The aggregate mix of activities undertaken by listed companies is continually changing as economic forces influence a company's ability to attract capital and the preparedness of investors to take on risk and outlay funds.

Like other companies, ASX is exposed to the risk of changes in regulatory pricing related to climate change. For example, increases in electricity costs. However, our view is that these risks are not material to ASX.

Supporting the transition to a low carbon economy

ASX helps to play a role in the smooth and orderly transition to a low carbon economy. We are committed to providing a marketplace with a framework that enables companies to consider and disclose their material risks adequately (including to climate change) and which allows investors to make informed decisions about where to allocate funds and build wealth for the long-term.

ASX supports companies that identify climate change as a material risk by endorsing best practice disclosure. Through the framework of the fourth edition of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, ASX encourages companies to report material risks using the Task Force on Climate-related Financial Disclosure. The framework provides useful guidance to help listed entities produce information for investors and other stakeholders to assess and price climate-related risks and opportunities.

FY19 environmental outcomes

ASX's electricity and paper usage outcomes are set out below:

Electricity and paper usage	FY18	FY19	Change from prior year
Electricity GHG ¹ emission (excluding ASX's data centre hosting) per \$1,000 of revenue generated (in t CO ₂ -e ²)	0.0099	0.0097	(2)%
Paper usage (excluding CHESS statements and notifications) by headcount (tonnes)	0.0121	0.0125	3%

¹ Greenhouse gas (GHG) emissions.
² Tonnes of carbon dioxide equivalent.

Corporate responsibility and sustainability continued

Electricity usage

ASX's total electricity consumption increased by 5% in FY19 and decreased 2% relative to revenue.

More than half of ASX's energy usage is in the Australian Liquidity Centre (ALC), ASX's primary data centre.

The ALC is a state-of-the-art facility, offering customers productivity efficiencies by having their data centre operations co-located with ASX.

Growth in this business (and its energy consumption) reflects the ALC's position as the premier financial markets ecosystem in Australia. The number of IT cabinets hosted in the ALC has grown from 117 to 301 in the last five years.

While ALC's energy consumption has increased as the business has grown, ASX believes that co-location results in a net reduction overall in energy usage by the Australian financial services industry when compared to customers each having their own data centre.

ASX has processes in place so that if there is a disruption to the supply of electricity to our sites (including to our data centres) there will be no service disruption to our customers. The infrastructure that supports ASX's data centres incorporates uninterruptible power supply systems, which provide ongoing electricity in the event of a loss of power from the grid. ASX's business continuity management plans outline how we maintain operations in such circumstances. These plans are reviewed periodically.

Paper usage

ASX's paper usage is carbon neutral and by headcount (excluding CHESSE statements and notifications) increased by 3% in FY19.

ASX management continues to reduce paper usage in our business and we encourage our shareholders to receive electronic communications instead of hardcopy communications via the post.

Environmental reporting

Environmental impact

Greenhouse gas (GHG) emissions	Unit	2016	2017	2018	2019
Scope 1 – diesel and gas	t CO2-e ¹	11	48	52	3
Scope 2 – electricity	t CO2-e	14,435	14,262	14,330	15,065
GHG emissions by activity	Unit	2016	2017	2018	2019
Scope 1 – diesel and gas combustion	t CO2-e	14	48	52	3
Scope 2 – electricity (data centre hosting)	t CO2-e	10,105	9,983	10,030	10,545
– electricity (remainder of ASX's business)		4,332	4,279	4,299	4,520
Scope 3 – travel (business travel and commuting)	t CO2-e	1,021	613	660	758
– paper usage (office) ²	t CO2-e	0 ²	0	0	0
– paper usage (CHESSE statements and notifications) ²	t CO2-e	0 ²	0	0	0
Paper usage	Unit	2016	2017	2018	2019
Office use	tonnes	7.35	6.82	6.80	8.12
CHESSE statements and notifications	tonnes	75	74	79	77

¹ Tonnes of carbon dioxide equivalent.

² GHG emissions reported are inclusive of carbon offset. ASX commenced using 100% carbon neutral paper in 2015.

Corporate governance



Corporate governance



Directors (from left to right): Melinda Conrad, Damian Roche, Yasmin Allen, Ken Henry, Dominic Stevens (CEO), Peter Marriott, Rick Holliday-Smith (Chairman), Peter Warne, Heather Ridout and Peter Nash.

ASX Limited Board

Rick Holliday-Smith

Independent, Non-Executive Chairman
BA (Hons), FAICD

Rick Holliday-Smith has served as Chairman of ASX since March 2012 and as a director since July 2006. He was previously Chairman of SFE Corporation Limited from 1998 until 2006.

Mr Holliday-Smith is Chairman of the Nomination Committee and the intermediate holding companies of the ASX clearing and settlement facility licensees. He is also a member of the Audit and Risk, and Remuneration Committees.

Mr Holliday-Smith has global executive and leadership experience in capital markets and derivatives, and a background in venture capital activities.

His previous roles include CEO of futures and options trading firm Chicago Research and Trading (CRT), President responsible for global trading and sales at Nations Bank-CRT (a predecessor of Bank of America), both based in Chicago, and Managing Director of Hong Kong Bank Limited (a wholly owned merchant banking subsidiary of HSBC Bank) based in London.

Mr Holliday-Smith was appointed Chairman of Cochlear Limited in July 2010, having joined the Board in March 2005. He has been a director of Servcorp Limited since October 1999 and is a Member of the Macquarie University Faculty of Business and Economics Advisory Board.

Dominic Stevens

Managing Director and CEO, Executive Director
BCom (Hons)

Dominic Stevens was appointed Managing Director and Chief Executive Officer (CEO) of ASX in August 2016. He was an independent non-executive director of ASX from December 2013 until his appointment as CEO.

Mr Stevens is a director of the ASX clearing and settlement licensees and their intermediate holding companies.

Mr Stevens has over 30 years' experience in financial markets. He was CEO of Challenger Limited from 2008 to 2012, before which he was the company's Deputy CEO and head of capital, risk and strategy.

Prior to Challenger, he held senior positions during a long career at Bankers Trust Australia, where he had responsibility for the Australian derivatives and the global metals and agricultural commodity derivatives businesses.

Mr Stevens is also a director of the Murdoch Children's Research Institute.

Corporate governance continued

Yasmin Allen

Independent, Non-Executive Director
BCom, FAICD

Yasmin Allen was appointed a director of ASX in February 2015. She is a member of the Audit and Risk Committee.

Ms Allen is also a director of ASX Clear (Futures) Pty Limited and Austraclear Limited, the ASX clearing and settlement licensees for Australia's derivatives, OTC and debt markets, and their intermediate holding companies.

Ms Allen has extensive financial services, strategy and corporate governance experience, gained during a career of over 20 years in finance and investment banking.

She was formerly a vice president at Deutsche Bank, a director at ANZ Investment Bank and an associate director at HSBC Group.

Ms Allen was appointed a director of Cochlear Limited in August 2010 and Santos Limited in October 2014. Ms Allen's previous appointments include director of Insurance Australia Group Limited between November 2004 and September 2015.

Ms Allen is also Chair of Advance, a director of the George Institute for Global Health and the National Portrait Gallery, and Acting President of the Australian Government Takeovers Panel.

Melinda Conrad

Independent, Non-Executive Director
MBA, FAICD

Melinda Conrad was appointed a director of ASX in August 2016.

She has over 20 years' experience in business strategy and marketing, and brings skills and insights as an executive and director from a range of industries, including retail, financial services and healthcare.

Ms Conrad has been a strategy and marketing adviser, an executive with Colgate-Palmolive, and founded and managed a retail business.

She was appointed a director of Stockland Corporation Limited and Stockland Trust in May 2018 and Caltex Australia Limited in March 2017. Ms Conrad's previous appointments include director of OFX Group Limited between September 2013 and September 2018, David Jones Limited between July 2013 and August 2014, APN News and Media Limited between January 2012 and February 2013, and Reject Shop Limited between August 2011 and June 2017.

Ms Conrad is also a director of the Centre for Independent Studies and the George Institute for Global Health, and a member of the ASIC Director Advisory Panel and the AICD Corporate Governance Committee.

Dr Ken Henry AC

Independent, Non-Executive Director
BCom (Hons), PhD, DB h.c, FASSA

Ken Henry was appointed a director of ASX in February 2013. He is a member of the Audit and Risk Committee.

Dr Henry is a director of ASX Clear Pty Limited and ASX Settlement Pty Limited, the ASX clearing and settlement licensees for Australia's equity markets, and their intermediate holding companies.

Dr Henry has extensive experience as an economist in Australia and overseas, and has worked as a senior policy adviser to successive Australian governments.

Dr Henry served as the Secretary of the Federal Department of the Treasury from 2001 to 2011. He is Chairman of the Sir Roland Wilson Foundation at the Australian National University, Governor of the Committee for Economic Development of Australia, and a member of the Advisory Board of the John Grill Centre for Project Leadership at the University of Sydney.

Dr Henry has been Chairman of National Australia Bank Limited since December 2015, having joined the Board in November 2011. He has announced his intention to retire as Chairman this year.

Peter Marriott

Independent, Non-Executive Director
BEc (Hons), FCA, MAICD

Peter Marriott was appointed a director of ASX and Chair of the Audit and Risk Committee in July 2009.

He is a director of each ASX clearing and settlement facility licensee and their intermediate holding companies.

Mr Marriott has spent over 30 years in senior management roles in the finance industry, spanning international banking, finance and auditing.

Mr Marriott was Chief Financial Officer of Australia and New Zealand Banking Group Limited (ANZ) from 1997 to May 2012. He also spent two years as Group Head of Risk Management. Prior to his career at ANZ, he was a partner of KPMG Peat Marwick specialising in the banking and finance, and information technology sectors.

Mr Marriott was appointed a director of Westpac Banking Corporation in June 2013. He is a member of the Council of Monash University and is Chairman of the Resources and Finance Committee of the Monash University Council.

Corporate governance continued

Peter Nash

Independent, Non-Executive Director

BCom, FCA, F Fin

Peter Nash was appointed a director of ASX on 19 June 2019.

Mr Nash was a Senior Partner with KPMG until September 2017, having been admitted to the partnership in 1993. Mr Nash served as National Chairman of KPMG Australia from 2011 until August 2017. In this role, he also served as a member of the Global Board of KPMG and was the Chair of KPMG's Global Investment Committee.

Mr Nash is Chairman of Johns Lyng Group Limited and a non-executive director of Westpac Banking Corporation and Mirvac Group Limited. He is a board member of Reconciliation Australia, Koorie Heritage Trust, Migration Council Australia and Golf Victoria.

Mr Nash's previous appointments include member of the Business Council of Australia and member of its Economic and Regulatory Committee.

Heather Ridout AO

Independent, Non-Executive Director

BEd (Hons)

Heather Ridout was appointed a director of ASX in August 2012.

Mrs Ridout is also Chair of the Remuneration Committee and a member of the Nomination Committee.

Mrs Ridout is a company director with a long history as a leading figure in the public policy debate in Australia. She was formerly Chief Executive of the Australian Industry Group, a major national employer organisation representing a cross-section of industry including manufacturing, construction, defence, ICT and labour hire, until April 2012.

Mrs Ridout was appointed Chair of the AustralianSuper Trustee Board in May 2013, having joined the Board in 2007. She has also been a director of Sims Metal Management Limited since September 2011 and a director of the Australian Chamber Orchestra since December 2012. Mrs Ridout was appointed a director of AustCyber, the Australian Cyber Security Growth Network, in July 2017.

Mrs Ridout is a member of the ASIC External Advisory Panel.

Mrs Ridout's previous appointments include member of the Board of the Reserve Bank of Australia from February 2012 until February 2017, Infrastructure Australia, the Australian Workforce and Productivity Agency, the Henry Tax Review panel, the Climate Change Authority and the Prime Minister's Taskforce on Manufacturing.

Damian Roche

Independent, Non-Executive Director

BCom

Damian Roche was appointed a director of ASX in August 2014.

Mr Roche is also Chairman of ASX Clear (Futures) Pty Limited and a director of Austraclear Limited, the ASX clearing and settlement licensees for Australia's derivatives, OTC and debt markets, and their intermediate holding companies.

Mr Roche has 20 years' experience in global investment banks, with extensive asset class expertise spanning the equities, fixed income and commodities markets, with a specific focus on the Asia Pacific region, including Australia.

Mr Roche was a member of the global Corporate and Investment Bank Operating Committee for J.P. Morgan. His most recent role at the bank was as Head of Markets and Investor Services, Sales and Distribution for Asia Pacific, based in Hong Kong.

Mr Roche is a director of the Kaldor Public Arts Projects and HRL Morrison & Co Limited.

Peter Warne

Independent, Non-Executive Director

BA, FAICD

Peter Warne was appointed a director of ASX in July 2006. He was previously a director of SFE Corporation Limited from 2000 to 2006. He is also a member of the Audit and Risk, Nomination and Remuneration Committees. Mr Warne is also Chairman of Austraclear Limited and a director of ASX Clear (Futures) Pty Limited, the ASX clearing and settlement licensees for Australia's derivatives, OTC and debt markets, and their intermediate holding companies.

Mr Warne has over 30 years' experience in financial markets and brings a deep practical and technical understanding of debt, equities and derivatives markets, and risk management.

Mr Warne is a director of Securities Exchanges Guarantee Corporation, NSW Treasury Corporation and Allens. He is also a member of the ASIC External Advisory Panel.

Mr Warne has been Chairman of Macquarie Group Limited and Macquarie Bank Limited since April 2016, having served as a director since July 2007.

Mr Warne's previous appointments include Chairman of OFX Group Limited (formerly OzForex Group) between September 2013 and November 2016, Chairman of Australian Leisure and Entertainment Property Management Limited between September 2003 and May 2017, Deputy Chairman of Crowe Horwath Australasia Limited between May 2007 and January 2014, and Adjunct Professor at the University of Sydney Business School between November 2011 and November 2014.

Corporate governance continued

ASX is committed to maintaining and promoting high standards of corporate governance. By corporate governance we mean our structures for accountability and the framework of rules, relationships, systems and processes within and by which authority is exercised and managed within our company.

This report outlines our principal governance arrangements and practices for effective decision-making and accountability. It is current as at 15 August 2019 and has been approved by the Board. ASX's governance arrangements have been consistent with the third edition of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations* throughout the reporting period and this statement reports compliance with the third edition. In FY20, ASX intends to report against the fourth edition of the *Corporate Governance Principles and Recommendations*, which was launched in February 2019.

The ASX Board and its committees regularly review ASX's governance arrangements and practices to ensure they are in line with regulatory requirements and developments in industry expectations, and that they continue to support ASX's business objectives. More information on ASX's corporate governance is available on ASX's website.

Laying solid foundations for management and oversight

The role of the Board

The Board is accountable to shareholders for the performance of ASX. It is mindful that the company's long-term success depends on maintaining the trust and goodwill of various stakeholders, including our customers, regulators and employees.

The Board has set the company's vision to become the world's most respected financial marketplace. This is a long-term goal. The Board reviews and approves ASX's strategy to achieve that vision including the annual budget and financial plans. It is also responsible for monitoring management's progress in implementing that strategy.

The Board meets regularly to review the ASX Group's performance and progress against the strategy. The Board's responsibilities also include:

- Appointing and assessing the performance of the CEO and overseeing succession plans for the whole executive team
- Reviewing and overseeing systems of risk management, internal control and regulatory compliance.

The Board's responsibilities are detailed in the Board charter. The Board's conduct is also governed by ASX's constitution. The Board charter and ASX's constitution are available on ASX's website.

The role of committees

The Board has established three committees to assist in discharging its responsibilities:

- Audit and Risk Committee
- Nomination Committee
- Remuneration Committee.

The duties of each committee and details of their membership are disclosed in this Corporate Governance report.

Delegation to management

The Board has appointed Dominic Stevens as CEO. The CEO is responsible for managing the ASX Group in accordance with the strategy and policies approved by the Board.

Executives support and report to the CEO. Executives' biographies are available on ASX's website.

Executives attend and regularly report at Board meetings.

Nomination and appointment of directors

The Board has established a Nomination Committee to help bring the focus and independent judgement needed for decisions regarding the composition of the Board.

The Nomination Committee reviews the skills represented by directors on the Board and considers whether the composition, mix of those skills and succession plans remain appropriate for ASX's strategy. It makes recommendations to the Board based on its reviews.

The Nomination Committee also considers and makes recommendations to the Board about the process for nomination and selection of directors for the Board and Board committees, and about the performance of directors.

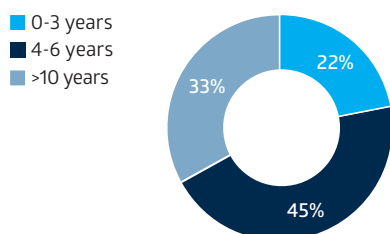
The Nomination Committee is currently comprised of three independent, non-executive directors. The ASX Chairman Rick Holliday-Smith chairs the Nomination Committee. Heather Ridout and Peter Warne are also Committee members.

The Nomination Committee's charter is available on the ASX website. The number of times the Nomination Committee met during FY19 and the individual attendance of its members at those meetings are disclosed on page 43.

Before appointing a director, ASX undertakes comprehensive reference checks including education, employment, character, criminal history and bankruptcy checks. A statutory 'fit and proper' test applies to directors because of their involvement with market licensees and/or clearing and settlement facilities. It is a condition of appointment that any new director is not a disqualified person under this test. Directors make an annual declaration to this effect.

Corporate governance continued

Non-executive director tenure



Any director (except the CEO) who has been appointed during the year must stand for election at the next Annual General Meeting (AGM). ASX provides shareholders with all material information in its possession that is relevant to a decision on whether to elect (or re-elect) a director.

New directors receive a letter of appointment that outlines ASX's expectations about director time commitment, compliance with ASX policies and regulatory requirements. As part of their induction process, new directors receive briefings on strategic initiatives and operational matters.

Director retirement and re-election

Directors are generally elected for three years. Retiring directors are not automatically re-appointed. Melinda Conrad and Ken Henry will retire by rotation in 2019. They are standing for re-election at the 2019 AGM and are unanimously supported by all other directors. Peter Nash was appointed a director of ASX on 19 June 2019. He is standing for election at the 2019 AGM and is unanimously supported by all other directors.

Board renewal

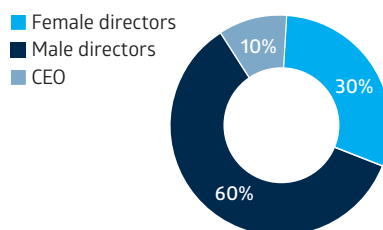
The Board, in consultation with the Nomination Committee, regularly reviews its composition and succession plans and the process for nominating and selecting ASX directors.

As noted above, the most recent appointment to the ASX Board was Peter Nash in June 2019. Details about Mr Nash's skills and experience are set out on page 39 and are also in the Notice of Annual General Meeting (AGM) 2019. The Board considers that Mr Nash's leadership skills and his extensive business and audit experience as a senior partner with KPMG complement and add value to the Board's existing skills and experience.

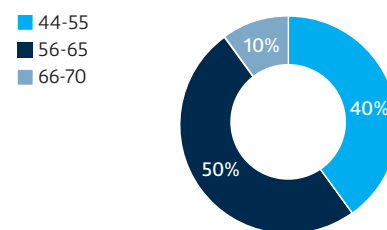
Company secretaries

The Board is responsible for the appointment of company secretaries. The company secretary is accountable directly to the Board, through the Chairman, on all matters to do with the proper functioning of the Board. Details of ASX's company secretaries are on page 63.

Board gender diversity



Age of directors



Diversity

ASX's Board and workforce are comprised of individuals with a range of skills, backgrounds and experiences. ASX values diversity and inclusion, and recognises the organisational capability and business performance these bring.

ASX has adopted a diversity and inclusion policy (available on ASX's website) which describes how ASX promotes diversity. The diversity objectives adopted by the Board and achievements in FY19 are set out on page 29, along with further details on ASX's initiatives to support diversity.

The Board is committed to maintaining its diversity of membership. The Board has adopted a target of a minimum of 40% female directors. Currently, 30% percent of ASX's directors are female and 33.3% of non-executive directors are female.

ASX's most recent report to the Workplace Gender Equality Agency, which sets out our performance against gender equality indicators, is available on ASX's website.

Performance reviews

Board

Under its charter, the Board and directors are required to undergo regular performance reviews. The performance of the Board, its committees and individual directors are reviewed each year. This evaluation took place in FY19 with the support of an external consultant.

The Board takes this evaluation into consideration when recommending directors for election.

Executives

The CEO and ASX's executives have written agreements setting out their employment terms.

The Board assesses each executive's performance on an annual basis. The process for evaluating executive performance and remuneration is set out in the Remuneration Report on pages 48 to 62. Performance evaluations for the CEO and ASX's executives took place in FY19 in accordance with the process disclosed in the Remuneration Report.

Corporate governance continued

Structuring the board to add value

Board composition

As at the date of this report, the Board comprised nine independent, non-executive directors and the CEO.

The directors have elected Rick Holliday-Smith as the Chairman. The Chairman is an independent, non-executive director. He leads the Board in its duties to ASX and is responsible for facilitating effective Board meeting discussion. The roles of CEO and Chairman are separate and are not performed by the same person. The name, qualifications and tenure of each director are set out on pages 37 to 39. Director biographies are published on ASX's website.

Director skills and experience

The skills and experience of the Board reflect ASX's role as the provider of critical infrastructure to Australia's financial markets and its leading position in the Asia-Pacific region.

To guide its assessment of the skills and experience of non-executive directors and to identify any gaps in the collective skills of the Board, the Board uses the skills matrix below. The chart below shows the Board's current assessment of its skills coverage.

The Board considers that individually and collectively, the directors have an appropriate mix of skills, experience and expertise to understand ASX and its operating environment, to navigate current and emerging issues, and to oversee the performance of management in executing the Board-approved strategy.

The Board keeps up-to-date with market and industry developments through regular briefings at Board meetings, Board workshops, meetings with customers and regulators, and through site visits.

Board skills matrix

Category	Description	Number of non-executive directors with these skills								
		1	2	3	4	5	6	7	8	9
Executive leadership	Successful career as a CEO or senior executive	■	■	■	■	■	■	■	■	■
Strategy	Define strategic objectives, constructively question business plans and implement strategy	■	■	■	■	■	■	■	■	■
Financial acumen	Accounting and reporting, corporate finance and internal controls, including assessing quality of financial controls	■	■	■	■	■	■	■	■	■
Risk and compliance	Forward looking, able to identify the key risks to the organisation and monitor effectiveness of risk management frameworks and practices	■	■	■	■	■	■	■	■	■
Public policy	Public and regulatory policy, including impact on markets and corporations	■	■	■	■	■	■	■	■	■
Information technology/digital	Use and governance of critical information technology infrastructure, digital disruption and information monetisation	■	■	■	■	■	■	■	■	■
Business development and customer management	Commercial and business experience, including development of product, service or customer management strategies, and innovation	■	■	■	■	■	■	■	■	■
People and change management	Overseeing and assessing senior management, remuneration frameworks, strategic human resource management and organisational change	■	■	■	■	■	■	■	■	■
Corporate governance	Knowledge, experience and commitment to the highest standards of governance	■	■	■	■	■	■	■	■	■
International exchange experience	International financial markets or exchange groups including post-trade services and relationships with financial markets participants	■	■	■	■	■	■	■	■	■
Financial services experience	Broking, funds management, superannuation and/or investment banking activities	■	■	■	■	■	■	■	■	■

Corporate governance continued

Director independence

ASX recognises that having a majority of independent directors helps to ensure that the decisions of the Board reflect the best interests of ASX and its shareholders generally and that those decisions are not biased towards the interests of management or any other group.

The Board requires a majority of its directors to be independent.

In determining whether a director is independent, the Board considers whether the director is free of interests that could (or could be perceived to) materially interfere with the independent exercise of the director's judgement and the capacity to act in the best interests of ASX as a whole rather than of an individual security holder or other party.

The Board has adopted a policy to assess a director's independence. The policy includes guidelines for assessing the materiality of directors' relationships that may affect their independence. This policy is available on ASX's website.

The Board regularly assesses the independence of its directors. The Board has assessed each non-executive director as independent.

There is no fixed limit on director tenure. The tenure of each director is set out on pages 37 to 39. Rick Holliday-Smith (ASX's Chairman) and Peter Warne have been directors of ASX Limited for more than 13 years. In FY19, the Board reviewed and determined that their tenure has not impacted on their independence. The mix of directors' tenure is shown in a diagram on page 41.

Conflicts of interest

Directors are required to disclose all interests that may conflict with their duties. If a director has a material personal interest in a matter being considered by the Board, they must not be present for the consideration of that matter or vote on the matter (unless approved by other directors who do not have a material personal interest in the matter).

Aligning interests of the Board with shareholders

To underscore the alignment of the Board with shareholders' interests, the Board has adopted a policy that all non-executive directors should accumulate a number of ASX shares equivalent in value to their base level annual director fee (and in the case of the ASX Chairman, the base level annual director fee plus the Chairman fee) within three years of their appointment. All directors other than the most recently appointed director comply with this policy.

Details regarding director remuneration and ASX's remuneration policies and practices are set out in the Remuneration Report on pages 48 to 62.

Access to information and advice

Directors have access to management to request information.

Directors are also entitled, with the approval of the Chairman, to obtain independent professional advice at ASX's expense relating to their role as an ASX director.

Attendance at meetings

Details of director attendance at Board and committee meetings in the 12 months up to 30 June 2019 are set out below. Provided there is no conflict of interest, directors are also invited to, and frequently attend as observers, meetings of Board committees of which they are not members.

All directors receive copies of agendas, papers and minutes of committee meetings to help ensure they remain equally informed, regardless of whether they are appointed to particular committees.

Director name	Board meetings		Audit and Risk Committee meetings			Nomination Committee meetings			Remuneration Committee meetings		
	Held	Attended	Held	Attended	Observed	Held	Attended	Observed	Held	Attended	Observed
Rick Holliday-Smith	10	10	4	4	-	5	5	-	5	5	-
Dominic Stevens	10	10	-	-	4	-	-	5	-	-	5
Yasmin Allen	10	10	4	4	-	-	-	5	-	-	5
Melinda Conrad	10	10	-	-	4	-	-	5	-	-	5
Ken Henry	10	10	4	4	-	-	-	5	-	-	5
Peter Marriott	10	10	4	4	-	-	-	5	-	-	5
Peter Nash	1	1	-	-	-	-	-	1	-	-	1
Heather Ridout	10	10	-	-	4	5	5	-	5	5	-
Damian Roche	10	10	-	-	4	-	-	5	-	-	5
Peter Warne	10	10	4	4	-	5	5	-	5	5	-

Corporate governance continued

Act ethically and responsibly

ASX is committed to conducting business in an open and accountable way. We believe that ethical and responsible business practices are a driver of shareholder value, and that ASX plays a leadership role in setting and articulating corporate governance standards in Australia.

Code of Conduct

ASX has adopted a Code of Conduct which sets the standards for how we work at ASX and states our values to anyone dealing with ASX. A copy of the Code is available on ASX's website. Further information about our Code of Conduct and corporate culture is set out on page 28.

Our Corporate Responsibility and Sustainability report on pages 26 to 35 details other ASX policies, practices and governance frameworks for how we:

- Operate with integrity
- Engage with the community
- Act responsibly towards the environment.

Securities trading

ASX has adopted dealing rules that restrict dealing in ASX and non-ASX securities. The rules apply to directors and staff. The dealing rules:

- Document the procedure for dealing in securities
- Are designed to help prevent directors and staff from contravening laws on insider trading.

Additional dealing restrictions apply to staff working in specified functions (including our Listings Compliance, Market Announcements and Surveillance functions).

Derivatives and hedging arrangements for unvested ASX securities, or vested ASX securities subject to a holding lock, are prohibited.

A copy of ASX's dealing rules is available on ASX's website.

Payments to political parties

ASX has a responsibility to its stakeholders to articulate the opportunities and challenges facing its business, communicate its position on relevant public policy issues and contribute to well-informed decision-making by government.

We actively engage with government and political decision-makers about our role, the investments we're making to build world-class infrastructure, and the dynamic and globally competitive market environment in which ASX's operates.

Similar to previous years, in FY19 ASX paid \$100,000 in membership fees to each of the Liberal Party Australian Business Network and the Federal Labor Business Forum. ASX's membership of these business networks provides an opportunity to engage with a wide range of policy and business decision-makers.

The Board sets the policy regarding payments to political parties, including limits on the amounts paid. Payments within those limits are approved by the CEO and the General Counsel. All payments to political parties are disclosed by ASX.

Safeguarding integrity in corporate reporting

ASX believes that accurate and timely corporate reporting underpins effective risk management and is key to executing ASX's strategy.

The Board is responsible for overseeing that appropriate monitoring and reporting mechanisms are in place. It is supported in this regard by the Audit and Risk Committee.

The role of the Audit and Risk Committee in safeguarding the integrity of ASX's corporate reporting includes reviewing ASX's financial reports and the adequacy of the Group's corporate reporting processes.

Additional information on the role and responsibilities of the Audit and Risk Committee, its membership, and the number of times the Committee met in FY19 are detailed on pages 43 and 46.

Integrity of financial reporting

Before it approves the financial statements for the half-year and full-year, the Board receives a statement from the CEO and Chief Financial Officer (CFO) consistent with the requirements of the *Corporations Act 2001*. These statements are made after the CEO and the CFO receive attestations from executives regarding their respective areas of responsibility. The Board also receives a statement from the CEO and the Chief Risk Officer (CRO) that ASX's risk management and internal control systems are operating effectively for the management of material business risks.

Corporate governance continued

External auditor

ASX has appointed PricewaterhouseCoopers (PwC) as its external auditor. The appointment was approved by shareholders at the 2008 AGM. In accordance with auditor rotation requirements, the PwC lead audit partner for ASX changed in FY19.

Among its key responsibilities, PwC reviews the financial reporting of ASX and provides an opinion on whether ASX's financial report gives a true and fair view of the ASX Group's financial position and financial performance, and whether it complies with Australian Accounting Standards and the *Corporations Regulations 2001*. PwC's opinion on the FY19 financial report is on pages 109 to 113.

PwC attends each Audit and Risk Committee meeting and meets with the Committee without management present at least once annually.

PwC has provided confirmation that there have been no contraventions of the auditor independence requirements of the *Corporations Act 2001* and no contraventions of any applicable code of professional conduct in relation to its audit (refer to page 65). The fees paid to PwC for non-audit services are disclosed on page 107.

PwC's lead audit partner will attend the 2019 AGM to answer questions relevant to the external audit.

Making timely and balanced disclosure

Continuous and periodic disclosure

ASX is committed to providing shareholders and the market with equal access to material information about its activities in a timely and balanced way.

ASX has adopted a continuous disclosure policy which sets out how it complies with its listing rule disclosure obligations. This policy was updated in FY19 and is available on ASX's website.

ASX will not disclose market sensitive information to any analyst or investor unless it has first provided that information to the market and received an acknowledgement that the information has been released.

Key periodic shareholder communications include our Annual Report, full-year and half-year financial results, and monthly activity reports.

Respecting the rights of security holders

Shareholder engagement

ASX is committed to communicating promptly, accurately and in plain language with shareholders. This commitment is detailed in our shareholder communications policy available on our website.

All market announcements (including financial results and Annual Reports) are published on ASX's website after they have been released on the Market Announcements Platform. ASX also publishes media releases and other relevant information on its website (including its corporate governance arrangements).

ASX uses a number of channels and technologies, including webcasting and social media, to communicate promptly, transparently and widely. We encourage shareholders to participate in shareholder meetings and we deal with shareholder enquiries fairly and respectfully.

ASX has implemented an investor relations program to facilitate effective two-way communications with investors.

ASX does not hold meetings with investors or analysts to discuss ASX's financial performance within a 'blackout' period in advance of results announcements.

Electronic communications

We encourage shareholders to receive communications from us electronically. Electronic communication allows ASX to communicate with shareholders quickly, and reduces ASX's paper usage. ASX emails shareholders when important information becomes available such as financial results, dividend statements, notice of meetings, voting forms and Annual Reports. Shareholders who receive information from us by post can log in at www.linkmarketservices.com.au to provide their email address and elect to receive communications electronically.

Annual General Meetings

Details about ASX's 2019 AGM are provided on page 119.

The AGM is an opportunity for shareholders to hear from and put questions to the Board, external auditor and executives.

We encourage shareholders to attend and participate. To improve access and participation for those who cannot attend in person, ASX webcasts proceedings and allows shareholders to vote directly without having to appoint a proxy.

Corporate governance continued

Recognising and managing risk

The Board recognises that effective risk management is critical to maintaining ASX's reputation.

Division of responsibilities

The Board is responsible for setting ASX's risk strategy and risk appetite. It is also responsible for reviewing and overseeing systems of risk management and the process for identifying significant risks, and that appropriate controls, monitoring and reporting mechanisms are in place.

Management implements the Board-approved strategy and manages ASX's operations within the Board-approved risk appetite. It is responsible for identifying, monitoring, mitigating and reporting on risks.

Audit and Risk Committee

As outlined above, the Board has established an Audit and Risk Committee. The Audit and Risk Committee reports to the ASX Board and its responsibilities include:

- Reviewing the enterprise risk management framework
- Overseeing the process for identifying significant risks facing ASX
- Reviewing and overseeing risk management processes, internal controls and compliance systems.

The Audit and Risk Committee receives regular reports from the CFO on financial matters, the CRO on enterprise risks, the Chief Operating Officer (COO) on operational, technology and cyber security risks, the Chief Compliance Officer on compliance matters as well as reports from ASX's Internal Audit and Enterprise Compliance functions, and from our external auditor.

In addition to the responsibilities listed above, the Audit and Risk Committee has a role in safeguarding the integrity of ASX's corporate reporting. Further details about that role are set out on page 44.

The Audit and Risk Committee charter is available on ASX's website.

The Committee is currently comprised of five independent, non-executive directors. Its members are Peter Marriott (Committee Chair), Rick Holliday-Smith, Yasmin Allen, Ken Henry and Peter Warne. The number of times the Committee met in FY19 and the individual attendance of its members at those meetings are detailed on page 43.

ASX's risk management framework

ASX has an established enterprise risk management framework. The framework encompasses, among other matters, the risk governance structure across ASX, the risk strategy and appetite, risk culture and behaviours, and supporting frameworks and processes governing risk assessment, monitoring and reporting.

ASX's risk management function has day-to-day responsibility for the implementation of the enterprise risk management framework.

The Audit and Risk Committee reviews the enterprise risk management framework annually. This review took place in FY19.

Management committees

ASX has established the following management committees comprised of senior executives to assist with the oversight and management of risks:

- **Risk Committee** chaired by the CRO. The Risk Committee has oversight of the implementation of ASX's enterprise risk management framework, approves risk policies and considers general risk matters consistent with the ASX Board's risk appetite
- **Regulatory Committee** chaired by the Group General Counsel. The Regulatory Committee has oversight of licence compliance matters, develops and approves policies, considers updates on regulatory and government engagement and on ASX rule changes
- **Technology Operations and Security Committee (TOSC)** chaired by the COO. TOSC has oversight of IT security matters, systems updates and incident management, and considers emerging technology, operational and security risks.

Internal Audit

ASX's Internal Audit function reviews and reports on internal control systems and procedures. Its role and responsibilities are set out in its charter, which is available on ASX's website.

The General Manager of Internal Audit reports to the Chairman of the Audit and Risk Committee and the CEO for functional audit purposes, and to the CRO for other purposes. The Audit and Risk Committee determines the Internal Audit function's scope, function and budget each year.

Internal Audit has full access to the Audit and Risk Committee. It also has unrestricted access to all ASX records, property and personnel. The Internal Audit function is independent of ASX's external auditor.

Corporate governance continued

Enterprise Compliance

ASX's Enterprise Compliance function maps the compliance framework for ASX regulatory obligations, oversees ASX's conflict handling arrangements and provides training to the business to ensure key Australian and international obligations are understood and complied with. It also undertakes compliance reviews and reporting to regulators. The General Manager of Enterprise Compliance has a direct reporting line to the Audit and Risk Committee and ASX's clearing and settlement (CS) boards for key licence obligations and conflict handling arrangements, and reports to the CRO for other purposes.

Exposure to material economic, environmental and social sustainability risks

Details of ASX's material business risks and how these are managed are provided on pages 16 to 25 in our Operating and Financial Review.

ASX's environmental and social sustainability risks and how these are managed are described in our Corporate Responsibility and Sustainability report set out on pages 26 to 35.

Clearing and settlement boards

ASX has four subsidiary companies that hold licences to operate clearing and settlement facilities, and two intermediate holding companies.

The CS boards focus on risk management and oversight of the operation of the clearing and settlement licensees. The responsibilities of these boards include the management of clearing and settlement risk and compliance with the Financial Stability Standards determined by the Reserve Bank of Australia. The CS boards' charter (available on ASX's website) sets out further details regarding their functions and governance.

The Audit and Risk Committee serves as the audit and risk committee for the CS boards where such matters relate to clearing and settlement operations outside of those matters carried out by the CS boards (and detailed in the CS boards' charter).

Remunerating fairly and responsibly

ASX aims to attract and retain high quality directors and senior executives.

The Board oversees executive and non-executive director remuneration arrangements and has established a Remuneration Committee to assist it in this regard. The Remuneration Committee helps bring the focus and independent judgement needed for remuneration decisions.

The Remuneration Committee's responsibilities include reviewing and reporting to the Board on:

- ASX's remuneration structure including incentives
- The process for overseeing performance accountability and effective monitoring of management performance (including setting and evaluating performance against goals and targets)
- Incentives and behaviours arising from ASX's remuneration structure
- Compliance of remuneration arrangements with Financial Stability Standards and other regulatory requirements
- Recruitment and retention strategies
- Remuneration by gender.

The Remuneration Committee charter is available on ASX's website.

ASX's Remuneration Committee is currently comprised of three independent, non-executive directors. The current members are Heather Ridout (Committee Chair), Rick Holliday-Smith and Peter Warne. It is a requirement under the Remuneration Committee charter that the Committee Chair be an independent director who is not the Chairman of the ASX Board.

The number of times the Committee met in FY19 and the individual attendance of its members at those meetings are detailed on page 43.

Details of executive and director remuneration and ASX's remuneration policies are disclosed in the Remuneration Report on pages 48 to 62.

Remuneration report



Remuneration report

Dear fellow shareholders,

ASX's performance and remuneration framework is designed to focus our employees on delivering the company's strategy, which will create enduring value for our customers, our shareholders, our communities and other stakeholders. The Board undertakes reviews to ensure the performance and remuneration framework meets these aims by:

- Being aligned to the creation of shareholder value
- Being regularly and rigorously measured
- Using a mix of financial and non-financial metrics
- Being able to attract, retain and motivate talent
- Promoting integrity within our workforce.

These reviews also allow us to assess the impact of the remuneration approach on our culture and the conduct of our employees.

ASX has previously recognised the importance of risk management through Vision, Strategy and Execution goals set across the Group and in the behavioural expectations of our people. During FY19, we enhanced how we incorporate financial and non-financial risk considerations into the performance and reward framework by mandating individual goals relating to risk awareness and risk culture for General Managers and above. This reinforces ASX's commitment to risk management and highlights the importance of individual accountability for managing risk.

To inform our assessment of overall performance, the Board sought assessments of risk and conduct from the Chief Risk Officer, as well as input from the Audit and Risk Committee and clearing and settlement boards. This approach ensures that each Executive's reward outcome reflects their performance, how they have discharged the accountabilities of their role, their management of risk and their conduct.

The Board will continue to review ASX's performance and reward practices to ensure they uphold our remuneration principles, remain fit for purpose and reward Executives for the value they create for customers, shareholders and other stakeholders.

FY19 company performance

FY19 saw solid performance across the Group. ASX grew its statutory revenues by 5.0% and its statutory NPAT by 10.5%. During the year, we continued to invest to strengthen our risk management capabilities and the resilience of our technology platform. In parallel, ASX progressed its growth initiatives including the rollout of ASX DataSphere, our open data analytics platform, and continued to explore how we might use our expertise and experience in distributed ledger technology to benefit customers, the industry and ultimately our shareholders. Further details of ASX's performance are provided in section 3.2 of this report.

FY19 Group remuneration outcomes

Fixed remuneration outcomes

The fixed remuneration for Executives is reviewed annually to ensure it remains competitive and reflects the accountabilities of each role. There were no changes to the fixed remuneration for the five disclosed Executives in FY19.

For FY20, the Board determined that the Chief Operating Officer and Chief Risk Officer will receive fixed remuneration increases of 7% and 9% respectively, to reflect market rates for these roles. The fixed remuneration for these roles was unchanged for the last two financial years. These changes will be disclosed in the FY20 Remuneration Report. No other Executive received a fixed remuneration increase for FY20.

Short-term incentive (STI) outcomes

The Board assesses the performance of the Group against the Balanced Scorecard, achievement of Vision, Strategy and Execution goals, and management of risk. This performance informs the maximum value available under the Group incentive pool.

Based on the Group's performance, the Board determined that the Group incentive pool will be 105% of target. Further detail regarding how the Group incentive pool was determined is discussed in section 3.2 of this report.

An Executive's individual performance is assessed against their goals drawn from the Group Balanced Scorecard, the Vision, Strategy and Execution goals, division-specific goals and individual goals based on the accountabilities of that Executive's role. The ASX values and financial and non-financial risk management are explicitly considered in the individual performance assessment, as they guide the conduct of employees by encouraging them to focus on the way they behave, the risks they manage and the results they achieve.

In FY19, the STI outcomes for Executives ranged from 105% to 125% of their target STI, with the average STI outcome being 109%.

Long-term incentive (LTI) outcomes

The performance rights granted under the LTI Plans are measured against earnings per share (EPS) targets and relative total shareholder return (TSR) targets.

In FY19, no awards were tested. This reflects the Board's decision to extend the performance period of the LTI to four years for awards made in the 2016 financial year onwards. As such, the next test of the LTI will occur in August 2019 and will be disclosed in the 2020 Remuneration Report. Further details of the LTI Plan can be found in section 5.5 of this report.

Consistent with the continuous improvement approach we take to remuneration practices at ASX, we have sought to enhance our remuneration disclosure in this Remuneration Report. We hope you find the new layout an improvement on last year.

The Board believes the remuneration outcomes for FY19 are consistent with the value generated for our customers, shareholders and the communities in which the Group operates.

Thank you for your support.



Heather Ridout
Chair, Remuneration Committee

¹ Executives refer to the CEO, Deputy CEO, Chief Financial Officer, Chief Operating Officer and Chief Risk Officer.

Remuneration report continued

Contents

1. Key Management Personnel covered in this report	50
2. Glossary of key terms	50
3. Snapshot of FY19 Group performance and reward	51
4. Remuneration governance	54
5. Executive remuneration framework	56
6. Statutory remuneration disclosure – Executives	59
7. Non-executive director remuneration arrangements	61

1. Key Management Personnel covered in this report

This Remuneration Report details the performance and remuneration of Key Management Personnel (KMP) for FY19. KMP is defined as persons having authority and responsibility for planning, directing and controlling the activities of an entity, directly or indirectly. The KMP comprise of:

- Non-executive directors of ASX Limited
- The CEO and members of the executive team who are accountable for managing critical operational activities, financial control or risk functions (collectively termed Executives).

Name	Role	Term as KMP
Non-Executive Directors		
R Holliday-Smith	Chairman	Full year
Y A Allen	Non-executive director	Full year
M B Conrad	Non-executive director	Full year
K R Henry	Non-executive director	Full year
P R Marriott	Non-executive director	Full year
P S Nash	Non-executive director	Commenced 19 June 2019
H M Ridout	Non-executive director	Full year
D Roche	Non-executive director	Full year
P H Warne	Non-executive director	Full year
Executives		
D J Stevens	Managing Director and Chief Executive Officer (CEO)	Full year
P D Hiom	Deputy Chief Executive Officer (Deputy CEO)	Full year
T J Hogben	Chief Operating Officer	Full year
G L Larkins	Chief Financial Officer	Commenced 29 October 2018
H J Treleaven	Chief Risk Officer	Full year
Former Executive		
R Aziz	Chief Financial Officer	Ceased 31 October 2018

2. Glossary of key terms

Term	Meaning
EPS	Earnings per share, defined as net profit after tax divided by the average number of issued shares during the year. The LTI Plan has two performance measures, one of which is EPS.
Executives	The CEO, Deputy CEO, Chief Financial Officer, Chief Operating Officer and Chief Risk Officer.
KMP	Key Management Personnel are those people with authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly. KMP comprise non-executive directors, as well as Executives as defined above.
TSR	Relative total shareholder return, defined as share price growth plus dividends paid over the measurement period. Dividends are assumed to be reinvested on the ex-dividend date. The LTI Plan has two performance measures, one of which is TSR.

Remuneration report continued

3. Snapshot of FY19 Group performance and reward

3.1 Remuneration received or available in the financial year

This section provides a snapshot of the performance of the Group and the corresponding remuneration outcomes. The remuneration table below has been provided as additional non-statutory information to assist in understanding the total value of remuneration received by Executives in the current and prior financial years.

	Year	Total fixed remuneration ¹	Other remuneration ²	STI awarded and paid ³	Total payments	Previous year awards that vested during the year		Total remuneration received
						Deferred STI vested ⁴	LTI vested ⁵	
		a	b	c	d=a+b+c	e	f	g=d+e+f
Current								
D J Stevens	2019	2,000,000	2,610	868,000	2,870,610	-	-	2,870,610
Managing Director and CEO	2018	2,000,000	2,610	800,000	2,802,610	-	-	2,802,610
P D Hiom	2019	1,000,000	2,610	434,000	1,436,610	395,767	-	1,832,377
Deputy CEO	2018	1,000,000	2,610	420,000	1,422,610	-	424,945	1,847,555
T J Hogben	2019	675,000	2,610	195,300	872,910	138,535	-	1,011,445
Chief Operating Officer	2018	675,000	2,610	189,000	866,610	-	-	866,610
G L Larkins	2019	538,462	1,757	225,534	765,753	-	-	765,753
Chief Financial Officer								
H J Treleaven	2019	800,000	202,610	133,334	1,135,944	-	-	1,135,944
Chief Risk Officer	2018	800,000	202,610	133,334	1,135,944	-	-	1,135,944
Former								
R Aziz ⁶	2019	206,394	403,305	-	609,699	118,696	-	728,395
Chief Financial Officer	2018	600,000	7,570	80,000	687,570	-	-	687,570
Total	2019	5,219,856	615,502	1,856,168	7,691,526	652,998	-	8,344,524
	2018	5,075,000	218,010	1,622,334	6,915,344	-	424,945	7,340,289

¹ Base salary, superannuation, non-monetary benefits and benefits that have been salary sacrificed such as participation in the employee share plan.

² Salary continuance insurance for all Executives. Benefits to specific Executives include: Hamish Treleavan: deferred cash payments were made in FY18 and FY19 in connection to the commencement of his employment, which were subject to his service and sufficient performance standards being met. Ramy Aziz: \$3,901 of fringe benefits tax on gifts and a payment of \$396,841 in lieu of notice upon termination.

³ The portion of STI awarded for the financial year in cash. The remaining portion of STI in respect of FY19 but deferred for two and four years, is shown in table 6.1 Statutory remuneration.

⁴ This relates to the vesting of STI awarded in prior years, which was provided in the form of restricted ASX ordinary shares. The value disclosed is based on the five-day volume weighted average price of ASX ordinary shares up to and including the vesting date.

⁵ The FY18 value for Peter Hiom relates to the vesting of the September 2014 share-based LTI offer. It has been calculated using the total number of shares vested and the five-day volume weighted average price of ASX ordinary shares up to and including the vesting date. No LTI was tested during FY19.

⁶ Ramy Aziz was not eligible for an STI award in FY19.

Remuneration report continued

3.2 FY19 Group performance

The Board assesses the performance of the Group against the Balanced Scorecard, the achievement of Vision, Strategy and Execution goals, and management of risk. This assessment informs the Board's determination of the Group incentive pool, which limits the total value of STI payments available.

In FY19, the Board determined a Group incentive pool of 105% of target. This took into account the following:

	Link to strategy	Measure	Actual outcome
Financial objectives¹		Revenue	Target met. \$863.8m, up 5.0% on FY18
		Expenses	Target not met. 9.9% growth, slightly higher than guidance impacted by higher supervision levies
		Statutory net profit after tax (NPAT)	Target met. Statutory NPAT up 10.5% (prior year included an impairment charge of \$20.2m)
		Underlying net profit after tax (NPAT)	Target met. Underlying NPAT up 5.7%
		Underlying earnings per share (EPS)	Target met. Underlying EPS up 5.7%
		Dividends per share (DPS)	Target met. Full-year DPS 228.7 cents, fully franked, up 5.7%, plus special dividend of 129.1 cents per share, fully franked
		Capital expenditure (capex)	Target met. Capex approximately \$75.1m
Non-financial objectives	Enduring trust, integrity and resilience	Increase employees' focus on risk awareness, accountability and speaking up survey	Target exceeded. Year-on-year improvement in risk management practices and awareness as measured by internal risk survey Favourable outcome achieved through implementation of the Board-approved risk strategy and risk culture action plan
		Complete implementation of FY19 Stronger Foundations recommendations	Target met. All recommendations scheduled for FY19 have been implemented by the agreed timeline, with initiatives across risk, technology and leadership delivered
		Near real-time risk management capability for ASX Clear (Futures) and ASX Clear	Target met. Near real-time risk management visualisation tool developed and demonstrated to the RBA for ASX Clear (Futures). Development of a similar tool for ASX Clear is in progress
		Implement improvements to company listings and compliance processes	Target met. Major listing rules consultation underway. 4th edition of <i>Corporate Governance Principles and Recommendations</i> released in February. Substantial regulatory action taken against various listed companies and major improvements to documentation, processes, rules and guidance
		No significant regulatory breaches in the key areas of legal, compliance, finance, tax and operations	Target met.
		All systems meet availability targets	Target met. Average system uptime for our critical systems over the past 12 months was 100%
Innovative solutions and technology		Delivery of CHES replacement program milestones	Target met. Project milestones throughout FY19 were delivered to target, including opening the Customer Development Environment on schedule
		Establish secondary data centre and commence migration in Q4 FY19 (multi-year project)	Target not met. Migration delayed, however on track for commissioning secondary data centre in FY20
		Build new data and analytic products for internal and external use	Target met. ASX DataSphere platform launched. Improved approach to clearing risk through enhanced analytical tools
Customer centric		Complete customer consultation on CHES replacement day-one scope and functionality	Target met. Consultation successfully completed with a total of 41 written submissions received. ASX response to consultation feedback released to the market in September 2018
		Improve customer experience through ASX Online	Target met. New participants' compliance portal integrated in ASX Online platform, providing a refreshed platform, single sign-on experience, and streamlined lodgement, notification and self-service compliance management for participants
Diverse ecosystem		Diversified listings strategy to attract foreign and technology listings	Target met. In excess of 40 new foreign and technology listings in FY19
		Deliver new growth opportunities in multi-currency (US\$) and benchmarks (roadmap for new products)	Target met. US\$ payments live, on-boarding foundation customers/benchmarks roadmap delivered as part of five-year plan
Collaborative culture		Embed ASX values at all levels of ASX	Target met. BE values embedded in all HR operating processes with 96% of employees demonstrating these values
		Develop a refreshed Diversity and Inclusion strategy by June 2019	Target met. Strategy developed and diversity initiatives rollout commenced, which will continue in the FY20

¹ Financial objective outcomes are per the Group's segment note.

Remuneration report continued

3.3 FY19 Executive STI outcomes

The STI for Executives is based on a combination of the Group's performance (the Group incentive pool) and an individual's performance. An individual's performance is assessed against goals that are cascaded from the Group Balanced Scorecard, the Vision, Strategy and Execution goals, and division-specific goals drawn from the accountabilities of an Executive's role. Both the ASX values and non-financial risk management are explicitly considered in the individual performance assessment, as they guide the conduct of employees by encouraging them to focus on the way they behave, the risks they manage and the results they achieve.

	Total STI awarded ¹		Cash payment paid August 2019	STI deferred for 2 years (vesting August 2021) ²	STI deferred for 4 years (vesting August 2023) ²
	\$	%	\$	\$	\$
Current					
D J Stevens	2,170,000	108.5%	868,000	651,000	651,000
P D Hiom	1,085,000	108.5%	434,000	325,500	325,500
T J Hogben	488,250	108.5%	195,300	146,475	146,475
G L Larkins	563,836	105.0%	225,534	169,151	169,151
H J Treleaven	333,334	125.0%	133,334	100,000	100,000

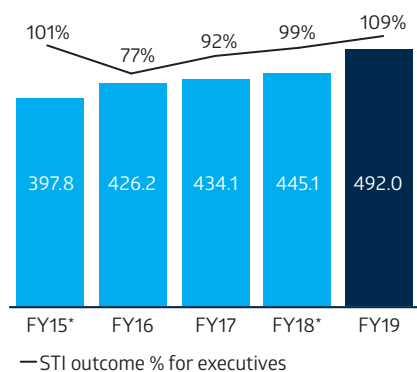
¹ Total STI award including cash payment and deferred component.

² The deferred STI awards are subject to continued employment and satisfactory performance during the deferral period.

3.4 Long-term performance

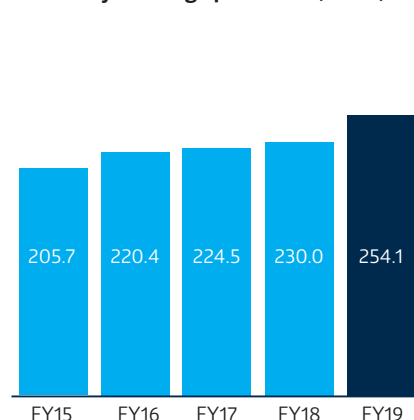
The following charts illustrate the long-term performance of the Group against key financial metrics. No LTI grants were tested in FY19, as the Board determined to increase the performance period from three to four years for grants of LTI from the 2016 financial year onwards.

Statutory net profit after tax (\$million) and STI outcome (% of target) for Executives

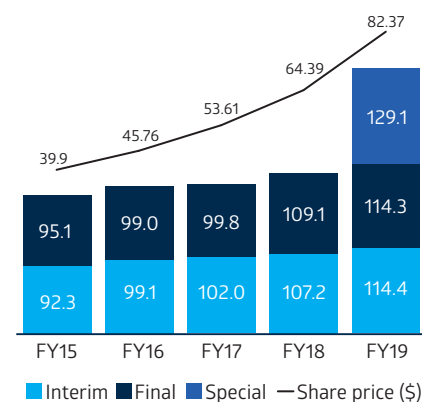


*Underlying profit in FY18 \$465.3 million, FY15 \$403.2 million

Statutory earnings per share (cents)



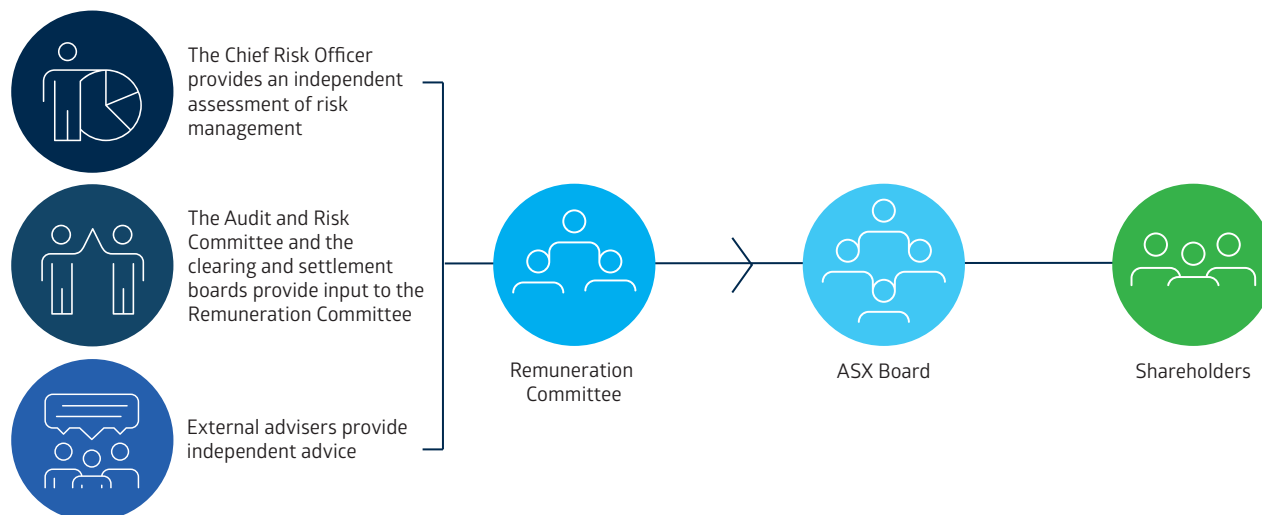
Dividends per share (cents) and share price (\$ at end of financial year)



Remuneration report continued

4. Remuneration governance

The diagram below provides an overview of our governance arrangements relating to remuneration.



4.1 Role of the ASX Board

The Board oversees and approves the non-executive director remuneration and Executive remuneration arrangements. The Board has established a Remuneration Committee for recommending remuneration policy for the Group. The ultimate responsibility for remuneration policy matters rests with the Board.

4.2 Role and responsibilities of the Remuneration Committee

The Remuneration Committee develops the remuneration principles, framework and policies for the Group. The Remuneration Committee's responsibilities are outlined below.

Recommend to the Board:

- Remuneration arrangements and all reward outcomes for Executives
- Performance against goals and targets for Executives, incorporating an evaluation of risk management performance
- Remuneration for Executive appointments and retention matters
- ASX's remuneration and incentive framework, including STI and LTI arrangements and participation
- Non-executive director fees.

Conduct reviews of:

- The effectiveness of the reward policy in supporting ASX's values while complying with regulatory requirements
- Executive succession and key staff succession plans
- Progress against gender diversity objectives and actively promoting a collaborative and inclusive culture
- The capabilities required to deliver the organisation's strategy.

Remuneration report continued

4.3 Board discretion relating to variable remuneration

The Board understands that to make good remuneration decisions it needs both a robust framework and the ability to exercise judgement. Therefore, the Board retains discretion to adjust variable remuneration outcomes in certain cases so that awards are appropriate, support sound and effective risk management, and are aligned to shareholder interests.

The Remuneration Committee provides recommendations to the Board for approval of all Executives' remuneration arrangements. The Board may use its discretion to adjust any individual variable reward outcome. In determining remuneration outcomes for Executives, the Board takes into account information from a range of sources. The Board seeks feedback on Executive performance from the Audit and Risk Committee and the clearing and settlement boards, as well as reports on risk management performance from the Group Chief Risk Officer. This approach ensures independence, objectivity, fairness and consistency in the overall process, and provides sufficient information to inform the use of Board discretion in determining appropriate remuneration outcomes.

4.4 Clawback policy

The Board retains discretion to adjust performance-based remuneration that has not yet been realised or vested without restrictions, for any employee or group of employees within the ASX Group, if it considers that such remuneration would be an inappropriate benefit.

The Board has absolute discretion to determine what constitutes an 'inappropriate benefit'. Examples that may lead to an inappropriate benefit include:

- Mismanagement of material risk issues for the Group
- Fraudulent or dishonest behaviour
- A material misstatement or omission in ASX's financial statements
- A breach of obligations to ASX
- Acting in a manner that brings ASX into disrepute.

4.5 External advice

When an external perspective is needed, the Remuneration Committee may seek professional advice from remuneration advisers. Remuneration advisers are engaged by the Committee independently of management when receiving remuneration recommendations, as defined by the *Corporations Act 2001*.

During FY19, the Committee engaged EY to provide general information on remuneration market trends. No remuneration recommendations were made by EY in FY19.

4.6 Engagement with external stakeholders

Each year, the ASX Chairman meets with investors and proxy advisers. These meetings provide an opportunity to discuss remuneration practices and policies and any issues raised by the investor or proxy adviser.

4.7 Share ownership

Share ownership is encouraged among non-executive directors to strengthen the alignment between their interests and the interests of shareholders.

In June 2019, the Board revised the guideline that determines the appropriate number of shares each non-executive director should hold. It is expected that all ASX non-executive directors hold a number of ASX shares equivalent in value to their base level annual director fee (and in the case of the ASX Chairman, the base level annual director fee plus the Chairman fee), by the first 30 June after the third anniversary of their appointment. For directors appointed before 19 June 2019, the applicable number of shares is 3,107 (or 6,935 for the Chairman).

The applicable number of shares is calculated based on the market price of ASX shares as at the date of the non-executive director's appointment, rounded up to the nearest share.

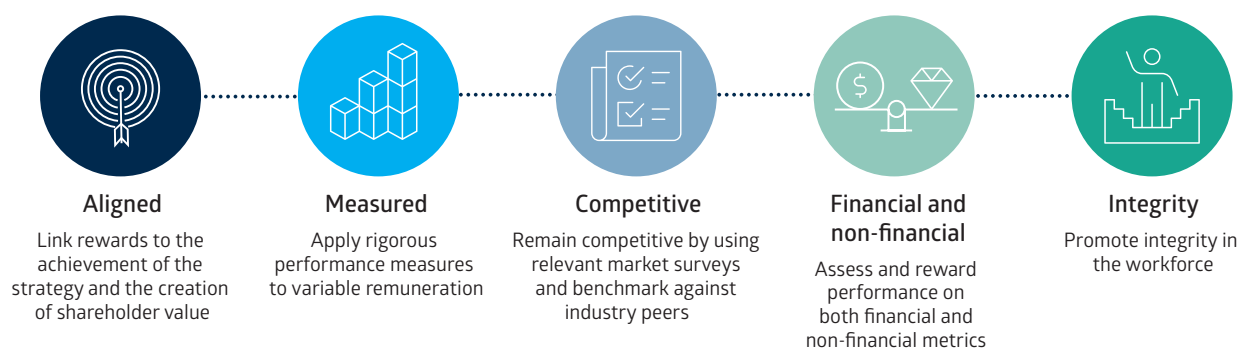
All eligible non-executive directors currently hold a number of shares at or in excess of this level.

Remuneration report continued

5. Executive remuneration framework

5.1. Executive remuneration principles

ASX's remuneration framework provides a clear link between individual and Group performance, and aims to align rewards with shareholder interests and our business strategy. To achieve this, the executive remuneration framework incorporates five guiding principles that deliver reward which is:



- **Aligned – creating shareholder value:** STI is based on the achievement of goals aligned to ASX's strategy. The LTI is aligned to the creation of shareholder value through the relative TSR and EPS hurdles. A portion of an Executive's total variable award is managed through the compulsory deferral in ASX shares, creating alignment with shareholders through the performance of ASX's share price.
- **Regularly and rigorously measured:** Each year, Executives undergo a performance assessment process including a self-assessment and a manager assessment that factors in subsidiary board or committee feedback where appropriate. Performance and remuneration recommendations take into account an assessment of an Executive's management of risk. This is informed via an independent assessment by the Chief Risk Officer. ASX defers a portion of STI awards over two and four years to ensure risks are appropriately considered over the longer term before value is received by the Executive. ASX measures the LTI over a period of four years. All variable remuneration is subject to satisfactory performance and the Board has discretion to make adjustments to the deferred remuneration. Adjustments can include partial reductions or complete forfeiture of deferred awards.
- **Competitive – attracting, retaining and motivating talent:** ASX provides competitive total remuneration that is benchmarked against market data for comparable roles in companies of a similar size and other publicly available market information.
- **Apply the right mix of financial and non-financial metrics:** By balancing financial goals with quantifiable non-financial goals and measuring adherence to the ASX values, Executives are rewarded for driving both the immediate and long-term performance of the Group.
- **Promote integrity in the workforce:** ASX's values are designed to encourage and support our people to act and make decisions with integrity. An assessment is made about how well an individual has exemplified ASX's values, which then has a direct outcome on their overall STI payment.

5.2. Executive remuneration components

The remuneration arrangements for Executives are made up of both fixed and variable remuneration. Variable remuneration is provided through the STI and LTI.

5.3 Fixed remuneration

ASX provides competitive fixed remuneration to attract, retain and motivate talent. Fixed remuneration is paid as cash and comprises salary, superannuation, and salary sacrificed items including non-monetary benefits and share-based payments. Fixed remuneration is set with reference to relevant market benchmarks typically within finance, legal, technology and other sectors relevant to ASX's functions or the broader market. Fixed remuneration is reviewed annually.

Remuneration report continued

5.4. Short-term incentive

STI considerations in determining the STI outcomes for Executives are illustrated in the following diagram.



The following table outlines the key elements of the STI Plan.

Purpose	<ul style="list-style-type: none"> Encourage the achievement of financial and non-financial goals that support the Group's strategy. Deferral periods extend the reward time frame to consider risks being managed. Reflects behaviours to ensure employees act in accordance with ASX's values. 	
Performance	<p>Group performance</p> <ul style="list-style-type: none"> The target STI pool for Executives is calculated as the sum of individual target STIs. Following an assessment of the Group's performance, the Board determines what percentage of the pool may be released. This is referred to as the Group incentive pool. The Group incentive pool represents the maximum amount available for STI payments across employees under the STI Plan, however less than this amount may be spent depending on individual performance. 	<p>Individual performance</p> <ul style="list-style-type: none"> Individual performance is based on a holistic assessment of an Executive's performance and behaviours across their core accountabilities and their delivery of strategic projects. An Executive's goals are cascaded from the Group Balanced Scorecard, the Vision, Strategy and Execution goals, and the division-specific goals drawn from the accountabilities of an Executive's role. An Executive's performance rating determines what percentage of individual STI targets are received. The range is 0% to 150%.
Evaluation and approval	<ul style="list-style-type: none"> The CEO presents the Board with an assessment of the Group's performance based on achievement against the Balanced Scorecard, the Vision, Strategy and Execution goals, and management of risk. The Board incorporates feedback from the CEO and the Chief Risk Officer to determine the Group incentive pool. 	<ul style="list-style-type: none"> The Chief Risk Officer makes an assessment of risk management for Executives and provides this to the CEO. The Chief Risk Officer subsequently provides this assessment directly to the Remuneration Committee. The Group CEO recommends to the Remuneration Committee the individual performance ratings and the percentage of STI target to be applied for Executives reporting to him, considering feedback from the Chief Risk Officer, the Audit and Risk Committee and clearing and settlement boards where appropriate. The Remuneration Committee considers the CEO's recommendations and the Chief Risk Officer's assessment, and then determines the final recommendations for all Executives that will be submitted for Board approval.
Instrument	<ul style="list-style-type: none"> 40% of the STI is delivered in cash, with 60% deferred into restricted ordinary shares. Half of the deferred portion vests after two years of ongoing employment, with the remainder vesting after four years of ongoing employment. Dividends are accrued during the restricted period and paid to the Executive upon vesting. 	
Treatment upon departure	<ul style="list-style-type: none"> Under the rules of the STI Plan, unless the Board determines otherwise, shares subject to a holding lock will be forfeited if the participant's employment is terminated other than for a qualifying reason, or if a condition of the invitation to participate in the plan has not been met in the time specified in the invitation. A qualifying reason means, death, permanent disability, retirement, hardship, redundancy or another reason determined by the Board. If the participant's employment is terminated for a qualifying reason, the Board retains a discretion to determine the number of shares that will be forfeited, if any. 	

Remuneration report continued

5.5 Long-term incentives

Key features of the plan are summarised below.

Purpose	<ul style="list-style-type: none"> Encourage performance that creates long-term value for shareholders. The combination of relative TSR and EPS hurdles provides balance to the plan by measuring performance on a relative and absolute basis: <ul style="list-style-type: none"> Relative: rewards participating Executives for performance that exceeds that of peer companies Absolute: ensures there is a continued focus on providing positive growth, even when the market is declining. 			
Performance	Participation is limited to the CEO and Deputy CEO. The face value of the maximum potential LTI award for the CEO and Deputy CEO is 50% of their fixed remuneration.			
Performance measures	External performance measure		Internal performance measure	
	Relative total shareholder return (TSR) (50%)		Earnings per share (EPS) growth (50%)	
	<ul style="list-style-type: none"> TSR is measured over a four-year period against a peer group determined by the Board at the time of the offer. Currently it is based on the ASX 100, excluding property trusts. The peer group may change as a result of specific events such as mergers and acquisitions or de-listings. The plan rules determine the adjustments of the peer group following such events. 		<ul style="list-style-type: none"> EPS performance is measured over a four-year period using the most recent financial year-end prior to the granting of the award as the base year, and the final financial year in the performance period as the end-year. 	
Vesting schedule	Performance	Vesting	Performance p.a.	Vesting
	Less 51st percentile	0%	Less than 5.1%	0%
	51st percentile	25%	5.1%	50%
	Greater than 76th percentile	100%	Greater than 10%	100%
	Vesting occurs in a straight line between the 51st and 76th percentile		Vesting occurs in a straight line between 5.1% and 10%	
Calculation	<ul style="list-style-type: none"> TSR is calculated as the movement in share price and dividends received, assuming re-investment of dividends. The TSR is calculated over a four-year period, using the three-month volume weighted average price up to (and including) the start date and end date of the performance period. 		<ul style="list-style-type: none"> EPS is calculated by dividing the underlying profit after tax for the relevant reporting period (profit after tax adjusted for the after tax effect of any significant items) by the weighted average number of ordinary shares of ASX. This is then compared to the starting EPS, calculated in a similar fashion to determine the EPS performance. To arrive at underlying profit after tax, significant items may be excluded. These items are determined by the Board and may include revenues and expenses associated with specific events or the results of corporate actions. Exclusion of these items would be clearly identified and explained if such action impacted any vesting outcome. 	
Performance period	Four years			
Instrument	Performance rights over ASX ordinary shares. For grants made from FY19 onwards, the Board may, at its discretion, elect to settle vested LTI allocations with a cash equivalent payment. The value of the cash payment will be determined based on the number of rights that have vested, multiplied by volume weighted average price over the 20 trading days prior to the vesting date.			
Determining the number of performance rights	The number of performance rights allocated is based on the volume weighted average price of ASX shares (face value) on the 10 business days preceding the grant date.			
Expiry	At the end of the performance period, any performance rights that have not vested will lapse.			
Dividends	Dividends are not paid on performance rights.			
Retesting	No			
Treatment upon departure	Performance rights will lapse if an Executive's employment is terminated for cause or poor performance, or if the Executive resigns. If an Executive ceases employment in other circumstances (for example, by mutual agreement with ASX, termination of employment by ASX on notice, redundancy or retirement), any performance rights will remain on foot in accordance with their original terms, except that any service condition will be waived, unless the Board determines otherwise. The Board retains a discretion to determine the proportion of performance rights that remain on foot, vest or lapse.			

5.6 Executive remuneration mix

The Executives' remuneration is aligned to the executive remuneration principles set out in section 5.1. All Executives receive fixed remuneration and STI. In addition, the CEO and Deputy CEO also receive an LTI component.

The chart below sets out the remuneration structure and mix for the CEO and Deputy CEO.

	At-risk →				
Fixed remuneration 40%	Target STI 40%			LTI grant face value 20%	
	Cash 40%	Equity deferred 2 years 30%	Equity deferred 4 years 30%	TSR (50% of award)	EPS (50% of award)

Remuneration report continued

The chart below sets out the remuneration structure and mix for Executives other than the CEO and Deputy CEO. These Executives consist of the Chief Financial Officer, Chief Operating Officer and Chief Risk Officer.

Fixed remuneration 50-75%	At-risk		
	Target STI 25-50%		
	Cash 40%	Equity deferred 2 years 30%	Equity deferred 4 years 30%

6. Statutory remuneration disclosure – Executives

6.1 Statutory remuneration

The remuneration table below has been prepared in accordance with accounting standards as required by the *Corporations Act 2001*. The accounting standards require the disclosure of the expense or cost to the company in the financial years presented, which may result in only a portion of cash remuneration being disclosed where payments are deferred to future financial years. In addition, the accounting standards require share-based payments expense to be calculated using the grant date fair value of the shares rather than current market prices.

Year	Short-term				Long-term			Share-based payments		Other share-based payments ¹⁰	Total	Performance – related ¹¹	
	Salary ¹	STI ²	Non-monetary ³	Annual leave accrual ⁴	Other ⁵	Long service leave accrual ⁶	Superannuation ⁷	STI Plan ⁸	LTI Plan ⁹				
Current													
D J Stevens Managing Director and CEO ¹²	2019	1,962,590	868,000	16,878	-	2,610	7,709	20,531	820,603	220,172	-	3,919,093	49%
	2018	1,962,192	800,000	17,759	(76,134)	2,610	6,673	20,049	370,603	277,029	-	3,380,781	43%
P D Hiom Deputy CEO	2019	962,590	434,000	16,878	67,809	2,610	(44,002)	20,531	513,750	43,503	-	2,017,669	49%
	2018	962,192	420,000	17,759	(11,302)	2,610	16,292	20,049	427,500	226,917	-	2,082,017	52%
T J Hogben Chief Operating Officer	2019	644,978	195,300	9,490	(15,139)	2,610	10,761	20,531	227,819	-	-	1,096,350	39%
	2018	649,780	189,000	5,171	(8,576)	2,610	32,370	20,049	174,006	-	-	1,064,410	34%
G L Larkins Chief Financial Officer	2019	522,610	225,534	-	34,251	1,757	1,044	15,851	-	-	355,678	1,156,725	19%
H J Treleaven Chief Risk Officer	2019	769,335	133,334	10,133	(12,047)	64,833	2,870	20,531	94,877	-	-	1,083,866	21%
	2018	779,013	133,334	938	14,990	175,944	2,366	20,049	19,877	-	-	1,146,511	13%
Former													
R Aziz Chief Financial Officer	2019	196,128	-	-	15,021	403,305	3,121	10,266	148,500	-	-	776,341	19%
	2018	579,951	80,000	-	(11,060)	7,570	9,542	20,049	148,500	-	-	834,552	27%
Total¹³	2019	5,058,231	1,856,168	53,379	89,895	477,725	(18,497)	108,241	1,805,549	263,675	355,678	10,050,044	39%
	2018	4,933,128	1,622,334	41,627	(92,082)	191,344	67,243	100,245	1,140,486	503,946	-	8,508,271	38%

¹ Base salary excluding payments made under the compulsory superannuation guarantee.

² The cash component of the STI earned over FY19, paid in cash in August 2019.

³ Salary-sacrificed items paid over the year including car parking (and associated fringe benefits tax) and participation in the employee share plan.

⁴ Annual leave accrued over the year.

⁵ The value of salary continuance insurance provided by the company. This column also shows the amortised value of payments to Hamish Treleaven relating to his commencement of employment and the payment in lieu of notice to Ramy Aziz upon cessation.

⁶ Long service leave accrued over the year.

⁷ Post-employment benefits, comprising the compulsory superannuation guarantee.

⁸ Annual share-based payments expense for restricted shares issued under the deferred STI Plan.

⁹ Reflects annual share-based payments expense for performance rights issued under the LTI Plan. The expense is calculated using the fair value of performance rights at grant date, less any write-back for performance rights lapsed as a result of non-market hurdles not attained. The LTI may be either equity or cash settled, as determined by the Board. FY19 values reflect the reversal of the accrued expense of previous awards which did not vest.

¹⁰ The amortised value of 11,604 restricted shares granted to Gillian Larkins on 15 February 2019, with a volume weighted average price of \$58.38. The restriction on half of this allocation of shares will lift on 1 September 2019 with the restriction on the remaining half lifting on 1 September 2020, subject to ongoing employment and satisfactory performance.

¹¹ Reflects the percentage of total remuneration that is performance-related (short-term and long-term cash settled STI and share-based payments relating to the LTI and STI Plans).

¹² The increase in total remuneration for the CEO in FY19 is primarily due to deferred STI expenses being amortised over four years. In FY18 this reflects amortisation of the FY17 award and in FY19 this reflects amortisation of both the FY17 and FY18 awards.

¹³ The total FY19 remuneration shown in table 6.1 is higher than the prior year. This is primarily due to: a) the change to the amortised expense of the CEO's deferred STI described in footnote 12; and b) payments relating to the change in Chief Financial Officer described in footnote 5 (Mr Aziz) and footnote 10 (Ms Larkins).

Note regarding the preparation of prior year information:

Prior year amounts have been restated to include additional benefits received for annual and long service leave and salary continuance insurance while other long-term benefits has been restated to reflect the expense recognised in the year rather than the cash received. In addition, the salary sacrifice employee share plan has been reclassified as a short-term 'non-monetary' benefit.

Remuneration report continued

6.2 Current LTI grants

Shares relating to grants of performance rights that have vested are allocated from a trust established to hold shares for this purpose. The table below sets out a summary of the LTI grants that were in operation during FY19.

Grant year	FY19		FY18		FY17		FY16 ¹
Grant date	4 October 2018		26 September 2017		28 September 2016		30 September 2015
Performance period	5 October 2018 – 4 October 2022		27 September 2017 – 26 September 2021		28 September 2016 – 29 September 2020		30 September 2015 – 1 October 2019
Vesting date	4 October 2022		26 September 2021		29 September 2020		1 October 2019
Vesting period	4 years		4 years		4 years		4 years
Participation	2		2		2		1
Performance rights awarded	CEO 15,843	Deputy CEO 7,921	CEO 18,975	Deputy CEO 9,488	CEO 20,889	Deputy CEO 10,445	Deputy CEO 13,041
Performance measure	50% EPS and 50% TSR		50% EPS and 50% TSR		50% EPS and 50% TSR		50% EPS and 50% TSR
EPS vesting commences at	5.1% compound growth		5.1% compound growth		5.1% compound growth		5.1% compound growth
TSR vesting commences at	51st percentile		51st percentile		51st percentile		51st percentile
Dividends paid	No		No		No		No
Retesting	No		No		No		No
Share price at grant date	\$62.01		\$52.62		\$47.78		\$37.88
Volatility p.a.	16%		17%		17%		16%
Discount rate (risk free rate) p.a.	2.2%		2.24%		1.70%		1.94%
Dividend yield p.a.	3.70%		4.00%		4.60%		4.75%
Fair value of performance rights (EPS awards)	\$53.48		\$44.83		\$39.75		\$31.32
Fair value of performance rights (TSR awards)	\$24.34		\$23.78		\$19.62		\$15.36
Weighted average AASB 2 share-based payment fair value	\$38.91		\$34.30		\$29.68		\$23.34

¹ The grants for FY16 exclude the former CEO Elmer Funke Kupper who resigned 21 March 2016.

As is customary, ASX will submit Dominic Stevens' FY20 LTI grant for shareholder approval at the 2019 Annual General Meeting (AGM).

6.3 FY19 Executive LTI allocations

The following table shows the movement during the financial year in the number of performance-related rights over issued ordinary shares in ASX held directly, indirectly or beneficially by the Executives, including their personally related parties.

	Held as at 1 July 2018	Granted as compensation during the year	Vested during the year	Lapsed during the year	Held at 30 June 2019
Current					
D J Stevens	39,864	15,843	-	-	55,707
P D Hiom	32,974	7,921	-	-	40,895

No other KMP had performance-related rights over issued ordinary shares in ASX directly, indirectly or beneficially.

6.4 Potential future value of LTI allocations for CEO and Deputy CEO

The following table shows the minimum and maximum values of performance rights that may be received by the CEO and Deputy CEO as remuneration in future financial years:

Grant date:	30 September 2015		28 September 2016		27 September 2017		5 October 2018	
Vesting date:	1 October 2019		29 September 2020		26 September 2021		4 October 2022	
	Min \$ ¹	Max \$ ²	Min \$ ¹	Max \$ ²	Min \$ ¹	Max \$ ²	Min \$ ¹	Max \$ ²
Current								
D J Stevens	N/A	N/A	-	619,986	-	650,843	-	616,451
P D Hiom	-	304,377	-	310,008	-	325,438	-	308,206

¹ Since the performance rights are issued with a zero exercise price, their minimum total value is nil, on the basis that they will not vest if the applicable performance/vesting conditions are not met.

² The amounts represent the maximum fair value for future years of the performance rights yet to vest, as at their grant date. The maximum total value is the number of rights issued multiplied by the weighted average fair value.

Remuneration report continued

6.5 Holdings of ordinary shares

	Held at 1 July 2018	Received on vesting of rights over deferred shares	Allocated under deferred STI Plan	Other changes	Held at 30 June 2019
Current					
D J Stevens	29,754	-	17,886	-	47,640
P D Hiom	60,444	-	9,390	-5,845	63,989
T J Hogben	8,820	-	4,226	14	13,060
G L Larkins ¹	-	-	-	11,604	11,604
H J Treleaven	996	-	2,981	14	3,991
Former					
R Aziz ¹	36,042	-	1,789	-	37,831

¹ Opening balance for Gillian Larkins is effective from her date of commencement on 29 October 2018. Closing balance for Ramy Aziz is effective from his cessation date of 31 October 2018.

6.6 Service agreements

Minimum notice periods (months)					
Name	Position held	Contract effective date	Executive	ASX	Poor performance
D J Stevens	Managing Director and CEO	1 August 2016	6	12	3
P D Hiom	Deputy CEO	1 July 2015	6	12	3 ¹
T J Hogben	Chief Operating Officer	1 April 2010	3	6	1 ¹
G L Larkins	Chief Financial Officer	29 October 2018	6	12	3 ¹
H J Treleaven	Chief Risk Officer	1 March 2017	6	12	3 ¹
Former					
R Aziz ²	Chief Financial Officer	19 July 2010	3	6	1 ¹

¹ The notice period for termination for poor performance requires an initial written notice of one month.
² R Aziz resigned on 31 October 2018.

7. Non-executive director remuneration arrangements

Non-executive directors receive fees for their contribution on the boards and associated committees on which they serve. The Remuneration Committee reviews and recommends to the Board the fees provided to non-executive directors.

Non-executive director fees are set to ensure:

- ASX non-executive directors are remunerated fairly for their services, recognising the workload and level of skill and experience required for the role
- ASX can attract and retain talented non-executive directors.

7.1 Remuneration structure

ASX reviewed its non-executive director fees in August 2017 and made changes that became effective in October 2017. These were determined with regards to the changed responsibilities of non-executive directors across ASX's governance forums. These fees remained unchanged through FY19.

Under the non-executive director fee structure, remuneration comprises one base fee (plus superannuation) in respect of a non-executive director appointment to the ASX Board and any board committee and/or its subsidiaries. An additional amount is paid to the Chairperson of the ASX Limited Board or a committee or subsidiary board.

The aggregate amount paid to non-executive directors is approved by shareholders at the AGM. The maximum aggregate amount that may be paid to all ASX non-executive directors in their capacity as members of the ASX Limited Board and its committees, and as non-executive directors of subsidiary boards, is \$3 million per annum. This was approved by shareholders at the 2017 AGM. The amount paid in FY19 was \$2.49 million. Non-executive directors of independent subsidiary boards who do not serve on the ASX Limited Board are not included in the fee pool.

Non-executive directors have no entitlement to any performance-based remuneration or participation in any share-based incentive schemes.

ASX does not have a non-executive director retirement scheme.

Remuneration report continued

7.2 Non-executive director fee schedule

The following table summarises the fees received for each role on the Board.

Board/Committee	Role	Fees excluding superannuation (\$)	
		2019	2018
Board ¹	Chair	550,000	550,000
	Member	235,000	235,000
Audit and Risk Committee	Chair	45,000	45,000
Remuneration Committee	Chair	20,000	20,000

¹ ASX Limited Board fees include payment for membership of ASX Limited Board committees and clearing and settlement boards.

7.3 Director fees for FY18 and FY19

The following table sets out the statutory remuneration details for non-executive directors for FY18 and FY19.

	Year	Short-term salary and fees	Post-employment superannuation	Total
Current				
R Holliday-Smith	2019	550,000	20,531	570,531
	2018	556,250	20,049	576,299
Y A Allen	2019	235,000	20,531	255,531
	2018	235,000	20,049	255,049
M B Conrad	2019	235,000	20,531	255,531
	2018	213,750	18,599	232,349
K R Henry	2019	235,000	20,531	255,531
	2018	235,000	20,049	255,049
P R Marriott	2019	280,000	20,531	300,531
	2018	285,000	20,049	305,049
P S Nash	2019	6,603	627	7,230
H M Ridout	2019	255,000	20,531	275,531
	2018	250,000	20,049	270,049
D Roche ¹	2019	270,000	20,531	290,531
	2018	270,000	20,049	290,049
P H Warne ²	2019	255,000	20,531	275,531
	2018	257,500	20,049	277,549

¹ Fees disclosed for Damian Roche include \$35,000 per annum for his role as Chairman of ASX Clear (Futures) Pty Ltd.

² Fees disclosed for Peter Warne include \$20,000 per annum for his role as Chairman of Austraclear Ltd.

7.4 Equity holdings

The table below sets out current equity holdings for non-executive directors.

	Held as at 1 July 2018	Other changes	Held at 30 June 2019
R Holliday-Smith	12,000	-	12,000
Y A Allen	5,000	-	5,000
M B Conrad	5,000	-	5,000
K R Henry	5,000	-	5,000
P R Marriott	5,316	-	5,316
P S Nash	-	-	-
H M Ridout	5,000	-	5,000
D Roche	10,000	-	10,000
P H Warne	6,000	-	6,000

Directors' report

The directors present their report, together with the financial statements of ASX Limited (ASX or the Company) and its subsidiaries (together referred to as the Group), for the year ended 30 June 2019 (FY19) and the auditor's report thereon. The financial statements have been reviewed and approved by the directors on the recommendation of the ASX Audit and Risk Committee.

The FY19 consolidated net profit after tax attributable to the owners of ASX was \$492.0 million (2018: \$445.1 million).

Directors

The directors of ASX in office during the financial year and at the date of this report (unless otherwise stated) were as follows:

- Rick Holliday-Smith (Chairman)
- Dominic J Stevens (Managing Director and CEO)
- Yasmin A Allen
- Melinda B Conrad
- Ken R Henry AC
- Peter R Marriott
- Peter S Nash (appointed 19 June 2019)
- Heather M Ridout AO
- Damian Roche
- Peter H Warne.

Directors' meetings and attendance at those meetings for FY19 (including meetings of committees of directors) are disclosed on page 43. The qualifications and experience of directors, including current and recent directorships, are detailed on pages 37 to 39.

Company secretaries

Daniel Moran

Group General Counsel and Company Secretary,
BA (UTS) LLB (UNSW)

Daniel Moran is Group General Counsel and Company Secretary. Mr Moran joined ASX as Deputy General Counsel in 2010. Prior to that he was a Senior Associate in the Australian law firm Herbert Smith Freehills. Since joining ASX he has worked across ASX's businesses and engaged closely with ASX's boards and committees as a lawyer and company secretary.

Daniel Csillag, BA LLB (UNSW), General Manager Company Secretariat and Senior Legal Counsel, is also a Company Secretary. As Company Secretary, he is responsible for company secretariat and corporate governance support across the Group. He has company secretariat experience from his time at ASX and other entities.

Report on the business

Principal activities

During the year the principal activities of the Group consisted of providing:

- Securities exchange and ancillary services
- Derivatives exchange and ancillary services
- Central counterparty clearing services
- Registry, depository, settlement and delivery-versus-payment clearing of financial products
- Technical and information services.

Review of operations

Information on the operations and financial position of the Group, and its business strategies and prospects, is disclosed in the Operating and Financial Review on pages 16 to 25.

Dividends

Information relating to dividends for the current and prior financial year, including dividends determined by the Board since the end of the financial year, is disclosed in note B3 of the financial statements on page 82.

Significant changes in the state of affairs

There were no significant changes in the Group's state of affairs during the year.

Events subsequent to balance date

From the end of the period to the date of this report, no matter or circumstance has arisen which has significantly affected the operations of the Group, the results of those operations or the state of affairs of the Group.

Likely developments

For further information about likely developments in the operations of the Group, refer to the Operating and Financial Review on pages 16 to 25. The expected results from those operations in future financial years have not been included because they depend on factors such as general economic conditions, the risks outlined, and the success of ASX's strategies, some of which are outside the control of the Group.

Environmental regulation

The operations of the Group are not subject to any particular or significant environmental regulations under a Federal, State or Territory law.

Directors' report continued

Indemnification and insurance of officers

The Group has paid insurance premiums for directors' and officers' liability for current and former directors and officers of the Company, its subsidiaries and related entities.

The insurance policies prohibit disclosure of the nature of the liabilities insured against and the amount of the premiums.

The constitution of ASX provides that every person who is or has been a director, secretary or executive officer of the Company, and each other officer or former officer of the Company (or of its related bodies corporate as the directors in each case determine), is indemnified by the Company to the maximum extent permitted by law. The indemnity covers losses or liabilities incurred by the person as a director or officer, including but not limited to liability for negligence and for legal costs on a full indemnity basis.

Performance rights over issued shares

At the date of this report, ASX had 96,602 performance rights outstanding (2018: 72,838). For further details on the performance rights including performance hurdles for vesting, refer to the Remuneration Report on pages 48 to 62.

During the year, no performance rights vested or lapsed under any Long-Term Incentive Plan (LTIP). In the prior year, 8,065 performance rights vested as a result of partial attainment of hurdles under the September 2014 LTIP and 19,367 rights lapsed.

Proceedings on behalf of the Group

No application for leave has been made under section 237 of the *Corporations Act 2001* in respect of the Group and no proceedings have been brought or intervened in on behalf of the Group under that section.

Remuneration Report

Information on remuneration for the ASX Limited Board and Key Management Personnel (KMP), is contained in the Remuneration Report on pages 48 to 62.

Non-audit services

Details of the amounts paid or payable to the Group's auditor PricewaterhouseCoopers (PwC) and its related practices for non-audit services provided during the year are set out in note F5.3 of the financial statements on page 107.

Directors' declaration of satisfaction with independence of auditor

The Board of directors has considered the non-audit services provided during the year by the auditor and in accordance with written advice provided by resolution of the Audit and Risk Committee, is satisfied that the provision of those non-audit services is compatible with, and did not compromise, the auditor independence requirements of the *Corporations Act 2001* for the following reasons:

- Non-audit services were subject to the corporate governance procedures adopted by the Group and have been reviewed by the Audit and Risk Committee
- Non-audit services provided do not undermine the general principles relating to auditor independence as set out in APES 110 *Code of Ethics for Professional Accountants*, as they did not involve reviewing or auditing the auditor's own work, acting in a management or decision-making capacity for the Company, acting as an advocate for the Company or jointly sharing risks and rewards.

A copy of the Auditor's Independence Declaration as required under section 307C of the *Corporations Act 2001* is on page 65.

Rounding of amounts

ASX is a company of the kind referred to in ASIC Legislative Instrument 2016/191. Amounts in the financial statements and the Directors' Report have been rounded to the nearest thousand or hundred thousand dollars in accordance with that instrument, unless otherwise indicated.

Signed in accordance with a resolution of the directors:



Rick Holliday-Smith
Chairman



Dominic Stevens
Managing Director and Chief Executive Officer

Sydney, 15 August 2019



Auditor's independence declaration

As lead auditor for the audit of ASX Limited for the year ended 30 June 2019, I declare that to the best of my knowledge and belief, there have been:

- a. no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and
- b. no contraventions of any applicable code of professional conduct in relation to the audit.

This declaration is in respect of ASX Limited and the entities it controlled during the period.

A handwritten signature in black ink, appearing to read 'V. Papageorgiou', written in a cursive style.

Voula Papageorgiou
Partner

PricewaterhouseCoopers

Sydney, 15 August 2019

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Statutory report – financial statements

Contents

Consolidated financial statements

Consolidated statement of comprehensive income	67
Consolidated balance sheet	68
Consolidated statement of changes in equity	69
Consolidated statement of cash flows	70

Notes to the consolidated financial statements

Significant accounting policies

A1 Significant accounting policies	72
A2 New and amended standards	73
A3 Reclassification of prior year balances	73
A4 Changes in accounting policies	75

Performance of the Group

B1 Segment reporting	78
B2 Revenue from contracts with customers	80
B3 Dividends	82
B4 Capital management	82
B5 Earnings per share	83
B6 Taxation	84

Risk management

C1 Clearing risk	85
C2 Cash	86
C3 Financial risk	87

Investments

D1 Investments in equity instruments	96
D2 Equity accounted investments	96
D3 Financial assets at fair value through profit or loss	97

Other balance sheet assets and liabilities

E1 Trade and other receivables	98
E2 Intangible assets	98
E3 Property, plant and equipment	100
E4 Trade and other payables	101
E5 Provisions	101

Group disclosures

F1 Subsidiaries	102
F2 Deed of Cross Guarantee	103
F3 Related party transactions	104
F4 Parent entity financial information	104
F5 Other disclosures	105
F5.1 Commitments	105
F5.2 Share-based payments	105
F5.3 Auditor's remuneration	107
F5.4 Subsequent events	107

Directors' declaration **108**

Independent auditor's report **109**

Consolidated statement of comprehensive income

For the year ended 30 June	Note	2019 \$m	2018 \$m
Revenue			
Listings and Issuer Services	B2	222.5	222.9
Derivatives and OTC Markets	B2	309.5	286.7
Trading Services	B2	230.9	211.8
Equity Post-Trade Services	B2	108.4	105.3
Interest income		216.2	170.9
Dividend income		5.1	14.2
Share of net (loss) of equity accounted investments	D2	(5.1)	(0.4)
Other	B2	1.9	1.6
		1,089.4	1,013.0
Expenses			
Staff		(127.7)	(114.6)
Occupancy		(17.9)	(16.4)
Equipment		(32.2)	(29.4)
Administration		(41.3)	(40.3)
Finance costs		(117.4)	(102.4)
Depreciation and amortisation	E2, E3	(47.8)	(47.6)
Other	D2	-	(20.2)
		(384.3)	(370.9)
Profit before income tax expense		705.1	642.1
Income tax expense	B6	(213.1)	(197.0)
Net profit for the year attributable to owners of the Company		492.0	445.1
Other comprehensive income			
Items that may be reclassified to profit or loss¹			
Change in the fair value of available-for-sale financial assets ¹		-	(0.9)
Change in the fair value of investments in equity instruments ²		-	(10.3)
Change in the fair value of cash flow hedges		-	1.2
Items that cannot be reclassified to profit or loss			
Change in the fair value of investments in equity instruments		(7.9)	-
Other comprehensive income for the year, net of tax		(7.9)	(10.0)
Total comprehensive income for the year attributable to owners of the Company		484.1	435.1
Earnings per share			
Basic earnings per share (cents per share)	B5	254.1	230.0
Diluted earnings per share (cents per share)	B5	254.1	230.0

¹ In the prior year, \$0.2 million was reclassified from equity to profit or loss following the sale of available-for-sale (AFS) financial assets prior to their maturity. The AFS financial assets have been reclassified to financial assets at amortised cost and financial assets at fair value through profit or loss (FVTPL) on 1 July 2018 following the adoption of AASB 9 *Financial Instruments*. Therefore there will no longer be any fair value movements recognised in equity and subsequently reclassified to profit or loss on sale.

² The AFS investments have been renamed to investments in equity instruments on the balance sheet. Following the adoption of AASB 9 *Financial Instruments*, these have been designated at fair value through other comprehensive income (FVTOCI) and any gain on sale remains within equity.

The above consolidated statement of comprehensive income should be read in conjunction with the accompanying notes.

Consolidated balance sheet

As at 30 June	Note	2019 \$m	2018 ¹ \$m
Current assets			
Cash ¹	A3,C2	333.1	377.2
Other financial assets at amortised cost	A3,A4,C3	10,825.4	5,186.7
Financial assets at fair value through profit or loss ²	C3,D3	1,111.8	-
Available-for-sale financial assets ³	A4,C3	-	4,001.4
Trade and other receivables	E1	390.6	373.2
Prepayments		17.5	17.4
Total current assets		12,678.4	9,955.9
Non-current assets			
Investments in equity instruments ⁴	D1	24.3	416.4
Equity accounted investments	D2	52.0	53.1
Financial assets at fair value through profit or loss ²	D3	-	4.8
Intangible assets	E2	2,458.3	2,438.1
Net deferred tax asset	B6	45.3	-
Property, plant and equipment	E3	61.5	54.4
Prepayments		10.5	0.3
Total non-current assets		2,651.9	2,967.1
Total assets		15,330.3	12,923.0
Current liabilities			
Amounts owing to participants	C1	10,601.0	8,295.8
Trade and other payables	E4	349.3	354.3
Current tax liabilities		89.9	17.1
Provisions	E5	15.2	14.6
Revenue received in advance	B2	83.1	22.4
Total current liabilities		11,138.5	8,704.2
Non-current liabilities			
Amounts owing to participants	C1	200.0	200.0
Net deferred tax liabilities	B6	-	64.7
Provisions	E5	9.6	8.5
Revenue received in advance	B2	65.8	0.1
Total non-current liabilities		275.4	273.3
Total liabilities		11,413.9	8,977.5
Net assets		3,916.4	3,945.5
Equity			
Issued capital	B4	3,027.2	3,027.2
Retained earnings		801.7	666.7
Restricted capital reserve		71.5	71.5
Asset revaluation reserve		0.4	168.4
Equity compensation reserve		15.6	11.7
Total equity		3,916.4	3,945.5

¹ The cash and other financial assets at amortised cost line items were previously reported as cash and funds on deposit in the prior year financial statements. Refer to note A3 for further details.

² In the current year, the convertible note included within financial assets at fair value through profit or loss has been reclassified to current assets.

³ The AFS financial assets were reclassified to financial assets at amortised cost and financial assets at FVTPL on 1 July 2018 following the adoption of AASB 9. Refer to note A4 for further details.

⁴ This line item was called available-for-sale investments in the prior year.

The above consolidated balance sheet should be read in conjunction with the accompanying notes.

Consolidated statement of changes in equity

For the year ended 30 June	Note	Issued capital \$m	Retained earnings \$m	Restricted capital reserve \$m	Asset revaluation reserve \$m	Equity compensation reserve \$m	Total equity \$m
Opening balance at 1 July 2018		3,027.2	666.7	71.5	168.4	11.7	3,945.5
Change in accounting policies	A4	-	(85.0)	-	0.6	-	(84.4)
Restated balance at 1 July 2018		3,027.2	581.7	71.5	169.0	11.7	3,861.1
Profit for the year		-	492.0	-	-	-	492.0
Other comprehensive income for the year		-	-	-	(7.9)	-	(7.9)
Transfers within equity	D1	-	160.7	-	(160.7)	-	-
Total comprehensive income for the period, net of tax		-	652.7	-	(168.6)	-	484.1
Transactions with owners in their capacity as owners:							
Incentive plans – value of employee services	F5.2	-	-	-	-	3.9	3.9
Dividends paid	B3	-	(432.7)	-	-	-	(432.7)
Closing balance at 30 June 2019		3,027.2	801.7	71.5	0.4	15.6	3,916.4
Opening balance 1 July 2017							
		3,027.2	622.2	71.5	178.4	8.8	3,908.1
Profit for the year		-	445.1	-	-	-	445.1
Other comprehensive income for the year		-	-	-	(10.0)	-	(10.0)
Total comprehensive income for the period, net of tax		-	445.1	-	(10.0)	-	435.1
Transactions with owners in their capacity as owners:							
Incentive plans – value of employee services	F5.2	-	-	-	-	2.9	2.9
Dividends paid	B3	-	(400.6)	-	-	-	(400.6)
Closing balance at 30 June 2018		3,027.2	666.7	71.5	168.4	11.7	3,945.5

The above consolidated statement of changes in equity should be read in conjunction with the accompanying notes.

Consolidated statement of cash flows

For the year ended 30 June	Note	2019 \$m	2018 ^a \$m
Cash flows from operating activities			
Receipts from customers		941.8	891.7
Payments to suppliers and employees		(297.3)	(248.0)
		644.5	643.7
Increase in participants' margins and commitments		1,603.3	208.3
Net movement in financial assets at amortised cost		(1,969.7)	(323.1)
Interest received		133.5	122.2
Interest paid		(116.2)	(101.9)
Dividends received		5.1	14.2
Income taxes paid		(210.6)	(196.4)
Net cash inflow from operating activities		89.9	367.0
Cash flows from investing activities			
Receipts from the sale of equity instruments	D1	380.7	-
Payments for equity accounted investments		(4.0)	(7.0)
Payments for financial assets at fair value through profit or loss	D3	-	(4.6)
Payments for other non-current assets		(84.6)	(48.3)
Net cash inflow/(outflow) from investing activities		292.1	(59.9)
Cash flows from financing activities			
Dividends paid	B3	(432.7)	(400.6)
Net cash (outflow) from financing activities		(432.7)	(400.6)
Net decrease in cash		(50.7)	(93.5)
Increase in the fair value of cash		-	1.8
Increase in cash due to changes in foreign exchange rates		6.6	4.7
Cash at the beginning of the year		377.2	464.2
Cash at the end of the year	C2	333.1	377.2

Total funds available for the Group to invest comprises the following

As at 30 June

ASX Group funds		1,464.0	1,069.5
Participants' margins and commitments	C1	10,801.0	8,495.8
Less: non-cash collateral	C1	(1,106.5)	(411.2)
Total		11,158.5	9,154.1
Cash	C2	333.1	377.2
Other financial assets at amortised cost	C3	10,825.4	5,186.7
Available-for-sale financial assets (excluding non-cash collateral lodged by participants)		-	3,590.2
Total		11,158.5	9,154.1

The above consolidated statement of cash flows should be read in conjunction with the accompanying notes.

Consolidated statement of cash flows continued

Reconciliation of the operating profit after income tax to the net cash flows from operating activities

For the year ended 30 June	2019 \$m	2018 ¹ \$m
Net profit after tax	492.0	445.1
Non-cash items:		
Depreciation and amortisation	47.8	47.6
Share-based payments	3.9	2.9
Share of net (loss) of equity accounted investments	5.1	0.4
Foreign currency revaluation	(6.8)	(4.9)
Impairment of equity accounted investments	-	20.2
Total non-cash items	50.0	66.2
Changes in operating assets and liabilities:		
(Increase) in other financial assets at amortised cost ²	(2,048.0)	(370.0)
(Increase) in financial assets at FVTPL	(695.3)	(198.1)
Increase in tax balances ²	2.5	0.4
(Increase) in receivables ³	(15.6)	(3.3)
(Increase) in prepayments	(10.3)	(0.1)
Increase in amounts owing to participants	2,305.2	411.1
Increase in trade and other payables ³	2.5	11.1
Increase in revenue received in advance ²	5.3	4.2
Increase in provisions ³	1.6	0.4
Net cash inflow from operating activities	89.9	367.0

¹ The prior year has been restated to reflect the change in classification of certain assets as cash equivalents. Refer to note A3 for further details.

² Adjustments for changes in accounting policies are excluded, refer to note A4 for details.

³ Changes in assets and liabilities from investing and financing activities such as margins receivable/payable, certain accruals, makegood provisions and securities pledged under repurchase agreements are excluded.

The above consolidated statement of cash flows should be read in conjunction with the accompanying notes.

Notes to the consolidated financial statements

Significant accounting policies

A1 Significant accounting policies

(a) Basis of preparation

ASX Limited (ASX or the Company) is a company limited by shares, incorporated and domiciled in Australia and is a for-profit entity for the purposes of preparing the financial statements. The financial statements for the year ended 30 June 2019 are for the consolidated entity which consists of ASX and its subsidiaries (together referred to as the Group) and were authorised for issue by the Board of Directors on 15 August 2019. The directors have the power to amend and reissue the financial statements.

The financial statements are general purpose financial statements that:

- have been prepared in accordance with the requirements of the *Corporations Act 2001*, Australian Accounting Standards and other authoritative pronouncements issued by the Australian Accounting Standards Board (AASB) and International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB)
- include the assets and liabilities of all subsidiaries of the Company as at 30 June 2019 and the results of the subsidiaries for the year then ended. Inter-entity transactions with, or between, subsidiaries are eliminated in full on consolidation
- have been prepared on a historical cost basis, except for financial assets at FVTPL and investments in equity instruments which have been measured at FVTOCI (refer to notes C3, D1 and D3)
- are measured and presented in Australian dollars which is ASX's functional and presentation currency with all values rounded to the nearest thousand or hundred thousand dollars in accordance with ASIC Legislative Instrument 2016/191, unless otherwise indicated.

(b) Key judgements and estimates

In the process of applying the Group's accounting policies, management has made a number of judgements and applied estimates concerning future events. Judgements and estimates that are material to the financial report are found in the following notes:

- B2 Revenue from contracts with customers
- D1 Investments in equity instruments
- D2 Equity accounted investments
- D3 Financial assets at fair value through profit or loss
- E2 Intangible assets.

Key judgements and estimates are contained in shaded text and included in the relevant note.

(c) Accounting policies

Foreign currency translation

Foreign currency transactions are translated into Australian dollars, being the currency of the primary economic environment in which the entity operates (the functional currency), using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation at period end exchange rates of monetary assets and liabilities denominated in foreign currencies, are recognised in profit or loss, except where they are deferred in equity as qualifying cash flow hedges (refer to note C3) and investments in equity instruments (refer to note D1).

Goods and Services Tax (GST)

Revenues and expenses are recognised net of the amount of Goods and Services Tax (GST), except where the amount of GST is not recoverable from the taxation authority. In these circumstances the GST is recognised as part of the item of expense to which it relates.

Assets are recognised net of the amount of GST, except where the amount of GST is not recoverable from the taxation authority. In these circumstances the GST is recognised as part of the cost of acquisition of the asset. Receivables and payables are stated with the amount of GST included. The net amount of GST recoverable from, or payable to, the taxation authority is included as a current asset or liability.

Cash flows are reported on a gross basis and inclusive of GST. The GST components of cash flows arising from investing and financing activities which are recoverable from, or payable to, the taxation authority are classified as operating cash flows.

Other accounting policies

Other significant accounting policies are contained in shaded text and are included in the relevant note. These policies have been consistently applied to all years presented, unless otherwise stated.

(d) Reclassification of prior year balances

In the current year, the classification of certain amounts on the balance sheet and statement of cash flows have been reassessed and determined to no longer be cash equivalents. The comparatives have been restated to align with the new classification. Refer to note A3 for further details.

Notes to the consolidated financial statements continued

Significant accounting policies

A2 New and amended standards

(a) New and amended standards and interpretations adopted by the Group

The AASB has issued a number of standards and amendments to standards that are mandatory for the first time in the reporting period commenced 1 July 2018. The following standards have been identified as having a material impact on adoption and in future reporting periods:

- AASB 9 *Financial Instruments* (AASB 9)
- AASB 15 *Revenue from Contracts with Customers* (AASB 15).

The impact of adopting AASB 9 and AASB 15 are disclosed in note A4. All other standards and amendments to standards issued by the AASB do not materially affect the amounts recognised in prior, current or future periods. The Group did not apply any pronouncements before their operative date in the financial year ended 30 June 2019.

(b) New and amended standards and interpretations not yet adopted by the Group

The AASB has issued a number of new or amended accounting standards and interpretations that are not mandatory for the first time in the reporting period commenced 1 July 2018. The Group has assessed these standards and interpretations and determined that AASB 16 *Leases* (AASB 16) will have a material impact on the Group in future reporting periods. The impact of this standard is set out below.

AASB 16 is mandatory for periods beginning on or after 1 January 2019 and will be adopted by the Group on the mandatory date of 1 July 2019. It replaces AASB 117 *Leases* (AASB 117) and contains a revised definition of a lease and has removed the distinction between operating and finance leases by lessees. Under the new standard, a non financial asset that represents the right to use the leased item and a financial liability that represents the obligation to pay rent will be recognised on the balance sheet. The asset will be depreciated over the lease term on a straight-line basis and interest expense will be charged on the lease liability. The interest charge will result in a higher expense in the early years of the lease which will impact certain ratios and metrics. EBITDA will be impacted as the expense will be recognised within depreciation and amortisation and finance costs rather than operating expense. Short-term leases or leases of low value assets are exempted from the application of this standard and will continue to be expensed on a straight-line basis within occupancy expense.

The Group intends to apply the modified retrospective approach on transition. Under this approach, comparative amounts will not be restated and the right of use (ROU) asset will be equal to the amount of the lease liability less any accrued amounts under AASB 117. On adoption of the standard, the Group will recognise a ROU asset of \$80.6 million and a lease liability of \$84.4 million. The lease provisions of \$3.8 million as at 30 June 2019 recognised under AASB 117 will be reversed and adjusted against the ROU asset. As a result of the adoption of the new standard, the Group expects the FY20 net profit after tax to be \$1.6 million lower due to the front loading of the expense. The EBITDA reported in the segment results is expected to be approximately \$11.5 million higher as the lease expense that is included within operating expenses under AASB 117 will instead be recognised within depreciation and amortisation and finance costs which are excluded from this measure. Operating cash flows are expected to increase as the lease payments will be recognised within financing cash flows.

There are no other standards or amendments to standards that are not yet effective that are expected to have a material impact on the Group in the current or future reporting periods.

A3 Reclassification of prior year balances

In the current year, the Group reassessed the classification of its cash and cash equivalents and determined that certain funds on deposit and debt and money market instruments no longer meet the criteria to be classified as a cash equivalent.

In prior years, all cash and funds on deposit and all AFS financial assets were classified as cash and cash equivalents on the basis that they were readily convertible to known amounts of cash, subject to insignificant risk of changes in value and the weighted average maturity of the investment portfolio was considered to be short-term. The Group has now determined that the term deposits, reverse repurchase agreements and notice deposits previously included within cash and funds on deposit and the negotiable certificates of deposit, bonds, promissory notes, treasury notes, and floating rate notes that were previously classified as AFS financial assets in the prior years do not meet the criteria to be classified as cash equivalents. This is because the maturity of the instruments at the acquisition date in some instances is greater than 3 months and they are ultimately held for investment purposes rather than to meet short-term cash commitments. For comparability purposes, the prior year balances have been reclassified in the balance sheet and statement of cash flows.

The following tables show the reclassifications for each individual line item in the financial statements. Line items that were not affected by the change have not been included. As a result, the sub-totals and totals disclosed cannot be recalculated from the numbers provided.

Notes to the consolidated financial statements continued

Significant accounting policies

Consolidated balance sheet (extract)

As at 30 June	Reported 2018 \$m	Adjustment	Restated 2018 \$m
Cash	-	377.2	377.2
Cash and funds on deposit	5,563.9	(5,563.9)	-
Other financial assets at amortised cost	-	5,186.7	5,186.7
Total current assets	9,955.9	-	9,955.9

Consolidated statement of cash flows (extract)

For the year ended 30 June			
Cash flows from operating activities			
Increase in participants' margins and commitments	-	208.3	208.3
Net movement in other financial assets at amortised cost	-	(323.1)	(323.1)
Interest received	169.1	(46.9)	122.2
Net cash inflow from operating activities	528.7	(161.7)	367.0
Cash flows from investing activities			
Increase in participants' margins and commitments	404.5	(404.5)	-
Net cash inflow from investing activities	344.6	(404.5)	(59.9)
Net increase in cash	472.7	(566.2)	(93.5)
Increase in the fair value of cash	0.4	1.4	1.8
Increase in cash due to changes in foreign exchange rates	6.6	(1.9)	4.7
Cash at the beginning of the year	9,085.6	(8,621.4)	464.2
Cash at the end of the year	9,565.3	(9,188.1)	377.2

Total funds available for the Group to invest comprises the following

As at 30 June			
ASX Group funds	1,069.5	-	1,069.5
Participants' margins and commitments	8,495.8	-	8,495.8
Less: non-cash collateral	-	(411.2)	(411.2)
Total	9,565.3	(411.2)	9,154.1

Reconciliation of the operating profit after income tax to the net cash flows from operating activities (extract)

For the year ended 30 June			
Non-cash items:			
Foreign currency revaluation	(0.2)	(4.7)	(4.9)
Changes in operating assets and liabilities:			
(Increase) in other financial assets at amortised cost	-	(370.0)	(370.0)
(Increase) in financial assets at FVTPL	-	(198.1)	(198.1)
Increase in amounts owing to participants	-	411.1	411.1
Net cash inflow from operating activities	528.7	(161.7)	367.0

Notes to the consolidated financial statements continued

Significant accounting policies

A4 Changes in accounting policies

The Group has adopted AASB 9 and AASB 15 from 1 July 2018. This has resulted in changes in accounting policies and adjustments to the amounts recognised in the financial statements. In accordance with the transition provisions in AASB 9 (7.2.15) and (7.2.22) and AASB 15(C3) (b), the Group has applied both standards retrospectively, however comparative periods have not been restated. The opening balance sheet on 1 July 2018 has been adjusted to recognise the cumulative effect of applying the standard retrospectively.

The following table shows the adjustments recognised for each individual line item in the financial statements on 1 July 2018 on adoption of AASB 9 and AASB 15. This is following the reclassification of prior year balances as described in note A3. Line items that were not affected by the changes have not been included. As a result, the sub-totals and totals disclosed cannot be recalculated from the numbers provided.

Consolidated balance sheet (extract)

As at	30 June 2018 Reported \$m	Reclassifications ¹ \$m	30 June 2018 Restated ¹ \$m	AASB 9 \$m	AASB 15 \$m	1 July 2018 Restated \$m
Current assets						
Cash	-	377.2	377.2	-	-	377.2
Cash and funds on deposit	5,563.9	(5,563.9)	-	-	-	-
Other financial assets at amortised cost	-	5,186.7	5,186.7	3,590.7	-	8,777.4
Available-for-sale financial assets	4,001.4	-	4,001.4	(4,001.4)	-	-
Financial assets at FVTPL	-	-	-	411.2	-	411.2
Total current assets	9,955.9	-	9,955.9	0.5	-	9,956.4
Total assets						
	12,923.0	-	12,923.0	0.5	-	12,923.5
Current liabilities						
Revenue received in advance	22.4	-	22.4	-	57.8	80.2
Total current liabilities	8,704.2	-	8,704.2	-	57.8	8,762.0
Non-current liabilities						
Net deferred tax liabilities	64.7	-	64.7	0.2	(36.4)	28.5
Revenue received in advance	0.1	-	0.1	-	63.3	63.4
Total non-current liabilities	273.3	-	273.3	0.2	26.9	300.4
Total liabilities	8,977.5	-	8,977.5	0.2	84.7	9,062.4
Net assets/(liabilities)	3,945.5	-	3,945.5	0.3	(84.7)	3,861.1
Equity						
Retained earnings	666.7	-	666.7	(0.3)	(84.7)	581.7
Asset revaluation reserve	168.4	-	168.4	0.6	-	169.0
Total equity	3,945.5	-	3,945.5	0.3	(84.7)	3,861.1

¹ The 30 June 2018 balances above were restated for the reclassification of certain cash balances as described in note A3 prior to the adoption of AASB 9 and AASB 15 on 1 July 2018.

Notes to the consolidated financial statements continued

Significant accounting policies

(a) AASB 9

The new standard replaces AASB 139 *Financial Instruments: Recognition and Measurement* (AASB 139). It has changed the criteria for classifying and measuring financial instruments and introduces a new expected credit loss (ECL) model for calculating impairment. It also aligns hedge accounting more closely with common risk management practices.

Classification and measurement

There has been no impact on the accounting for the Group's financial liabilities which continue to be classified and measured at amortised cost under the new standard. The classification and measurement model of financial assets has been revised and is now based on an entity's business model for managing the assets and their contractual cash flow characteristics as described in the accounting policy within note C3 on page 87.

The Group has assessed all financial assets to determine the characteristics of the contractual cash flows (CCFs) and the business model that applies and reclassified them accordingly. The following table summarises the reclassification of financial instruments made on 1 July 2018 following the adoption of AASB 9.

As at 1 July 2018	Measurement category		Classification	Carrying value		
	New (AASB 9)	Original (AASB 139)	Original (AASB 139)	New \$m	Original \$m	Variance \$m
Current financial assets						
Cash	Amortised cost	Amortised cost	Loans and receivables	377.2	377.2	-
Funds on deposit	Amortised cost	Amortised cost	Loans and receivables	5,186.5	5,186.7	(0.2)
Debt and money market instruments	Amortised cost	FVTOCI	AFS	3,590.9	3,590.2	0.7
Debt instruments lodged by participants	FVTPL	FVTOCI	AFS	411.2	411.2	-
Trade and other receivables	Amortised cost	Amortised cost	Loans and receivables	373.2	373.2	-
Non-current financial assets						
Equity securities	FVTOCI	FVTOCI	AFS	416.4	416.4	-
Convertible notes	FVTPL	FVTPL	FVTPL	4.8	4.8	-
Current financial liabilities						
Amounts owing to participants	Amortised cost	Amortised cost	Amortised cost	8,295.8	8,295.8	-
Trade and other payables ¹	Amortised cost	Amortised cost	Amortised cost	348.2	348.2	-
Non-current financial liabilities						
Amounts owing to participants	Amortised cost	Amortised cost	Amortised cost	200.0	200.0	-

¹ Excludes transaction taxes payable which are not financial instruments as they are statutory obligations.

(i) Reclassification from AFS to amortised cost

Prior to the adoption of the standard, the Group's debt and money market instruments were classified as AFS and measured at FVTOCI. On initial adoption of AASB 9 all debt securities, other than those lodged by participants to cover margin obligations, were reclassified and measured at amortised cost. This is because the Group intends to hold the securities to maturity to collect the CCFs and these CCFs are solely payments of principal and interest (SPPI).

As allowed by AASB 9, the comparative period has not been restated and the adjustments have been reflected in the opening balance sheet. The 30 June 2018 fair value impact of \$0.9 million was reversed on adoption and adjusted against the opening carrying value of the securities. Corresponding adjustments of \$0.6 million and \$0.3 million were made to the asset revaluation reserve and net deferred tax liability respectively. The opening carrying value of the securities was adjusted by (\$0.4) million to recognise the ECL allowance. Corresponding adjustments of (\$0.3) million and (\$0.1) million were made to retained earnings and net deferred tax liability.

The fair value of the other financial assets at amortised cost that were previously measured at FVTOCI as at 30 June 2019 is \$4,400.7 million (refer to note C3(d)(ii)). A fair value gain of \$3.2 million net of tax would have been recognised in other comprehensive income if the financial assets had not been reclassified.

(ii) Reclassification from AFS to FVTPL

Debt securities lodged by participants to satisfy margin obligations have been reclassified from AFS to FVTPL as these are not held to collect the CCFs and therefore do not meet the criteria for amortised cost or FVTOCI. This has not had a material impact on the current year financial statements and is not expected to have a material impact in future financial periods.

(iii) Reclassification from AFS to FVTOCI

The Group has made the election to designate its investments in equity instruments at FVTOCI. As these investments were previously classified as AFS and measured at FVTOCI there is no impact to their measurement on adoption of AASB 9. There will only be an impact when the investments are sold as any gain or loss on sale must remain in equity and can no longer be recycled to profit or loss. The gain or loss can however be transferred from the asset revaluation reserve to other components of equity.

Notes to the consolidated financial statements continued

Significant accounting policies

Impairment of financial assets

AASB 9 introduces a new model for calculating impairment which impacts both the measurement and the timing of the provision recognised. Under this new model, the Group recognises an expected credit loss on day 1. The measurement of the ECL depends on the level of credit risk. If there has been no significant increase in credit risk since initial recognition, the Group recognises a 12 month ECL which is the total credit losses from expected defaults in the next 12 months. If there has been a significant increase in credit risk since initial recognition or if the asset is credit impaired then the Group recognises a lifetime ECL which is the total credit losses from all expected defaults. As a result of this change in impairment methodology, the Group adjusted the opening retained earnings on 1 July 2018 by \$0.3 million net of tax.

The Group's financial assets that are subject to AASB 9's new expected credit loss model include:

- Cash
- Trade and other receivables
- Other financial assets at amortised cost.

Cash and other receivables

Cash and other receivables are subject to the new impairment requirements under AASB 9 however the impact is not material and no impairment allowance has been recognised on adoption of the standard.

Trade receivables

The Group applies the simplified approach to measuring ECLs for trade receivables where the lifetime ECL is recognised. To measure the ECLs, the trade receivables have been grouped by days past due and default rates have been applied to each group. The default rates have been estimated based on historical rates over a 4 year period. On adoption of AASB 9, the resulting ECL calculated under this method was compared to the existing provision recognised under AASB 139. As this did not result in a material difference, no adjustment was made on adoption of the standard.

Other financial assets at amortised cost

Other financial assets at amortised cost include:

- Fixed term deposits
- Notice deposits
- Reverse repurchase agreements
- Negotiable certificates of deposit (NCDs)
- Bonds
- Floating rate notes (FRNs)
- Promissory notes (P-Notes)
- Treasury notes (T-Notes).

The new ECL model when applied, resulted in the recognition of a loss allowance of \$0.3 million net of tax on 1 July 2018 (previous allowance was nil). The adjustment was made through retained earnings. There has been no material movement in the year ended 30 June 2019.

(b) AASB 15

Under AASB 15, revenue is recognised using a five step approach to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Refer to the accounting policy in note B2 on page 80 for details of the five steps.

The recognition of initial and subsequent listing fees have been impacted by the new approach outlined above. These fees were previously recognised on the date of admission or quotation of the shares. Under AASB 15, these listing fees are deferred and recognised over the period in which it is estimated that the listing service will be provided. This is because the services provided in relation to the initial or subsequent listing are not considered to be distinct from the ongoing listing service provided throughout the period which the entity is listed.

Based on historical data, the Group has determined that the revenue will be deferred and recognised over the following periods:

Initial listing fees	5 years
Subsequent listings fees	3 years

The Group has applied the above accounting policies retrospectively but has not restated the prior year. This resulted in an adjustment to opening retained earnings of \$84.7 million net of tax. The Group has recognised an additional contract liability of \$121.1 million upon adoption, which is represented within revenue received in advance on the Group's balance sheet. This additional contract liability relates to listing fees recognised in prior years for which the performance obligations had not been satisfied at 30 June 2018. The adoption of AASB 15 did not have a material impact on the measurement or timing of revenue recognition on other revenue from contracts with customers.

Revenue from contracts with customers is measured at the transaction price specified in the contract and is net of amounts expected to be refunded to the customer such as rebates. Revenue also excludes any taxes collected on behalf of third parties. Further details of the Group's accounting policies in relation to revenue from contracts with customers are provided in note B2.

Notes to the consolidated financial statements continued

Performance of the Group

B1 Segment reporting

(a) Description of segment

Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Operating Decision Maker (CODM). The CODM, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Managing Director and CEO.

The CODM assesses performance of the Group as a single segment, being an integrated organisation that provides a multi-asset class product offering which includes:

- Listing and issuer services offered to public companies and other issuers
- Trading venue or exchange activities for trading
- Clearing and settlement activities
- Exchange-traded and over-the-counter (OTC) products
- Information and technical services supporting the Group's activities.

Multi-asset class service offerings include equities, interest rate, commodity and energy products across cash and derivatives markets.

In addition to reviewing performance based on statutory profit after tax, the CODM assesses the performance of the Group based on underlying profit after tax. This measure excludes amounts regarded as significant items of revenue and expense such as those that may be associated with significant business restructuring or individual transactions of an infrequent nature. In the prior reporting period, the impairment to the carrying value of the equity investment in Yieldbroker was treated as a significant item and excluded from underlying profit after tax.

Group performance measures, including earnings before interest and tax (EBIT) and earnings before interest, tax, depreciation and amortisation (EBITDA), are also reviewed by the CODM. In assessing performance, ECL allowances and arrangements where revenue is shared with external parties are reclassified from expenses to operating revenue; certain expenses are reclassified within operating expenses; and interest income is presented net of interest expense.

(b) Segment results

The information provided on a regular basis to the CODM, along with a reconciliation to statutory profit after tax for the period attributable to owners of the Company, are presented on the following page.

ASX derives all external customer revenue within Australia with some services accessible, and some customers located, offshore.

No single customer generates revenue greater than 10% of the Group's total revenue.

Notes to the consolidated financial statements continued

Performance of the Group

For the year ended 30 June	2019			2018		
	Segment information \$m	Adjustments \$m	Consolidated income statement \$m	Segment information \$m	Adjustments \$m	Consolidated income statement \$m
Revenue						
Listings	171.1	2.3	173.4	171.4	2.3	173.7
Issuer Services	49.1	-	49.1	49.2	-	49.2
Listings and Issuer Services	220.2	2.3	222.5	220.6	2.3	222.9
Equity options	19.9	0.3	20.2	21.9	0.2	22.1
Futures and OTC clearing	232.9	0.5	233.4	212.5	-	212.5
Austraclear	55.8	0.1	55.9	52.0	0.1	52.1
Derivatives and OTC Markets	308.6	0.9	309.5	286.4	0.3	286.7
Cash market trading	51.7	-	51.7	45.7	0.3	46.0
Information services	96.3	-	96.3	90.1	-	90.1
Technical services	81.6	1.3	82.9	74.1	1.6	75.7
Trading Services	229.6	1.3	230.9	209.9	1.9	211.8
Cash market clearing	54.4	-	54.4	51.9	0.4	52.3
Cash market settlement	54.0	-	54.0	52.9	0.1	53.0
Equity Post-Trade Services	108.4	-	108.4	104.8	0.5	105.3
Other	(3.0)	4.9	1.9	1.0	0.6	1.6
Operating revenue	863.8			822.7		
Interest income		216.2	216.2		170.9	170.9
Dividend income		5.1	5.1		14.2	14.2
Share of net (loss) of equity accounted investments		(5.1)	(5.1)		(0.4)	(0.4)
Total revenue		225.6	1,089.4		190.3	1,013.0
Expenses						
Staff	(127.7)	-	(127.7)	(114.6)	-	(114.6)
Occupancy	(17.9)	-	(17.9)	(16.4)	-	(16.4)
Equipment	(30.7)	(1.5)	(32.2)	(27.9)	(1.5)	(29.4)
Administration	(22.5)	(18.8)	(41.3)	(22.4)	(17.9)	(40.3)
Variable	(8.4)	8.4	-	(7.9)	7.9	-
ASIC levy	(7.6)	7.6	-	(6.3)	6.3	-
Operating expenses	(214.8)			(195.5)		
EBITDA	649.0			627.2		
Finance costs	-	(117.4)	(117.4)	-	(102.4)	(102.4)
Depreciation and amortisation	(47.8)	-	(47.8)	(47.6)	-	(47.6)
Other	-	-	-	-	(20.2)	(20.2)
Total expenses	(47.8)	(121.7)	(384.3)	(47.6)	(127.8)	(370.9)
EBIT	601.2			579.6		
Net interest and dividend income						
Net interest income	23.4	(23.4)	-	18.2	(18.2)	-
Net interest on participant balances	75.4	(75.4)	-	50.3	(50.3)	-
Dividend income	5.1	(5.1)	-	14.2	(14.2)	-
Net interest and dividend income	103.9	(103.9)	-	82.7	(82.7)	-
Underlying profit before tax	705.1	-	705.1	662.3	(20.2)	642.1
Income tax expense	(213.1)	-	(213.1)	(197.0)	-	(197.0)
Underlying profit after tax	492.0	-	492.0	465.3	(20.2)	445.1
Significant items ¹	-	-	-	(20.2)	20.2	-
Net profit after tax	492.0	-	492.0	445.1	-	445.1

¹ Refer to note D2 for further details.

Revenues and expenses are recognised net of the amount of Goods and Services Tax (GST), except where the amount of GST is not recoverable from the taxation authority. In these circumstances the GST is recognised as part of the item of expense to which it relates.

Notes to the consolidated financial statements continued

Performance of the Group

B2 Revenue from contracts with customers

As allowed by AASB 15, the prior year has not been restated and comparative disclosures have not been provided in this note.

(a) Disaggregation of revenue

The Group derives its revenue from the transfer of services over time and at a point in time. The following table provides a breakdown of revenue by the timing of when performance obligations are satisfied and by major business line.

For the year ended 30 June 2019	Services satisfied at a point in time \$m	Services satisfied over time \$m	Total \$m
Listings and Issuer Services	43.4	179.1	222.5
Derivatives and OTC Markets	280.3	29.2	309.5
Trading Services	56.4	174.5	230.9
Equity Post-Trade Services	108.2	0.2	108.4
Other	0.1	1.8	1.9
Total revenue from contracts with customers	488.4	384.8	873.2

As disclosed in note B1, the Group has one operating segment, the disaggregated revenue in this note differs from the reportable segment as the expected credit loss allowance and certain revenue share agreements with external parties are reclassified from expenses to operating revenue.

(b) Revenue received in advance

The Group has recognised the following revenue received in advance related to contracts with customers as at 30 June 2019. The balances represent the aggregate transaction price allocated to contract liabilities for performance obligations that are partially unsatisfied at reporting date. There is no consideration that has been excluded from the transaction price.

As at 30 June	2019 \$m
Current	
Listings and Issuer Services	65.9
Austraclear	11.7
Information services	4.3
Memberships	1.2
Total current revenue received in advance	83.1
Non-current	
Listings and Issuer Services	65.7
Austraclear	0.1
Total non-current revenue received in advance	65.8
Total revenue received in advance	148.9

Refer to note A4 for details on the changes in accounting policies following the adoption of AASB 15.

The Group expects 55% of the transaction price allocated to the above contract liabilities to be recognised as revenue within the next financial year. The remaining 45% all relates to initial and subsequent listings and will be recognised as revenue between FY21 and FY25.

(i) Significant changes in contract liabilities

The opening balance of the revenue received in advance at 1 July 2018 was \$143.5 million. The increase in the contract liabilities in the current year is largely related to initial listing activities. The Group bills companies upfront and recognises this amount as a contract liability for unsatisfied performance obligations. Revenue recognition commences from the date the company lists on the exchange and is amortised over the estimated period the listing service is expected to be provided as set out in the accounting policy.

(ii) Revenue recognised in relation to carried forward contract liabilities

The following table shows the revenue recognised in the current year that relates to the opening balance of revenue received in advance.

For the year ended 30 June	2019 \$m
Listings and Issuer Services	60.2
Austraclear	10.5
Information services	3.2
Memberships	1.2
Total	75.1

(b) Contract assets

The Group did not have any contract assets at 30 June 2019.

Notes to the consolidated financial statements continued

Performance of the Group

Revenue from contracts with customers is recognised using a five step approach to depict the transfer of promised goods or services to customers. It is measured at the transaction price specified in the contract and is net of amounts expected to be refunded to the customer such as rebates. Revenue also excludes any taxes collected on behalf of third parties.

The following five steps are applied to determine when revenue is recognised:

1. Identify the contract with a customer
2. Identify the separate performance obligations in the contract
3. Determine the transaction price
4. Allocate the transaction price to the separate performance obligations in the contract
5. Recognise revenue when (or as) the entity satisfies a performance obligation.

Performance obligations that have not been satisfied at the reporting date are recognised as revenue received in advance on the balance sheet.

There are no contracts with customers that have significant financing components. The Group has considered the time difference between when it provides the initial and subsequent listing service to the customer and when the customer pays for the service and determined that this does not result in a significant financing component.

All contracts have standard 30 day payment terms.

The transaction price is based on the price specified in the contract or in accordance with published fee schedules and is net of any applicable rebates. Rebates are calculated based on actual transactions or trading, clearing or settlement volumes. Where this information is not immediately available within the relevant accounting period, the expected amount is estimated based on previous experience with the customer and revenue is only recognised to the extent that it is highly probable that a significant reversal will not occur. A liability for the rebates is recognised within trade and other payables and typically have payment terms of 30 days following the end of the relevant period.

Revenue is recognised for the major revenue lines as described below.

Listings and Issuer Services

Initial and subsequent listing fees are recognised evenly over the period the listing service is expected to be provided which is five years for initial listings and three years for subsequent listings. These fees are billed prior to the quotation of initial or secondary capital and are recognised within receivables and revenue received in advance at the time of billing. The recognition of revenue commences from the date that the entity is admitted to the official list or on quotation of the secondary capital.

Annual listing fees are billed at the commencement of the financial year or prior to an entity listing on the exchange, at which point the fee is recognised within receivables and revenue received in advance. The revenue is recognised evenly over the financial year as the service is provided.

Issuer services revenue includes revenue for the provision of holding statements and other related activities, and is recognised at the point that the service is provided.

Derivatives and OTC Markets

Revenue from trading and clearing of futures and equity options, and clearing of OTC interest rate derivatives is recognised at the point the service is provided which is the trade date. The revenue includes variable consideration for rebates on certain volumes traded. A liability for rebates is recognised at trade date and they are paid in the following month.

Fees for registry services for debt securities are billed upfront and are net of rebates. They are recognised within receivables and revenue received in advance and the revenue is recognised evenly over a 12 month period in which the service is provided.

Fees for Austraclear settlement and cash transactions are billed monthly net of rebates and are recognised at the point the service is provided which is the transaction date. Fees for depository services for debt securities are billed monthly net of rebates and are recognised as the service is provided during the month.

Austraclear membership fees are billed at the commencement of the calendar year or at the time an entity becomes a member. The revenue is recognised evenly over the calendar year in which the service is provided.

ASX Collateral service fees are recognised over the period the service is provided.

Trading Services

Cash market trading revenue is recognised at the point the service is provided which is the settlement date. The normal market convention is that settlement occurs two days after the initial trade date (T+2). Accordingly, revenue for trades transacted in the last two days prior to period end is deferred and recognised in the subsequent reporting period.

Memberships for cash market trading participants are billed at the commencement of the financial year and recognised within receivables and revenue received in advance. The revenue is recognised evenly over the financial year as the service is provided.

Revenue in relation to information and technical services is recognised over the period the service is provided.

Equity Post-Trade Services

This includes revenue from clearing and settlement of quoted securities including equities, debt securities, warrants and exchange-traded funds and is recognised at the point that the service is provided which is the settlement date. Accordingly, clearing and settlement fees for trades transacted in the last two days prior to period end are deferred and recognised in the subsequent reporting period. The revenue recognised is net of rebates expected to be paid which are estimated based on prior experience with customers. The rebate is paid in the following year.

Key judgements

The Group has applied critical judgement in determining the period that it expects to satisfy its performance obligations in relation to listing services. The model to determine the five and three year listing periods has taken into account historical information in relation to the length of time companies have been listed and excluded those outside one standard deviation of the mean.

Prior year accounting policy

In the prior year, revenue was measured at the fair value of the consideration received or receivable, net of rebates. Revenue was recognised when it could be reliably measured, and when it was probable that the economic benefits would flow to the Group.

While the approach to recognising revenue changed on adoption of AASB 15, there has been no change in the timing of revenue recognition except for initial and subsequent listing fees. In the prior year, these were recognised when the initial or subsequent listing event had taken place.

Notes to the consolidated financial statements continued

Performance of the Group

B3 Dividends

The Board's policy is to pay a dividend based on 90% of underlying net profit after tax. This is reviewed each time the Board considers payment of a dividend. The policy is unchanged from the prior year.

The following table includes information relating to dividends recognised and paid by ASX during the financial year.

For the year ended 30 June 2019	Cents per share	Total amount \$m
Final dividend for the year ended 30 June 2018	109.1	211.2
Interim dividend for the year ended 30 June 2019	114.4	221.5
Total	223.5	432.7

For the year ended 30 June 2018	Cents per share	Total amount \$m
Final dividend for the year ended 30 June 2017	99.8	193.2
Interim dividend for the year ended 30 June 2018	107.2	207.5
Total	207.0	400.7

The above dividends paid by the Company include amounts attached to certain shares held by the Group's Long-Term Incentive Plan Trust (LTIPT). The dividend revenue recognised by LTIPT has been eliminated on consolidation. In the current year, the dividend revenue was immaterial (less than \$0.1 million). In the prior year it was \$0.1 million.

Since the end of the financial year, the directors have determined a final dividend of 114.3 cents per share totalling \$221.3 million and a special dividend of 129.1 cents per share totalling \$249.9 million. The dividends will be fully franked based on tax paid at 30%.

A liability is recognised for the amount of any dividends determined on or before the balance date but not yet paid. Typically, the final dividend in respect of a financial year is determined after balance date, and therefore no provision is recognised.

Dividend franking account

As at 30 June	2019 \$m	2018 \$m
Franking credits available for future years at 30% adjusted for the payment of current income tax	367.6	268.6

Adjusting for the payment of the final and special dividend for the year ended 30 June 2019, the franking balance would be \$165.6 million (2018: \$178.1 million).

B4 Capital management

At 30 June 2019, equity of the Group totalled \$3,916.4 million (2018: \$3,945.5 million). The Group's capital supports a range of activities and risks. Capital requirements are subject to change from time to time. Some factors that may impact the amount of capital the Group requires to support its business include:

- The level of goodwill recognised from business combinations. This goodwill may be impacted by the performance of the Group and subsequent impairment leading to a reduction in capital
- Regulatory standards, both domestic and international, which may impact the level of capital supporting the clearing and settlement activities or other licensed activities. Regulatory standards applying to many financial market participants have increased in recent years and there is an expectation that these may increase further over time. There may also be uncertainty over the application of new regulatory standards
- The competitive environment in which ASX operates may lead to higher levels of capital in order to provide competitive services, noting that customers may be able to access competing services internationally
- The level or concentration of activity undertaken in markets and clearing and settlement facilities operated by ASX. Generally a higher level of activity may result in higher capital requirements, however the relationship is not necessarily linear
- The general economic or credit conditions that may impact on capital requirements as the level of risk generally increases as credit conditions deteriorate. The level of operational risk capital held by the Group can be impacted by any revision to future loss assessments and regulatory requirements
- The level of investments made, their fair value and the potential movement in their market values. Capital requirements are also impacted by ASX's level of investment in existing or new services. These investments are predominantly in intangible software assets and other equity investments which may be subject to write-down under certain circumstances.

The Board's policy is to maintain an appropriate level of capital within the Group and relevant subsidiaries with the objectives of:

- Meeting its compliance obligations with respect to the Financial Stability Standards and other regulations, including international regulations, as required by the various licences held
- Sustaining prudential stability through maintaining an adequate level of equity at the Group level, cognisant of the fact that a significant allocation of capital supports the activities of the two licensed central counterparty clearing (CCP) subsidiaries as discussed in note C1 and the two licensed settlement facilities
- Facilitating growth of the Group's exchange-traded and OTC markets, and providing appropriate risk-adjusted returns to shareholders
- Reflecting the risks associated with the Group's operations.

In accordance with the Group's objectives and policies, capital represented by cash is invested at an appropriate liquidity profile, taking into consideration the potential claims on that equity that may arise from the Group's activities, predominantly CCP clearing.

The Group's objective is also to maintain its credit rating at the current AA- long-term and A-1+ short-term as rated by Standard & Poor's (S&P).

Notes to the consolidated financial statements continued

Performance of the Group

(a) Ordinary share capital

Fully paid ordinary shares carry the right to participate in dividends. Ordinary shares also entitle the holder to the proceeds on winding up of the Company in proportion to the number of and amounts paid on the shares held. Ordinary shares have no par value and ASX does not have a limited amount of authorised capital. At 30 June 2019, all ordinary shares issued were fully paid. On a show of hands, every holder of ordinary shares present in person or by proxy, is entitled to one vote and upon a poll each share is entitled to one vote.

As at 30 June 2019, the closing balance of ordinary share capital was \$3,027.2 million (2018: \$3,027.2 million) and the number of shares outstanding was 193,595,162 (2018: 193,595,162). There were no movements in the balance of ordinary share capital or the number of shares outstanding in the current or prior financial year.

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction from the proceeds, net of tax.

(b) Treasury shares

The following table presents the movement in treasury shares during the financial year:

For the year ended 30 June	2019 No. of shares	2018 No. of shares
Opening balance	61,060	183,218
Issue of shares under the Long-Term Incentive Plan	(11,604)	(8,065)
Issue of deferred shares under employee equity plans	(50,000)	(116,801)
Shares transferred to the LTIPT	10,388	2,708
Closing balance	9,844	61,060

Treasury shares are shares in ASX held by a trust for the benefit of employees under the ASX Long-Term Incentive Plan (LTIP) as described in the Remuneration Report. The original purchase price of the shares, net of any tax effect, is deducted from the equity compensation reserve in equity.

Shares allocated to employees under the Deferred Short-Term Incentive Plan (DSTIP) are held as treasury shares when forfeited until such time that they are reallocated under another DSTIP or LTIP.

(c) Reserves

Restricted capital reserve

The restricted capital reserve was created when funds were transferred from the National Guarantee Fund (NGF) to ASX Clear Pty Ltd (ASX Clear) in 2005. At this point in time ASX Clear started assuming the clearing participant default risk of the clearing house. Under the terms of the transfer, ASX Clear must not, without first obtaining the consent in writing of the Assistant Treasurer (the Minister), take action to use these funds for a purpose other than clearing support.

Asset revaluation reserve

Changes in the fair value of investments in equity instruments are recognised in the asset revaluation reserve. The cumulative gain or loss that has been recognised within reserves is transferred directly to retained earnings and is not recycled through profit or loss when the associated equity instrument is sold.

The effective portion of gains or losses on assets designated as part of a cash flow hedging relationship are recognised in the hedging reserve which is included within asset revaluation reserves. The ineffective portion of a hedge is recognised directly in profit or loss.

The movement in the asset revaluation reserve is primarily due to the transfer of the accumulated fair value gain on the Group's investment in a listed entity to retained earnings following its sale (refer to note D1).

Equity compensation reserve

The equity compensation reserve is used to recognise the fair value of performance rights issued under ASX equity plans.

Refer to the consolidated statement of changes in equity for details of movements in the reserves.

B5 Earnings per share

As at 30 June	2019	2018
Basic and diluted earnings per share (cents)	254.1	230.0
Weighted average number of ordinary shares used in calculating basic and diluted earnings per share	193,576,187	193,507,104

The increase in the weighted average number of ordinary shares reflects lower treasury shares held during the current financial year. The basic and diluted earnings per share (EPS) amounts have been calculated on the basis of net profit after tax of \$492.0 million (2018: \$445.1 million).

Basic EPS is calculated by dividing the consolidated net profit after tax attributable to the owners of the Company, excluding any costs of servicing equity other than ordinary shares, by the weighted average number of ordinary shares outstanding during the financial year, adjusted for bonus elements in ordinary shares issued during the year and excluding treasury shares.

Diluted EPS adjusts the figures used in the determination of basic EPS to take into account the after income tax effect of interest and other financing costs associated with dilutive potential ordinary shares, and the weighted average number of additional ordinary shares that would have been outstanding assuming the conversion of all dilutive potential ordinary shares.

Notes to the consolidated financial statements continued

Performance of the Group

B6 Taxation

The movements during the year in the following components of deferred tax asset and liability were recognised in profit or loss with the exception of revaluations of investments in equity instruments, cash flow hedges and in the prior year AFS financial assets, which were recognised in other comprehensive income.

As at 30 June	2019 \$m	2018 \$m
(a) Income tax expense		
Profit before income tax expense	705.1	642.1
Prima facie income tax expense calculated at 30% (2018: 30%) on the profit before tax	(211.5)	(192.6)
Movement in income tax expense due to:		
Non-deductible items	(1.6)	(1.2)
Equity accounted investments	(1.5)	(0.1)
Equity accounted investments impairment ¹	-	(6.1)
Franking credit offset	0.9	2.5
Research and development tax offset	0.5	0.4
Adjustments to current tax for prior years	0.1	0.1
Total income tax expense	(213.1)	(197.0)
(b) Major components of income tax expense		
Current tax expense	(214.6)	(197.3)
Movement in deferred tax liability	(1.6)	(0.2)
Movement in deferred tax asset	3.0	0.4
Adjustments to current tax for prior years	0.1	0.1
Total income tax expense	(213.1)	(197.0)
(c) Income tax on items recognised directly in equity		
Sale of investments in equity instruments	68.9	-
Deferred revenue on adoption of AASB 15	36.3	-
ECL allowance on adoption of AASB 9	0.1	-
Deferred STI shares returned to trust	0.1	0.2
Total	105.4	0.2
(d) Income tax on items recognised directly in other comprehensive income		
Revaluation of AFS financial assets	(0.3)	0.4
Revaluation of investments in equity instruments – listed entities	2.0	6.3
Revaluation of investments in equity instruments – unlisted entities	1.4	(1.9)
Revaluation of cash flow hedges	-	(0.5)
Total	3.1	4.3
(e) Deferred tax asset/(liability)		
Deferred tax asset comprises the estimated future benefit at an income tax rate of 30% (2018: 30%) of the below items:		
Doubtful debts provisions	0.3	0.2
Employee entitlements provisions	9.8	9.6
Premises provisions	2.1	2.0
Accrued expenses	0.3	0.5
Revenue received in advance	44.2	4.9
Revaluation of AFS financial assets	-	0.3
ECL allowance	0.1	-
Deferred tax asset	56.8	17.5

As at 30 June	2019 \$m	2018 \$m
Deferred tax (liability) comprises the estimated future expense at an income tax rate of 30% (2018: 30%) of the following items:		
Fixed assets	(11.0)	(9.4)
Revaluation of cash flow hedges	(0.2)	(0.2)
Revaluation of investments in equity instruments – listed entities	-	(70.9)
Revaluation of investments in equity instruments – unlisted entities	-	(1.4)
Long-Term Incentive Plan	(0.3)	(0.3)
Deferred tax (liability)	(11.5)	(82.2)
Net deferred tax asset/(liability)	45.3	(64.7)

¹ A deferred tax asset was not recognised on the \$20.2 million impairment to the carrying value of Yieldbroker recognised in the prior year.

Income tax expense is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity respectively. Income tax expense recognised in profit or loss comprises current and deferred income tax.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years. Current tax assets and tax liabilities are offset if there is a legally enforceable right to offset and the Group intends to either settle on a net basis, or to realise the asset and settle the liability simultaneously.

Deferred income tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes, and the amounts used for taxation purposes. Deferred income tax is not recognised for certain temporary differences such as the initial recognition of goodwill.

The amount of deferred income tax is determined using tax rates enacted or substantively enacted at the balance sheet date and expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

A deferred tax asset is recognised only to the extent that it is probable that future taxable amounts will be available against which the asset can be utilised, and is reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and when the deferred tax balances relate to income taxes levied by the same tax authority.

Further information on the Group's tax obligations can be found in the Tax Transparency Report available on ASX's website.

Notes to the consolidated financial statements continued

Risk management

The Group is subject to a variety of risks including clearing and settlement risk, and operational risk.

C1 Clearing risk

The Group undertakes CCP clearing and collects margins and other balances (commitments) from clearing participants as security for clearing risk undertaken.

Sub-sections (a) and (b) below discuss participants' obligations and the nature of collateral and commitments lodged, as well as ASX's recognition principles concerning these liabilities.

(a) Novation

The Group has two wholly owned subsidiaries that provide CCP clearing services:

- ASX Clear Pty Limited (ASX Clear), which provides novation of cash market securities and derivatives
- ASX Clear (Futures) Pty Limited (ASX Clear (Futures)), which provides novation of both exchange-traded and OTC derivatives.

As a CCP, transactions between two clearing participant organisations are novated to the CCPs. This makes the CCPs contractually responsible for the obligations entered into by clearing participants on both the buying and selling legs of the same transaction. Through novation, the respective CCP assumes the credit risk of the underlying clearing participant in the event of a participant default. The novation process results in all positions held by the CCPs being matched.

(b) Participants' margins

Clearing participants are required to lodge an amount (initial margin) on open cash market, derivative and OTC positions novated to the Group's CCPs. These margins are based on risk parameters attached to the underlying security or contract at trade date and may include additional margins called on participants. The margin rates are subject to regulatory standards including a high level of confidence that they meet expected movements based on historical events. However, there could be circumstances where losses are greater than the margins held.

Clearing participants may lodge cash or certain equity and debt securities to cover their margin obligations. In accordance with Group policies, the cash lodged by participants may subsequently be invested into approved products which are recognised as cash or financial assets at amortised cost on the balance sheet. The following table shows the form in which participants lodged margins and commitments at 30 June. This excludes equity securities lodged by participants which are not recognised on the balance sheet.

As at 30 June	2019 \$m	2018 \$m
Current		
Cash	9,494.5	7,884.6
Debt securities	1,106.5	411.2
Total current amounts owing to participants	10,601.0	8,295.8
Non-current		
Cash commitments	200.0	200.0
Total non-current amounts owing to participants	200.0	200.0
Total amounts owing to participants	10,801.0	8,495.8

Current amounts owing to participants represent collateral lodged to cover margin requirements on unsettled derivative contracts and cash market trades. Non-current amounts owing to participants represent cash balances lodged by participants as commitments to clearing guarantee funds, which at reporting date had no determined repayment date.

Margins that are settled by cash or debt securities are recognised on balance sheet at fair value and are classified as amounts owing to participants within current liabilities. Balances lodged in cash are interest bearing and are carried at the amounts deposited which represent fair value. Margins that are settled by equity securities are not recognised on balance sheet as the Group is not party to the contractual provisions of the instruments other than in the event of a default.

In addition to the initial margin, participants must also settle changes in the fair value of derivatives contracts (variation margin), and in certain circumstances must lodge additional margins. Participants must settle both initial and variation margins daily, including possible intraday and additional margin calls. The amounts owing to participants are repayable on settlement or closure of the contracts.

In the event of default by a clearing participant, ASX Clear and ASX Clear (Futures) are required to provide funds or settle securities of the defaulting participant. The CCPs also have the authority to retain collateral and commitments deposited by the defaulting clearing participant to satisfy its obligations. Clearing participants lodged the following collateral and commitments at 30 June:

As at 30 June 2019	ASX Clear \$m	ASX Clear (Futures) \$m	Total \$m
Cash	843.6	8,850.9	9,694.5
Debt securities	-	1,106.5	1,106.5
Total amounts owing to participants	843.6	9,957.4	10,801.0
Equity securities¹	3,351.8	-	3,351.8

As at 30 June 2018	ASX Clear \$m	ASX Clear (Futures) \$m	Total \$m
Cash	567.3	7,517.3	8,084.6
Debt securities	-	411.2	411.2
Total amounts owing to participants	567.3	7,928.5	8,495.8
Equity securities¹	3,333.2	-	3,333.2

¹ Equity securities are not recognised on the balance sheet.

All net delivery and net payment obligations relating to cash market and derivative securities owing to or by participants as at 30 June 2019 were subsequently settled.

Notes to the consolidated financial statements continued

Risk management

(c) Financial resources available to CCPs

The Financial Stability Standards require each CCP to have adequate financial resources to cover its exposures in the event of default by the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. Financial resources include the clearing default funds shown in the next two tables as well as eligible collateral and commitments. The level of clearing default funds which the CCPs must maintain may therefore increase from time to time. The Financial Stability Standards also require each CCP to have a process for replenishing clearing default funds after depletion caused by a default loss. The replenished fund, which may be less than the original fund, is then available to support new activity post the loss. To comply with this obligation, the Group has undertaken, in certain circumstances, to provide funds up to pre-determined levels for replenishment of the clearing default funds. The Group may utilise a number of alternative funding sources to contribute to an increase in, or replenishment of, the CCPs' clearing default funds, including its own cash reserves. In certain circumstances participants may have an obligation to the CCP to contribute to an increase in, or replenishment of, the clearing default funds.

The CCPs' operating rules also provide for the CCPs to undertake certain actions to deal with events of default and utilisation of collateral, commitments and clearing default funds. These include the ability to call recovery assessments, impose payment reductions or implement termination of positions.

The following tables show the financial resources available to the CCPs to support their clearing activities (over and above the collateral lodged by participants).

ASX Clear

As at 30 June	2019 \$m	2018 \$m
Restricted capital reserve	71.5	71.5
Equity provided by the Group	178.5	178.5
Paid-in resources	250.0	250.0
Recovery assessments	300.0	300.0
Total financial resources	550.0	550.0

The financial resources at 30 June 2019 available to ASX Clear in the event of a participant default would be applied in the following order:

1. Collateral and other margins lodged by the defaulting participant
2. Restricted capital reserve of \$71.5 million
3. Equity capital of \$178.5 million
4. Contributions lodged by non-defaulting participants under the ASX Clear operating rules (no contributions were lodged in the current or prior year)
5. Recovery assessments of \$300.0 million which can be levied on participants (no amounts were levied in the current or prior year).

ASX Clear (Futures)

As at 30 June	2019 \$m	2018 \$m
Equity provided by the Group	120.0	120.0
Cash commitments	100.0	100.0
Equity provided by the Group	150.0	150.0
Cash commitments	100.0	100.0
Equity provided by the Group	180.0	180.0
Paid-in resources	650.0	650.0
Recovery assessments ¹	200.0	200.0
Total financial resources	850.0	850.0

¹ \$200 million for a single default event and up to \$600 million for more than one default event.

The financial resources at 30 June 2019 available to ASX Clear (Futures) in the event of a participant default would be applied in the following order:

1. Collateral and commitments lodged by the defaulting participant
2. Equity capital of \$120.0 million
3. Commitments lodged by non-defaulting participants, totalling \$100.0 million less the defaulting participants' commitments included in item 1 above
4. Equity capital of \$150.0 million
5. Commitments lodged by participants, totalling \$100.0 million
6. Equity capital of \$180.0 million
7. Recovery assessments of \$200.0 million which can be levied on participants (no amounts were levied in the current or prior year).

The order of application with respect to items 3 and 5 above will depend on the market in which the defaulting participant operates. If the defaulting participant is a futures participant, then item 3 will comprise the cash commitments lodged by non-defaulting futures participants and item 5 will comprise the cash commitments lodged by OTC participants. If the defaulting participant is an OTC participant, then item 3 will comprise the cash commitments lodged by non-defaulting OTC participants and item 5 will comprise the cash commitments lodged by futures participants. If the defaulting participant is both a futures and OTC participant, then the non-defaulting participants commitments are apportioned for items 3 and 5.

C2 Cash

The cash balance is comprised of the Group's own cash funds as well as cash collateral and commitments lodged by participants in accordance with note C1 that has not been invested in debt or money market instruments.

Cash at bank and on hand	90.1	181.1
Overnight cash deposits	243.0	196.1
Total cash	333.1	377.2

Refer to note A3 for details regarding the reclassification of prior year balances.

Cash comprises cash on hand and deposits with banks that can be withdrawn with no or minimal notice.

Notes to the consolidated financial statements continued

Risk management

C3 Financial risk

The Group's activities expose it to a variety of financial risks including market risk (comprising interest rate, foreign currency and equity price risk), credit risk and liquidity risk.

The Group's overall risk management strategy seeks to manage potential adverse effects on the financial performance of the Group. Risk management is carried out under policies approved by the Board of Directors. Management monitors investment credit, foreign currency, liquidity and cash flow interest rate risk, and manages clearing default credit risk with counterparties in accordance with approved Board mandates with ongoing reporting to the respective boards.

The Group holds the following financial assets and liabilities by category:

As at 30 June	Note	2019 \$m	2018 \$m
Financial assets at amortised cost			
Cash	C2	333.1	377.2
Trade and other receivables	E1	390.6	373.2
Other financial assets at amortised cost			
- Term deposits		231.9	326.0
- Notice deposits		-	70.0
- Reverse repurchase agreements		6,197.6	4,790.7
- NCDs		1,097.0	-
- P-Notes		3,280.3	-
- FRNs		18.6	-
Financial assets at FVTPL			
Non-cash collateral	C1	1,106.5	-
Convertible notes	D3	5.3	4.8
AFS financial assets			
NCDs		-	817.3
P-Notes		-	2,555.6
T-Notes		-	99.7
FRNs		-	90.3
Bonds		-	438.5
Financial assets at FVTOCI			
Investments in equity instruments ²	D1	24.3	416.4
Total financial assets		12,685.2	10,359.7
Financial liabilities at amortised cost			
Trade and other payables ¹	E4	342.3	348.2
Amounts owing to participants	C1	10,801.0	8,495.8
Total financial liabilities		11,143.3	8,844.0

¹ Excludes transaction taxes payable which are not financial instruments as they are statutory obligations.

² This was called available-for-sale investments in the prior year.

The maximum exposure to credit risk at the end of the reporting period for each class of financial asset, other than amounts owing to participants, is the carrying amount as detailed in the previous table. If the financial asset is attributed to participants' collateral, the maximum credit exposure to ASX is \$75 million per counterparty. However, if it is attributed to ASX's own financial resources, the maximum credit exposure is the carrying amount of the financial asset.

Financial liabilities and financial assets other than trade receivables without a significant financing component are initially measured at fair value. This includes transaction costs that are directly attributable to the acquisition of the asset or issue of the liability for financial assets and liabilities not at FVTPL. Financial liabilities are subsequently measured at amortised cost while financial assets are subsequently measured in accordance with one of the following categories.

Amortised cost – this includes financial assets managed under a business model to hold the assets in order to collect the CCFs and those cash flows represent SPPI. Interest income from these financial assets is included in interest income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss. Impairment losses are included within administration expense in the statement of profit or loss.

FVTOCI – this includes financial assets managed under a business model to sell the assets and collect the CCFs and those cash flows represent SPPI. Fair value gains or losses are recognised directly in the asset revaluation reserve in equity. Any cumulative gain or loss recognised in equity is subsequently reclassified to profit or loss on disposal. Interest income from these financial assets is included in interest income using the effective interest rate method. An irrevocable election can also be made to measure certain investments in equity instruments at FVTOCI on initial recognition. In this case, fair value gains or losses are recognised directly in the asset revaluation reserve in equity however are not reclassified to profit or loss on disposal but remain in equity.

FVTPL – this includes financial assets that do not meet the criteria to be measured at amortised cost or FVTOCI. Any fair value gains or losses are recognised in profit or loss.

Refer to the relevant note for further details of the accounting policies for trade and other receivables, convertible notes and investments in equity instruments.

Reverse repurchase agreements are measured at the amount of the cash consideration paid. The securities purchased under the agreement are not recognised on the balance sheet as substantially all the risks and rewards of ownership are retained by the counterparty to the agreement.

Interest income comprises interest earned on the Group's own funds, as well as interest earned from the investment of funds lodged by participants as collateral. Interest income is recognised using the effective interest rate method.

Interest expense is recognised as a finance cost in the statement of comprehensive income using the effective interest rate method.

Prior year accounting policy

In the prior year the Group classified and measured its financial assets as one of the following categories:

Classification	Measurement
Loans and receivables	Amortised cost
Held-to-maturity	Amortised cost
FVTPL	FVTPL
AFS	FVTOCI

The Group's debt and money market instruments were classified as AFS and initially recognised at fair value, being the fair value of the consideration given, plus transaction costs that were directly attributable to acquiring the asset. After initial recognition, they continued to be measured at fair value as determined by valuation techniques outlined in note C3(d)(i). Fair value gains or losses were recognised directly in the asset revaluation reserve in equity until the asset was derecognised, at which time the cumulative gain or loss previously recognised in equity was reclassified to profit or loss.

Notes to the consolidated financial statements continued

Risk management

(a) Market risk

Market risk is the risk of loss arising from movements in observable market variables such as interest rates, foreign exchange rates and other market prices.

(i) Interest rate risk

Exposure arising from	Risk management
Variable rate cash investments and money market instruments expose the Group to cash flow interest rate risk.	<ul style="list-style-type: none"> The Boards of the relevant subsidiaries have set limits with respect to maximum and weighted average maturity and value at risk. Managed by policies that enable the Group to pay a variable rate of interest to participants on the funds held.
In the prior year, fixed rate money market instruments that were carried at fair value exposed the Group to fair value interest rate risk.	<ul style="list-style-type: none"> The Boards of the relevant subsidiaries have set limits with respect to maximum and weighted average maturity and value at risk.

Interest bearing assets is comprised of the investment of the Group's cash resources (participant collateral lodged in cash and Group funds). Interest bearing liabilities is comprised of cash collateral and commitments lodged by participants. Non-cash collateral lodged by participants is non-interest bearing.

The Group's trade and other receivables, investments in equity instruments and trade and other payables are non-interest bearing so are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate (directly) due to a change in market interest rates.

The following table presents the Group's interest bearing financial assets and liabilities at 30 June.

	2019			2018		
	Floating interest rate \$m	Fixed interest rate \$m	Total \$m	Floating interest rate \$m	Fixed interest rate \$m	Total \$m
As at 30 June						
Interest bearing financial assets						
Cash	333.1	-	333.1	377.2	-	377.2
Other financial assets at amortised cost	18.6	10,806.8	10,825.4	70.0	5,116.7	5,186.7
Financial assets at FVTPL	-	5.3	5.3	-	4.8	4.8
AFS financial assets	-	-	-	90.3	3,499.9	3,590.2
Total interest bearing financial assets	351.7	10,812.1	11,163.8	537.5	8,621.4	9,158.9
Weighted average interest rate at period end	1.29%	1.64%		1.49%	1.99%	
Interest bearing financial liabilities						
Amounts owing to participants	10,801.0	-	10,801.0	8,495.8	-	8,495.8
Total interest bearing financial liabilities	10,801.0	-	10,801.0	8,495.8	-	8,495.8
Weighted average interest rate at period end	0.80%			1.05%		
Net interest bearing financial (liabilities)/assets	(10,449.3)	10,812.1	362.8	(7,958.3)	8,621.4	663.1

With respect to the prior table:

- Floating interest rate refers to financial instruments where the interest rate is subject to change prior to maturity or repayment – predominantly deposits at call and FRNs
- Fixed interest rate refers to financial instruments where the interest rate is fixed up to maturity – predominantly term deposits, NCDs, P-Notes, T-Notes, reverse repurchase agreements, bonds and convertible notes.

Sensitivity analysis (net of tax)

Changes in interest rates affect the Group's profit or loss due to higher/lower interest income earned on its cash and other financial assets at amortised cost and higher/lower interest paid to clearing participants. In the prior year, equity was affected due to the change in fair values of AFS financial assets. The interest on the Group's non-current financial assets at FVTPL are fixed, therefore there would be no impact to profit or loss if market interest rates were to change.

An analysis of this sensitivity and its impact on the Group's profit or loss and equity net of tax for the year is provided in the following table. The analysis is based on a hypothetical 25 basis point change in interest rates at 30 June and has been applied to the interest rate risk exposures that exist at that date. All other variables have been held constant.

Notes to the consolidated financial statements continued

Risk management

	2019		2018	
	Impact on profit \$m	Impact on equity \$m	Impact on profit \$m	Impact on equity \$m
+25 basis point change in interest rates	(0.5)	-	(1.0)	(1.6)
-25 basis point change in interest rates	0.5	-	1.0	1.6

Changes in interest rates affect the Group's profit or loss due to interest income earned on the Group's own cash resources and treasury earnings on clearing participants balances offset by interest paid to clearing participants on margins lodged. The interest earned side references a range of rates such as BBSW, while the interest paid side references overnight cash rates. ASX is exposed to the movement between these two rates. The table above assumes overnight cash rates and BBSW rates move in line.

(ii) Foreign currency risk

Exposure arising from	Risk management
Cash flow commitments in foreign currencies entered into by the Group.	<ul style="list-style-type: none"> Where the Group enters into material cash flow commitments in foreign currencies, its policy is to enter into hedging arrangements to mitigate the exchange risk where possible.
Collateral on clearing participants' derivatives exposures lodged in foreign currency and held by the Group's CCPs.	<ul style="list-style-type: none"> The collateral held in foreign currency is offset by an equal payable in the same currency to the participant, which reduces foreign currency risk in the normal course of business. Where non-matching currency is lodged as collateral, a discount is applied to its value.

The majority of the Group's net foreign currency risk is associated with foreign denominated cash, net interest income and exchange fees receivable. Such exposure is converted to AUD on a regular basis. Investments in equity instruments denominated in USD are subject to foreign currency risk, impacting their carrying value.

The following table shows the Group's exposure on its balance sheet to foreign currency risk at the end of the year, expressed in AUD.

As at 30 June	2019				2018			
	NZD \$m	USD \$m	EUR \$m	JPY \$m	NZD \$m	USD \$m	EUR \$m	JPY \$m
Financial assets								
Cash	109.8	12.4	17.9	18.1	85.3	113.7	1.6	44.0
Trade and other receivables	1.0	-	-	-	0.7	-	-	-
Other financial assets at amortised cost	68.4	-	-	66.2	46.1	-	-	61.5
Investment in equity instruments ¹	-	24.3	-	-	-	28.9	-	-
Financial asset at FVTPL	-	5.3	-	-	-	4.8	-	-
Financial liabilities								
Trade and other payables	0.2	-	-	-	0.2	-	-	-
Amounts owing to participants	176.7	-	17.8	83.0	130.5	90.3	1.6	104.6
Net exposure	2.3	42.0	0.1	1.3	1.4	57.1	-	0.9
Exchange rate for conversion AUD 1:	1.0461	0.7014	0.6168	75.57	1.0878	0.7352	0.6355	81.23

¹ This was called available-for-sale investments in the prior year.

Sensitivity analysis (net of tax)

Changes in exchange rates affect the Group's profit or loss due to the gain/loss recognised on translation of foreign currency denominated financial assets other than financial assets at FVTOCI and all foreign currency denominated financial liabilities at balance date. Equity is affected due to USD foreign currency cash flow commitments designated as cash flow hedges and the valuation of foreign currency equity investments.

An analysis of this sensitivity and its impact on the Group's profit or loss and equity net of tax for the year is provided in the following table. The analysis is based on a hypothetical 10% change in the market exchange rate of the AUD against other currencies at 30 June and has been applied to the foreign currency risk exposures that exist at that date. All other variables, including interest rates, have been held constant. The impact is expressed in AUD.

	2019		2018	
	Impact on profit \$m	Impact on equity \$m	Impact on profit \$m	Impact on equity \$m
+10% strengthening of AUD	(0.6)	(2.3)	(0.3)	(3.6)
-10% weakening of AUD	0.8	2.7	0.4	4.4

Notes to the consolidated financial statements continued

Risk management

Cash flow hedges

At 30 June 2019, the Group had designated cash at bank of USD 7.9 million (2018: USD 16.7 million) as the hedging instrument in qualifying cash flow hedges for committed expenditure to be paid in USD. These amounts are included within cash on the balance sheet. The cash flows are 100% hedged and the weighted average hedged rate during the year was AUD 1: USD 0.7498 (2018: AUD 1: USD 0.7587). During the current financial year, the use of cash flow hedges resulted in a \$0.9 million (2018: \$0.5 million) increase in cash flow required for committed capital and operating expenses.

The following table shows the movement in the Group's hedge reserves.

	2019 \$m	2018 \$m
For the year ended 30 June		
Opening balance at 1 July	0.5	(0.7)
Revaluation of hedging instrument	-	1.7
Less: deferred tax	-	(0.5)
Closing balance at 30 June	0.5	0.5

All movements in the hedge revaluation reserve, including gains or losses in the hedging instrument and amounts reclassified from equity to profit or loss were all immaterial (less than \$0.1 million) in the current year.

At the inception of the hedging transaction, the Group documents the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group documents its assessment, both at hedge inception and also on an ongoing basis, of whether the hedging relationship meets the following effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument
- credit risk does not dominate the value changes that result from that economic relationship
- the hedge ratio is the same as that resulting from the actual quantity of both the item hedged and the hedging instrument used.

For cash flow hedges, the effective portion of any change in the fair value of the instrument that is designated and that qualifies as a cash flow hedge is recognised in the hedge reserve in equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

At the time the hedged item affects the income statement or when the hedged item is no longer expected to occur, the cumulative gain or loss recognised in the hedge reserve is taken to finance costs in the income statement.

(iii) Price risk

Exposure arising from	Risk management
Price movements of the Group's investment in listed equity securities of \$nil (2018: \$387.5 million).	<ul style="list-style-type: none">• Ongoing monitoring of values with consideration given to financial and other implications of holding the instruments.
Other price movements associated with underlying equities and derivatives on trades novated to the CCPs.	<ul style="list-style-type: none">• Under normal circumstances, this risk is minimal as the trades are matched. However price movements may impact on credit risk associated with participant obligations (as discussed in the following section).

Sensitivity analysis (net of tax)

In the prior year, changes in quoted market prices affected the Group's equity due to the change in fair value of the Group's listed equity investment (refer to note D1). As the Group measures the investments in equity instruments at FVTOCI, any change in fair value resulting from a change in price does not impact profit or loss. In the prior year, if the price of the listed equity investment increased/decreased by 10% at 30 June 2018, with all other variables held constant, equity would have increased/decreased by \$27.1 million, net of tax.

Notes to the consolidated financial statements continued

Risk management

(b) Credit risk

Exposure arising from	Risk management
Through its CCP activities, the Group is exposed to the potential loss that may arise from the failure of a counterparty to meet its obligations or commitments. The obligations mainly relate to T+2 settlement risk for cash market trades and daily mark-to-market movements on open derivative positions. Failure of clearing participants to meet these obligations exposes the Group to potential losses.	<ul style="list-style-type: none"> • Clearing participant membership requirements and admission standards, including minimum capital requirements. • Participant surveillance, including capital monitoring. • Daily and intraday counterparty credit risk control, including margining and collateral management. • Position limits based on the capital of the participant. • Financial resource adequacy, including fixed capital and stress-testing of clearing participants' exposure limits against the amount and liquidity of variable and fixed financial resources available. • Operating rules that deal with recovery and resolution of losses in the event of a clearing participant default. Refer to note C1(c). • Margin calls outside of Australian business hours.
Investment counterparty credit risk arises on certain financial assets including cash, other financial assets at amortised cost, and trade and other receivables.	<ul style="list-style-type: none"> • Board policies that limit the amount of credit exposure and concentration to any one counterparty, as well as minimum credit ratings for counterparties. Investments are limited to non-derivative assets. • Recovery rules that address the allocation of losses between the Group and clearing participants. • Active debt collection procedures and regular review of trade receivables ageing.

The Group's ongoing monitoring of participants' market positions and exposures, coupled with daily margining and collateral management, including possible intraday and additional margin calls, enable it to manage its central counterparty credit risk and meet its regulatory obligations. Further information on the resources available to the CCPs in the event of a participant default is shown in note C1.

S&P credit ratings are used in determining the credit quality of the counterparty with whom cash and other financial assets at amortised cost are held.

Counterparties are limited to the Commonwealth of Australia, Australian state governments and banks, and foreign governments and banks with a minimum short-term credit rating of A2. The Group's largest single counterparty exposure at the end of the reporting period was \$5,215.7 million (2018: \$2,285.4 million) to an Australian licensed bank with a S&P short-term credit rating of A-1+. The majority of this exposure was secured against Commonwealth Government securities. The risk ratings of the counterparties that the Group has exposure to at the end of the period are shown in the following table.

	2019			2018		
	A1+ \$m	A1 \$m	Total \$m	A1+ \$m	A1 \$m	Total \$m
As at 30 June						
Cash at bank and on hand	89.6	0.5	90.1	90.3	90.8	181.1
Overnight cash deposits	136.3	106.7	243.0	87.5	108.6	196.1
Total cash	225.9	107.2	333.1	177.8	199.4	377.2
Reverse repurchase agreements ¹	4,571.1	1,626.5	6,197.6	3,933.7	857.0	4,790.7
Notice deposits	-	-	-	-	70.0	70.0
Term deposits	90.0	141.9	231.9	110.0	216.0	326.0
NCDs	758.8	338.2	1,097.0	-	-	-
P-Notes	3,280.3	-	3,280.3	-	-	-
FRNs	18.6	-	18.6	-	-	-
Total other financial assets at amortised cost	8,718.8	2,106.6	10,825.4	4,043.7	1,143.0	5,186.7
NCDs	-	-	-	442.4	374.9	817.3
P-Notes	-	-	-	2,555.6	-	2,555.6
T-Notes	-	-	-	99.7	-	99.7
FRNs	-	-	-	90.3	-	90.3
Bonds	-	-	-	438.5	-	438.5
Total AFS financial assets	-	-	-	3,626.5	374.9	4,001.4
Bonds (lodged by participants)	1,106.5	-	1,106.5	-	-	-
Total financial assets at FVTPL	1,106.5	-	1,106.5	-	-	-

¹ Reverse repurchase agreements are collateralised by Commonwealth, foreign government or Australian state government securities.

The Group uses other measures to monitor the credit of other financial assets, which includes trade and other receivables, margins receivable from participants, accrued revenue, interest receivable and investments in equity instruments. Intercompany receivables consist of balances owing between the entities of the Group and are eliminated on consolidation. The parent entity considers the credit risk on these balances to be low. The maximum exposure to credit risk for these financial assets is the carrying value as at reporting date.

Notes to the consolidated financial statements continued

Risk management

(i) Impairment of financial assets

The Group has the following financial assets that are subject to impairment:

- Cash
- Trade and other receivables
- Other financial assets at amortised cost.

Trade receivables

The Group has used the simplified approach to measuring expected credit losses for trade receivables whereby the lifetime ECL is recognised. To measure the loss allowance, the receivables have been grouped based on the number of days overdue. Expected loss rates have been determined for each group based on historical credit losses in the previous four years. These historical rates are adjusted to reflect current and forward looking information on macroeconomic factors that affect the ability of customers to settle the receivables. These rates have been applied to the gross carrying value of trade receivables to calculate the loss allowance. Where this calculation results in an immaterial amount no loss allowance is recognised. A loss allowance is also recognised for any debtors individually identified as being credit impaired.

The following table shows the aged analysis for gross trade receivables of the Group.

As at 30 June	2019 \$m	2018 \$m
Not past due	102.2	89.3
Past due 0-30 days	3.1	2.8
Past due 31-60 days	0.4	0.1
Past due 61-90 days	0.6	0.6
Past due 91 days and over	1.0	0.9
Trade receivables	107.3	93.7

As at 30 June 2019, the Group provided \$0.9 million (2018: \$0.8 million) for trade receivables that were identified as being impaired.

The Group recognised \$0.2 million of impairment gains in profit or loss during the year in accordance with AASB 9. In the prior year, the Group recognised impairment losses of \$1.2 million in profit or loss for individually impaired receivables relating to debts that were unpaid for a prolonged period despite active debt collection procedures. As there was no material difference between the loss allowance calculated under AASB 139 and AASB 9, there was no adjustment made on adoption of the new standard.

The movement in the loss allowance for trade receivables is as follows:

For the year ended 30 June		
Closing loss allowance at 30 June calculated under AASB 139	(0.8)	(0.8)
Amounts restated through opening retained earnings	-	-
Opening loss allowance at 1 July calculated under AASB 9	(0.8)	(0.8)
Increase in loss allowance recognised in profit or loss during the year	(1.4)	(0.8)
Amounts written-off during the year	0.3	0.2
Loss allowance subsequently reversed	1.0	0.6
Closing balance at 30 June	(0.9)	(0.8)

Cash and other receivables

Other receivables includes margins receivable, accrued revenue, interest receivable and other debtors. A default event in relation to margin obligations is defined in the ASX Clear and ASX Clear (Futures) operating rules. No loss allowance has been recognised for cash and other receivables as the assessed amount is immaterial.

Other financial assets at amortised cost

The ECL model for the Group's debt and money market instruments is based on the probability of default, loss given default and the Group's exposure to the counterparty. The probability of default is based on historical default rates and has been sourced from an external study of global corporate defaults by S&P. These rates have been adjusted for the loss given default to calculate the ECL rate.

The following table shows the gross carrying amounts of the other financial assets at amortised cost as at 30 June 2019 and the ECL rates that have been applied to determine the carrying amount net of the ECL allowance.

S&P long-term credit rating	ECL rate	Gross carrying amount \$m	ECL loss allowance \$m	Net carrying amount \$m
AAA	-	7,386.7	-	7,386.7
AA+	-	2,025.1	-	2,025.1
AA	0.01%	-	-	-
AA-	0.02%	867.5	(0.1)	867.4
A+	0.03%	252.5	(0.1)	252.4
A	0.04%	294.0	(0.2)	293.8
		10,825.8	(0.4)	10,825.4

The ECL rates have been applied to the gross carrying values of the Group's debt and money market instruments held at amortised cost as at 30 June 2019. As there was no material movement in the calculated loss allowance recognised on adoption of AASB 9, no impairment was recognised in profit or loss during the year.

A reconciliation of the loss allowance calculated under AASB 9 is provided in the following table. Comparatives have not been provided as the prior year has not been restated and there was no allowance previously calculated under AASB 139.

For the year ended 30 June		2019 \$m
Closing loss allowance at 30 June calculated under AASB 139		-
Amounts restated through opening retained earnings		0.4
Opening loss allowance at 1 July 2018 calculated under AASB 9		0.4
Increase in loss allowance recognised in profit or loss during the year		-
Closing loss allowance at 30 June		0.4

There were no significant changes to estimation techniques or assumptions made during the reporting period.

The debt and money market instruments are all considered to have low credit risk at the reporting date as all counterparties have an S&P long-term credit rating of A or higher. Therefore it is assumed that the credit risk for these financial assets has not increased significantly since initial recognition and the impairment allowance is measured at an amount equal to 12 month expected credit losses.

Notes to the consolidated financial statements continued

Risk management

Impairment

The Group recognises a loss allowance on financial assets at amortised cost.

The Group uses a three stage approach as described in the following table to determine the amount of loss allowance to be recognised for financial assets at amortised cost other than trade receivables.

Stage	Credit risk	Recognition of ECL
Stage 1	No significant increase since initial recognition	12 month ECLs
Stage 2	Significant increase since initial recognition	Lifetime ECLs
Stage 3	Asset is credit impaired	Lifetime ECLs

A simplified approach to measuring the loss allowance is applied for trade receivables where the lifetime ECLs are recognised. Loss rates for trade receivables are determined based on historical loss rates over a four year period and are adjusted for current and forward looking macroeconomic factors that may affect the customers' ability to settle the receivable.

Assets are credit impaired when there is objective evidence that the Group will not be able to collect all of the original amounts due.

The collectability of trade receivables is reviewed on a regular basis. Debts known to be uncollectable are written off by reducing the carrying amount directly. Other financial assets are written off when there is no reasonable expectation of recovery. Indicators that this may be the case include the debtor entering bankruptcy or failure to enter into a payment plan.

Impairment losses are recognised in the statement of comprehensive income in administration expenses.

Prior year accounting policy

In the prior year, the impairment of trade receivables was assessed based on the incurred loss model and a provision was recognised when there was objective evidence that the Group would not be able to collect all of the original amounts due. The amount of the provision was the difference between the asset's carrying amount and the present value of the estimated future cash flows.

Impairment indicators for AFS financial assets included a significant or prolonged decline in the fair value of the security below its cost. When the asset was considered to be impaired, any loss that had been recognised directly in equity was transferred to profit or loss.

(c) Liquidity risk

Exposure arising from	Risk management
Margins to cover derivatives and cash market exposures are settled with participants and invested in the short-term money market on a daily basis. The investment of these balances requires strict management to provide sufficient liquidity for the routine daily margin settlement.	<ul style="list-style-type: none"> The Board has implemented policies that specify liquidity requirements, based on whether assets can be liquidated and converted to cash on a same-day basis, including maximum average maturity limits. Instruments that are eligible for repurchase agreements with the Reserve Bank of Australia are treated as liquid. Forward planning and forecasting of liquidity requirements.

The expected undiscounted contractual cash flows of the Group's financial assets and liabilities are shown in the following table. All other financial assets at amortised cost are eligible for repurchase in the secondary market. All financial assets and liabilities are non-derivative.

The values on the balance sheet may differ to the assets and liabilities in the following table due to the difference in fair value at balance date compared to the contractual cash flows up to maturity.

As at 30 June 2019	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year \$m	No specific maturity \$m	Total \$m
Financial assets						
Cash	333.1	-	-	-	-	333.1
Other financial assets at amortised cost	5,339.8	3,378.9	2,133.6	-	-	10,852.3
Financial assets at FVTPL	1,106.5	-	-	8.8	-	1,115.3
Trade and other receivables	390.1	0.2	0.1	0.2	-	390.6
Investments in equity instruments ¹	-	-	-	-	24.3	24.3
Total financial assets	7,169.5	3,379.1	2,133.7	9.0	24.3	12,715.6
Financial liabilities						
Trade and other payables	336.0	5.4	-	-	0.8	342.2
Amounts owing to participants	10,601.0	-	-	-	200.0	10,801.0
Total financial liabilities	10,937.0	5.4	-	-	200.8	11,143.2
Commitments						
Capital and operating commitments	1.6	5.0	17.4	59.7	-	83.7
Operating lease commitments	0.8	1.6	7.3	60.5	-	70.2
Total commitments	2.4	6.6	24.7	120.2	-	153.9

Notes to the consolidated financial statements continued

Risk management

As at 30 June 2018	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year \$m	No specific maturity \$m	Total \$m
Financial assets						
Cash	377.2	-	-	-	-	377.2
Other financial assets at amortised cost	2,899.5	2,297.3	-	-	-	5,196.8
AFS financial assets	703.2	1,880.5	1,437.6	-	-	4,021.3
Financial assets at FVTPL	-	-	-	4.8	-	4.8
Receivables	372.2	0.7	0.1	0.2	-	373.2
Investments in equity instruments ¹	-	-	-	-	416.4	416.4
Total financial assets	4,352.1	4,178.5	1,437.7	5.0	416.4	10,389.7
Financial liabilities						
Trade and other payables	337.8	8.7	0.9	-	0.8	348.2
Amounts owing to participants	8,295.8	-	-	-	200.0	8,495.8
Total financial liabilities	8,633.6	8.7	0.9	-	200.8	8,844.0
Commitments						
Capital and operating commitments	0.9	2.7	16.2	69.2	-	89.0
Operating lease commitments	0.7	1.4	6.4	62.7	-	71.2
Total commitments	1.6	4.1	22.6	131.9	-	160.2

¹ This was called available-for-sale investments in the prior year.

While amounts owing to participants may have contractual cash flows greater than one month they have been classified as having maturities up to one month on the basis of the shortest possible obligation for repayment.

(d) Fair value measurements

(i) Financial instruments at fair value

The following table presents the Group's financial assets measured at fair value at 30 June. The Group does not have any financial liabilities measured at fair value.

As at 30 June	2019				2018			
	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m
Financial assets								
Investments in equity instruments ¹	-	-	24.3	24.3	387.5	-	28.9	416.4
Financial assets at FVTPL	1,044.9	61.6	5.3	1,111.8	-	-	4.8	4.8
AFS financial assets								
- NCDs	-	-	-	-	-	817.3	-	817.3
- P-Notes	-	-	-	-	-	2,555.6	-	2,555.6
- T-Notes	-	-	-	-	-	99.7	-	99.7
- FRNs	-	-	-	-	-	90.3	-	90.3
- Bonds	-	-	-	-	389.6	48.9	-	438.5
Total financial assets	1,044.9	61.6	29.6	1,136.1	777.1	3,611.8	33.7	4,422.6

¹ This was called available-for-sale investments in the prior year.

There were no transfers between levels for recurring measurements during the year. The Group did not measure any financial assets at fair value on a non-recurring basis at 30 June in the current or prior year.

Notes to the consolidated financial statements continued

Risk management

The classification of financial instruments within the fair value hierarchy and the valuation techniques used to determine their values are detailed below.

Level 1

Level 1 inputs are unadjusted quoted prices in active markets at the measurement date for identical assets and liabilities. Financial instruments included in this category are the Group's listed equity investment and Australian Government bonds. The fair value of listed investments is determined by reference to the ASX-quoted closing price at reporting date and the fair value of Australian Government bonds are determined by reference to readily observable quoted prices for identical assets in active markets.

Level 2

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices). In the prior year, AFS financial assets other than Australian Government bonds as noted above were classified as Level 2 financial instruments as their fair values were determined using discounted cash flow models or observable market prices for identical assets that were not actively traded.

Level 3

Level 3 inputs are based on unobservable market data. The fair values of the Group's unlisted equity investment and convertible note at FVTPL are determined using unobservable inputs and therefore are classified as Level 3 instruments.

(ii) Financial instruments at amortised cost

The Group has a number of financial instruments which are not measured at fair value on the balance sheet. The carrying amounts of current trade and other receivables, cash, term deposits, reverse repurchase agreements, current trade and other payables and current amounts owing to participants are assumed to approximate their fair value due to their short-term nature. The carrying amount of non-current amounts owing to participants approximates their fair value as the impact of discounting is not significant.

The fair value of other financial assets at amortised cost (excluding those mentioned above) are shown in the following table. Comparatives are not provided as these were classified as AFS in the prior year and have been included in the table in note C3(d)(i).

As at 30 June	2019 \$m
NCDs	1,098.5
P-Notes	3,283.6
FRNs	18.6
Total	4,400.7

The fair values of the above financial assets are determined in accordance with the level 2 fair value hierarchy described in note C3(d)(i).

(iii) Level 3 fair value instruments

The following table presents the changes in Level 3 fair value instruments during the year:

For the year ended 30 June	Investments in unlisted entities ¹ \$m	Investments at FVTPL ² \$m	Total \$m
Opening balance at 1 July 2018	28.9	4.8	33.7
Additions	-	0.3	0.3
Price revaluation:			
- Recognised in equity	(4.2)	-	(4.2)
- Recognised in deferred tax	(1.8)	-	(1.8)
FX revaluation gain:			
- Recognised in equity	1.0	-	1.0
- Recognised in profit or loss	-	0.2	0.2
- Recognised in deferred tax	0.4	-	0.4
Closing balance at 30 June 2019	24.3	5.3	29.6

Opening balance at 1 July 2017	22.7	-	22.7
Additions	-	4.6	4.6
Price revaluation:			
- Recognised in equity	3.5	-	3.5
- Recognised in deferred tax	1.5	-	1.5
FX revaluation gain:			
- Recognised in equity	0.9	-	0.9
- Recognised in profit or loss	-	0.2	0.2
- Recognised in deferred tax	0.3	-	0.3
Closing balance at 30 June 2018	28.9	4.8	33.7

¹ The revaluation gain/(loss), net of tax, has been recognised within the asset revaluation reserve.

² The (loss), net of tax, has been recognised within administration expenses in the statement of comprehensive income.

A change in the unobservable inputs used to determine the fair value of the unlisted equity investment would not have a material impact on the financial statements.

(e) Enforceable netting arrangements

There are no financial assets and financial liabilities recognised on a net basis. In the event that a clearing participant defaults and ASX assumes open positions under novation, ASX's policy is to recognise the net open positions where it has the right to offset exposures.

In the event that a clearing participant defaults, ASX may utilise collateral and commitments lodged by that participant to offset net losses realised from the close-out of positions. While ASX has the right to offset this collateral from the open position, its policy is to only offset following the close-out. The aggregate amount of collateral and commitments lodged by participants at 30 June 2019 was \$10,801.0 million (2018: \$8,495.8 million).

Notes to the consolidated financial statements continued

Investments

D1 Investments in equity instruments

	2019 \$m	2018 \$m
Investments in listed entities	-	387.5
Investments in unlisted entities	24.3	28.9
Total investments in equity instruments	24.3	416.4

The investments in equity instruments have been designated at FVTOCI on initial recognition. The election to measure the investments at FVTOCI rather than FVTPL has been made as the Group considers this to be more relevant as they are held for strategic purposes.

The investments are initially recognised at fair value, being the consideration given plus transaction costs that are directly attributable to acquiring the asset. After initial recognition, they continue to be measured at fair value and any fair value gains or losses are recognised directly in the asset revaluation reserve in equity. Any gains or losses on disposal remain within equity.

The fair value of investments in listed entities is determined by reference to quoted market prices at the close of business on the balance sheet date. Refer to note C3(d)(i).

The fair value of investments in unlisted entities is determined by reference to unobservable market data at balance date. Refer to note C3(d)(iii).

Dividend income is recognised when the right to receive the dividend has been established.

Prior year accounting policy

In the prior year, the investments were classified as AFS and measured at FVTOCI. The investments were initially recognised at fair value, being the consideration given plus transaction costs that were directly attributable to acquiring the asset. After initial recognition, they continued to be measured at fair value and any fair value gains or losses were recognised directly in the asset revaluation reserve in equity. Any accumulated fair value gains or losses previously recognised in equity were reclassified to profit or loss on disposal.

Key judgements

The Group has applied judgement in determining if it has significant influence or control over the investees and has concluded that it does not have significant influence over any of its investees as it holds less than 20% of the voting power; has no representation on the Board of directors; and does not have the power to participate in financial and operating policy decisions.

(a) Investments in listed entities

In February 2019, ASX sold its entire shareholding in IRESS Limited (IRESS) for \$380.7 million as the investment no longer provided strategic value. The fair value of the investment at the date of sale was \$394.6 million and the gain on sale of \$160.7 million, net of tax was transferred from the asset revaluation reserve to retained earnings.

The Group received \$5.1 million (2018: \$14.2 million) of dividends from IRESS during the year. As at 30 June 2018, ASX held 19% of the share capital of IRESS.

There was no impairment in investments in listed entities in the prior financial year.

(b) Investments in unlisted entities

As at 30 June 2019, ASX held 7% (2018: 7%) equity interest in Digital Asset Holdings LLC (DAH), which specialises in the development of distributed ledger technology solutions. No dividends were received during the current or prior year. Refer to note C3(d)(iii) for details of the movement in the fair value in the current and prior year. Refer to note F5.4 for details regarding the Group's investment in DAH post balance date.

D2 Equity accounted investments

The Group has interests in the following associates and joint ventures which are individually immaterial to the Group.

Name of entity	Nature of relationship	Ownership interest		Carrying amount	
		2019 %	2018 %	2019 \$	2018 \$
Yieldbroker Pty Limited (Yieldbroker)	Associate	46	47	46.5	46.5
Sympli Australia Pty Ltd (Sympli)	Joint venture	49	50	5.5	6.6
				52.0	53.1

The country of incorporation and principal place of business for both entities is Australia. Both Yieldbroker and Sympli are private entities and therefore quoted market prices are not available.

Yieldbroker operates licensed electronic markets for trading Australian and New Zealand debt securities and interest rate derivatives.

Sympli intends to offer electronic conveyancing solutions for property settlements, known as a Electronic Lodgement Network Operator (ELNO).

(i) Impairment

The investments have been tested for impairment at the reporting based on value-in-use calculations using projected future cash flows. The pre-tax discount rate used was 12.0% (2018: 12.0%) and the growth rate used to extrapolate cash flow projections beyond five years was 3.5% (2018: 3.5%).

No impairment was recognised in the current year for Yieldbroker or Sympli.

In the prior year, an impairment of \$20.2 million was recognised to reduce the carrying amount of the investment in Yieldbroker following financial under-performance compared to expectations due to slower growth in certain products moving to electronic trading. The impairment loss is included in other expenses in the consolidated statement of comprehensive income.

No impairment was recognised for Sympli in the prior year.

Notes to the consolidated financial statements continued

Investments

The following table shows ASX's aggregated interests in equity accounted investments.

For the year ended 30 June	2019 \$m	2018 \$m
(Loss) from continuing operations	(5.1)	(0.4)
Post-tax profit or loss from discontinued operations	-	-
Other comprehensive income	-	-
Total comprehensive income	(5.1)	(0.4)

Associates are entities over which the Group has significant influence but not control.

Joint ventures are arrangements in which the Group and another party have joint control and have rights to the net assets of the arrangement.

Investments in associates and joint ventures are accounted for using the equity method. The investments are initially recognised at cost and the carrying value is subsequently adjusted to recognise the Group's share of the investee's post-acquisition profit or loss and movement in other comprehensive income. This is recognised in the Group's profit and loss and comprehensive income respectively. Dividends received or receivable from associates are recognised as a reduction in the carrying amount of the investment.

The carrying amount of each equity accounted investment is tested for impairment at each reporting date and whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Indicators of impairment include a significant or prolonged decline in the fair value of the investment below its cost. Where the recoverable amount is less than the carrying amount, an impairment loss is recognised as an expense in the statement of comprehensive income. The recoverable amount is the higher of the assets' fair value less costs of disposal and value in use, and is assessed at the end of each reporting period.

Key judgements

The Group has applied judgement in determining if it has significant influence, control or joint control of the investees. Through its appointment of two directors to the Board of Yieldbroker, ASX participates in the financial and operating policy decisions of the investee. It also holds more than 20% of the voting rights so it is presumed that ASX has significant influence over the investee. The Group however does not have the power to unilaterally direct these decisions to affect the returns of the investee so does not have control of the investee. The investment in Yieldbroker has therefore been classified as an interest in an associate.

The arrangement in relation to Sympli requires unanimous consent from both parties about relevant activities. As ASX has joint control over Sympli and has rights to the net assets of the arrangement the investment has been classified as a joint venture.

D3 Financial assets at fair value through profit or loss

In December 2017, ASX acquired a convertible note (the note) issued by DAH for USD3.5 million. ASX has the right to convert the note to DAH shares at any time up to maturity in 2027, and under certain circumstances the note mandatorily converts to DAH shares.

Refer to note C3(d)(iii) for the balance and movement of financial assets at FVTPL at period end.

The convertible note is initially recognised at fair value being the consideration given. It is subsequently measured at FVTPL as the contractual terms of the agreement do not give rise to solely payments of principal and interest. Any fair value gains or losses are recognised in profit and loss. If the notes are converted to equity prior to or at maturity date, the converted shares will be designated at FVTOCI on initial recognition in accordance with the Group's accounting policy for investments in equity instruments.

Prior year accounting policy

In the prior year, the convertible notes were designated at FVTPL on initial recognition. Subsequently, the notes continued to be measured at fair value with any fair value gain or loss recognised in profit or loss.

Notes to the consolidated financial statements continued

Other balance sheet assets and liabilities

E1 Trade and other receivables

As at 30 June	2019 \$m	2018 \$m
Current		
Trade receivables	107.3	93.7
Margins receivable	268.6	266.6
Accrued revenue	4.4	5.4
Interest receivable	11.1	6.9
Other debtors	0.1	1.4
Less: loss allowance	(0.9)	(0.8)
Total trade and other receivables	390.6	373.2

Refer to note C3(b)(i) for further details of the loss allowance.

Trade receivables which generally have terms of 30 days are initially recognised at their transaction price and subsequently measured at amortised cost using the effective interest method, less any loss allowance.

Margins receivable represents collateral receivable from clearing participants on cash markets and derivative positions held at the end of the day, and are received on the next business day. The amounts include the movement in the fair value of derivative positions and are recognised on trade date. A corresponding margins payable is recognised and disclosed within trade and other payables.

E2 Intangible assets

The movements in the intangible asset balances are as follows:

For the year ended 30 June	2019					2018				
	Software \$m	Trade- marks \$m	Customer lists \$m	Goodwill \$m	Total \$m	Software \$m	Trade- marks \$m	Customer lists \$m	Goodwill \$m	Total \$m
Opening balance										
Cost	347.5	7.9	1.2	2,317.6	2,674.2	359.7	7.9	1.2	2,317.6	2,686.4
Accumulated amortisation and impairment	(235.7)	-	(0.4)	-	(236.1)	(247.1)	-	(0.1)	-	(247.2)
Net book value at 1 July	111.8	7.9	0.8	2,317.6	2,438.1	112.6	7.9	1.1	2,317.6	2,439.2
Movement										
Additions	54.3	-	-	-	54.3	33.5	-	-	-	33.5
Disposals – cost	(24.7)	-	-	-	(24.7)	(44.1)	-	-	-	(44.1)
Disposals – accumulated amortisation	24.7	-	-	-	24.7	44.1	-	-	-	44.1
Amortisation expense	(33.9)	-	(0.2)	-	(34.1)	(31.6)	-	(0.3)	-	(31.9)
Impairment	-	-	-	-	-	(1.1)	-	-	-	(1.1)
Write-offs	-	-	-	-	-	(1.6)	-	-	-	(1.6)
Net book value at 30 June	132.2	7.9	0.6	2,317.6	2,458.3	111.8	7.9	0.8	2,317.6	2,438.1
Closing balance										
Cost	377.1	7.9	1.2	2,317.6	2,703.8	347.5	7.9	1.2	2,317.6	2,674.2
Accumulated amortisation and impairment	(244.9)	-	(0.6)	-	(245.5)	(235.7)	-	(0.4)	-	(236.1)
Net book value at 30 June	132.2	7.9	0.6	2,317.6	2,458.3	111.8	7.9	0.8	2,317.6	2,438.1

Notes to the consolidated financial statements continued

Other balance sheet assets and liabilities

(a) Software

The impairment expense recognised in the prior financial year relates to certain software intangible assets that were identified as having no future economic benefit to the Group. Impairment charges were recognised within depreciation and amortisation in the statement of comprehensive income.

Costs incurred in developing products or systems, and acquiring software and licences that will contribute to future benefits, are capitalised at cost and amortised on a straight-line basis over their expected useful lives, from the time the assets are in use. Certain staff costs are capitalised when they can be specifically attributed to software development projects. Software purchased from external vendors is classified as externally acquired and may include capitalised staff costs that have been incurred in the implementation of the software.

Software is subject to amortisation and is reviewed for indicators of impairment at the end of each reporting period or when events or changes in circumstances have arisen that indicate the carrying value may be impaired. Where the recoverable amount is less than the carrying amount, an impairment loss is recognised as an expense in the statement of comprehensive income. The recoverable amount is the higher of an asset's fair value less costs of disposal and value-in-use. Determining whether the intangibles are impaired requires an estimation of their useful lives, residual values and amortisation method. The effect of any changes will be recognised on a prospective basis.

The estimated useful lives of significant computer software systems is as follows:

Trading platforms	5 years
Clearing platforms	5 years
Depository/registry platforms	10 years

(b) Trademarks and customer lists

There was no impairment expense recognised during the year for trademarks or customer lists.

Trademarks and customer lists have been externally acquired and are measured at cost. Customer lists are amortised on a straight-line basis over their estimated useful life of five years while the registered trademark has an indefinite useful life and is not amortised. The trademark is assessed for impairment at each reporting date or when there are indicators of impairment.

(c) Goodwill

(i) Impairment test for goodwill

The Group consists of two cash generating units (CGUs), namely exchange-traded and non exchange-traded. The goodwill attributable to each CGU at the time of acquisition is as follows:

- Exchange-traded: \$2,242.2 million
- Non exchange-traded: \$75.4 million.

No impairment charge arose in the current or prior financial year.

(ii) Key estimates and assumptions used for value-in-use calculations

Management has determined the budgeted operating results based on past performance and expectations for the future. The growth rates used for revenue and expense projections are consistent with, or lower than, historical trends for the CGUs.

The pre-tax discount rate used is 9.25% (2018: 9.25%) for all CGUs. The growth rate used to extrapolate cash flow projections beyond five years is 3.5% (2018: 3.5%) per annum for the exchange-traded CGU and 3.5% (2018: 3.5%) per annum for the non exchange-traded CGU. These calculations support the carrying value of goodwill. There is no reasonably possible change in any key assumptions that management has based its determination of the CGU's recoverable amount on that would result in an impairment charge being recognised.

Goodwill on acquisition is initially measured at cost, being the excess of the consideration paid over the acquirer's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities of the acquiree. Following initial recognition, goodwill is measured at cost less any accumulated impairment losses.

Goodwill has an indefinite useful life and as such is not subject to amortisation and is tested semi-annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. For the purpose of assessing impairment, assets are grouped at the lowest levels for which they are separately identifiable cash flows (CGUs) and goodwill is allocated to each of the Group's CGUs that are expected to benefit from the business combination in which the goodwill arose.

Goodwill is tested on an annual basis. Where the recoverable amount is less than the carrying amount, an impairment loss is recognised as an expense in the statement of comprehensive income. The recoverable amount of each CGU is determined based on value-in-use calculations. These calculations use cash flow projections based on financial estimates reviewed by management covering a five-year period. Cash flows beyond this five year period are extrapolated using estimated growth rates that do not exceed the long-term average growth rate for the business in which the CGU operates and are consistent with external sources of information.

Notes to the consolidated financial statements continued

Other balance sheet assets and liabilities

E3 Property, plant and equipment

The movements in the property, plant and equipment asset balances are as follows:

For the year ended 30 June	2019				2018			
	Leasehold improvements \$m	Plant and equipment \$m	Computer equipment \$m	Total \$m	Leasehold improvements \$m	Plant and equipment \$m	Computer equipment \$m	Total \$m
Opening balance								
Cost	33.0	29.9	85.2	148.1	34.1	47.9	126.3	208.3
Accumulated depreciation	(24.3)	(19.6)	(49.8)	(93.7)	(23.2)	(36.6)	(101.9)	(161.7)
Net book value at 1 July	8.7	10.3	35.4	54.4	10.9	11.3	24.4	46.6
Movement								
Additions	0.6	1.3	18.9	20.8	0.4	1.8	18.6	20.8
Disposals – cost	(0.9)	(0.9)	(9.2)	(11.0)	(1.5)	(19.6)	(59.7)	(80.8)
Disposals – accumulated depreciation	0.8	0.9	9.2	10.9	1.5	19.6	59.7	80.8
Depreciation expense	(2.3)	(2.8)	(8.5)	(13.6)	(2.6)	(2.6)	(7.6)	(12.8)
Write-offs	-	-	-	-	-	(0.2)	-	(0.2)
Net book value at 30 June	6.9	8.8	45.8	61.5	8.7	10.3	35.4	54.4
Closing balance								
Cost	32.7	30.3	94.9	157.9	33.0	29.9	85.2	148.1
Accumulated depreciation	(25.8)	(21.5)	(49.1)	(96.4)	(24.3)	(19.6)	(49.8)	(93.7)
Net book value at 30 June	6.9	8.8	45.8	61.5	8.7	10.3	35.4	54.4

Property, plant and equipment is measured at cost less accumulated depreciation and any impairment in value. Cost includes expenditure that is directly attributable to the acquisition of the assets. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. Repairs and maintenance are recognised in profit or loss during the financial period in which they are incurred.

The cost of improvements to leasehold property is capitalised and amortised over the unexpired period of the lease or the estimated useful lives of the improvements, whichever is the shorter.

Assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each reporting date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposal are determined by comparing the proceeds on disposal with the carrying amount and are included in profit or loss.

Depreciation of assets begins from the time an asset is implemented and available for use. Depreciation is provided on a straight-line basis on all plant and equipment, over their estimated useful lives.

The depreciation periods for each class of asset, for the current and previous years, are as follows:

Leasehold improvements	The shorter of minimum lease term and useful life
Plant and equipment	3 – 10 years
Computer equipment	3 – 5 years

Notes to the consolidated financial statements continued

Other balance sheet assets and liabilities

E4 Trade and other payables

As at 30 June	2019 \$m	2018 \$m
Trade payables	3.4	7.7
Margins payable	268.6	266.6
Interest payable	10.0	8.8
Rebates payable	21.4	12.3
Transaction taxes payable	7.0	6.1
Employee-related payables	18.6	17.2
Accrued expenses	19.4	28.3
Other payables	0.9	7.3
Total	349.3	354.3

Trade and other payables are initially recognised at fair value and are subsequently measured at amortised cost using the effective interest method. They represent liabilities for goods and services provided to the Group prior to the end of the reporting period that are unpaid.

All trade and other payables are unsecured and usually paid within 30 days of recognition other than certain rebates and accrued expenses which are typically paid within 3 months of recognition.

Trade and other payables are presented as current liabilities unless payment is not due within 12 months of the reporting date.

Refer to the accounting policy in note E1 for details of the margins payable.

Interest payable includes interest owed to participants on cash collateral and commitments lodged. Interest is recognised as a finance cost in the statement of comprehensive income using the effective interest rate method.

Rebates payable represent refund liabilities. Refer to the accounting policies in note B2 for further details of the rebates.

Provisions are recognised when the Group has a present legal or constructive obligation as a result of a past event, that it is probable the obligation will be settled and the amount can be reliably estimated. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and when appropriate, the risks specific to the liability. The increase in the provision due to the passage of time is recognised as a finance cost in profit or loss.

Current employee provisions include liabilities for annual leave and wages and salaries, including non-monetary benefits that are expected to be settled wholly within 12 months after the end of the period in which the employees render the related service. These are recognised in respect of employees' services up to the end of the reporting period. Long service leave provisions that the Company does not have an unconditional right to defer for 12 months after the reporting date are recognised as a current provision, regardless of when the actual settlement is expected to occur. Current employee provisions are measured at the amounts expected to be paid when the liabilities are settled.

Non-current employee provisions include long service leave provisions where the Company has an unconditional right to defer settlement for at least 12 months after the reporting period. Non-current employee provisions are not expected to be wholly settled within 12 months after the end of the reporting date, and are therefore measured as the present value of expected future payments.

When determining whether employees qualify or are expected to qualify for the Group's long service leave arrangements, consideration is given to history of employee departures and periods of service. Expected future wage and salary levels are discounted using the rates attached to a basket of comparable liquid corporate bonds at the end of each reporting period, which most closely match the terms to maturity of the related liabilities.

For short-term cash incentives offered to staff the Group recognises a liability and an expense. A provision is recognised where there is a contractual obligation or where there is past practice that gives clear evidence of the amount of the obligation.

Where short-term incentives are deferred to a future period the value of the incentives is expensed over the term of the deferral and recognised as a liability. Amounts expected to be wholly settled within 12 months after the end of the reporting date are recognised as current, all others are recognised as non-current.

Make-good obligations are provided for office space under operating leases that require the premises to be returned to the lessor in their original condition. The operating lease payments do not include the make-good payment at the end of the lease term. Provisions for make-good obligations are recognised when the Group becomes party to operating lease contracts that include make-good clauses.

Lease incentives received or receivable, such as rent-free periods and premises fit-out allowances, may be included in operating leases entered into by the Group. The value of lease incentives is included in the premises provision and is recognised as a reduction in occupancy expense in profit or loss on a straight-line basis over the term of the lease. Where the original lease term has been extended, these incentives will continue to be recognised over the original lease term.

E5 Provisions

As at 30 June		
Current		
Employee provisions	14.7	14.1
Premises provisions	0.5	0.5
Total	15.2	14.6
Non-current		
Employee provisions	3.6	3.0
Premises provisions	6.0	5.5
Total	9.6	8.5

The movements in the premises provision are as follows:

For the year ended 30 June		
Opening balance at 1 July	6.0	6.1
Provisions used during the period	(0.5)	(1.0)
Additions during the period	0.8	0.8
Unwinding of discount	0.2	0.1
Closing balance at 30 June	6.5	6.0

The provisions for employee benefits predominantly relate to annual and long service leave obligations. Premises provisions is comprised of lease rental amortised on a straight-line basis over the term of the lease, and provisions for make-good and lease incentives.

Notes to the consolidated financial statements continued

Group disclosures

F1 Subsidiaries

Parent entity¹: ASX Limited

Subsidiaries of ASX Limited:

ACN 611 659 664 Limited²
ASX Acceler8 Pty Limited
ASX Benchmarks Pty Limited
ASX Clearing Corporation Limited
ASX Compliance Pty Limited
ASX Data Analytics Pty Limited
ASX Energy Limited
ASX Financial Settlements Pty Limited³
ASX Futures Exchange Pty Limited
ASX Long-Term Incentive Plan Trust
ASX Operations Pty Limited²
ASX Settlement Corporation Limited²
Australian Securities Exchange Limited²
Australian Stock Exchange Pty Limited
SFE Corporation Limited²

Subsidiaries of ASX Operations Pty Limited:

ASX Collateral Management Services Pty Limited
Australian Clearing Corporation Limited²
Australian Clearing House Pty Limited
Equityclear Pty Limited
New Zealand Futures and Options Exchange Limited
Options Clearing House Pty Limited
Sydney Futures Exchange Pty Limited

Subsidiaries of ASX Clearing Corporation Limited:

ASX Clear (Futures) Pty Limited
ASX Clear Pty Limited
ASX Clearing Corporation Trust

Subsidiaries of ASX Settlement Corporation Limited:

ASX Settlement Pty Limited
Austraclear Limited

Subsidiaries of ASX Settlement Pty Limited:

CHESS Depository Nominees Pty Limited

Subsidiaries of Austraclear Limited:

Austraclear Services Limited

Subsidiaries of Australian Securities Exchange Limited:

Australian Securities Exchange (US) Inc

ASX Limited and Australian Securities Exchange Limited are licensed to operate financial markets while ASX Clear, ASX Clear (Futures), Austraclear Limited and ASX Settlement Pty Limited are licensed to operate clearing and settlement facilities.

In accordance with the *Corporations Act 2001*, the Group maintains two fidelity funds for claims about the defalcation of monies in relation to cash market and derivative trading. ASX Limited acts as manager for the ASX Division 3 Compensation Fund and Australian Securities Exchange Limited acts as trustee for the Sydney Futures Exchange Limited Fidelity Fund. ASX is also the sole member of the Securities Exchanges Guarantee Corporation (SEGC) which is responsible for administering the NGF, a compensation fund available to meet certain types of claims arising from dealings with participants of ASX and, in limited circumstances, participants of ASX Clear, in accordance with the *Corporations Act 2001*.

ASX Division 3 Compensation Fund, Sydney Futures Exchange Limited Fidelity Fund and SEGC are not consolidated into the Group.

All subsidiaries are incorporated in Australia except for Australian Securities Exchange (US) Inc (incorporated in the US), New Zealand Futures and Options Exchange Limited and ASX Energy Limited (both incorporated in New Zealand). All subsidiaries have the same reporting date.

Subsidiaries are consolidated from the date on which control is transferred to the Group and are de-consolidated from the date that control ceases. Control exists when the Company is exposed to, or has rights to, variable returns from its involvement with that entity and has the ability to affect those returns through its power to direct the activities of the entity. In addition to considering the existence of potential voting rights that are presently exercisable or convertible, the Company also considers relationships with other parties that may result in the Company controlling an entity on the basis of de facto circumstances.

The Group has two established trusts. LTIPT administers the Group's employee share scheme while ASX Clearing Corporation Trust manages the cash of the two CCP subsidiaries. Both trusts are consolidated as the substance of the relationship is that they are controlled by the Group.

¹ Parent entity refers to the immediate controlling entity of the entity in which the investment is shown. The parent entity's investment in relation to all subsidiaries during the financial year was 100% (2018: 100%).

² These subsidiaries are parties to the Deed of Cross Guarantee (the Deed) and have been granted relief from preparing financial statements in accordance with ASIC Legislative Instrument 2016/785. Refer to note F2 for details of the Deed.

³ ASX Financial Settlements Pty Limited was incorporated on 4 October 2018.

Notes to the consolidated financial statements continued

Group disclosures

F2 Deed of Cross Guarantee

ASX Limited and the wholly owned subsidiaries listed below are parties to a Deed of Cross Guarantee. In accordance with the Deed, each party guarantees the debts of the others.

Subsidiary name	ABN/ACN
ACN 611 659 664 Limited	611 659 664
ASX Operations Pty Limited	42 004 523 782
Australian Clearing Corporation Limited	068 624 813
Australian Securities Exchange Limited	83 000 943 377
ASX Settlement Corporation Limited	48 008 617 187
SFE Corporation Limited	74 000 299 392

Pursuant to ASIC Legislative Instrument 2016/785, the wholly owned subsidiaries are relieved from the requirement to prepare financial reports and directors' reports.

The entities represent a 'closed group' for the purposes of the instrument, and as there are no other parties to the Deed that are controlled by the Company, they also represent the 'extended closed group'.

No entities were added or removed from the Deed during the year.

(a) Consolidated statement of comprehensive income and summary of movements in retained earnings

The consolidated statement of comprehensive income and summary of movements in consolidated retained earnings for the closed group is set out below.

Statement of comprehensive income

For the year ended 30 June	2019 \$m	2018 \$m
Total revenue	937.1	892.8
Total expenses	(267.3)	(268.5)
Profit before income tax expense	669.8	624.3
Income tax expense	(186.0)	(177.7)
Net profit for the period	483.8	446.6
Items that may be reclassified to profit or loss:		
Change in the fair value of investments in equity instruments	(7.9)	(10.3)
Change in the fair value of cash flow hedges	-	1.2
Other comprehensive income for the period, net of tax	(7.9)	(9.1)
Total comprehensive income for the period	475.9	437.5

Summary of movements in consolidated retained earnings

	2019 \$m	2018 \$m
Opening retained earnings at 1 July	665.7	619.8
Adjustments on adoption of new accounting standards	(84.8)	-
Transfers from reserves to retained earnings	160.7	-
Dividends paid	(432.7)	(400.7)
Profit for the period	483.8	446.6
Closing retained earnings at 30 June	792.7	665.7

(b) Consolidated balance sheet

The consolidated balance sheet for the closed group is set out below.

As at 30 June	2019 \$m	2018 ¹ \$m
Current assets		
Cash	129.7	102.6
Other financial assets at amortised cost	568.4	40.0
AFS financial assets	-	191.3
Trade and other receivables	125.6	85.5
Prepayments	17.5	17.4
Total current assets	841.2	436.8
Non-current assets		
Investments in subsidiaries	731.1	731.1
Investments in equity instruments	24.3	416.4
Equity accounted investments	52.0	53.1
Financial assets at FVTPL	5.3	4.8
Intangible assets	2,395.0	2,374.3
Property, plant and equipment	61.5	54.4
Net deferred tax asset	45.3	-
Prepayments	10.5	0.3
Total non-current assets	3,325.0	3,634.4
Total assets	4,166.2	4,071.2
Current liabilities		
Trade and other payables	66.7	70.1
Current tax liabilities	89.9	17.0
Provisions	15.2	14.6
Revenue received in advance	83.1	22.4
Total current liabilities	254.9	124.1
Non-current liabilities		
Deferred tax liabilities	-	64.9
Provisions	9.6	8.5
Revenue received in advance	65.8	0.1
Total non-current liabilities	75.4	73.5
Total liabilities	330.3	197.6
Net assets	3,835.9	3,873.6
Equity		
Issued capital	3,027.2	3,027.2
Retained earnings	792.7	665.7
Asset revaluation reserve	0.4	169.0
Equity compensation reserve	15.6	11.7
Total equity	3,835.9	3,873.6

¹ The prior year has been restated for the reclassification of certain cash balances as described in note A3.

Notes to the consolidated financial statements continued

Group disclosures

F3 Related party transactions

(a) Transactions between subsidiaries

ASX Operations Pty Limited provides operational support for the majority of the Group's activities. Expenses paid, revenues collected and purchase of capital items on behalf of other entities within the Group are booked into inter-entity accounts. Interest is not charged on any inter-entity account, other than trust balances.

Transactions between the Company and subsidiaries are eliminated on consolidation.

Balances receivable by the Company from wholly owned subsidiaries within the Group are as follows:

As at 30 June	2019 \$000	2018 \$000
Current		
Amounts due from subsidiaries	599,121	245,543

The following transactions occurred between subsidiaries and the Company during the year:

For the year ended 30 June	2019 \$000	2018 \$000
Dividends paid to the parent entity	399,000	451,000

(b) Transactions with other related entities

The following transactions occurred with other related entities during the year:

Purchase of services from associates	265	162
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These transactions are on an arm's length basis and under normal commercial terms and conditions.

(c) Key Management Personnel (KMP) remuneration

KMP compensation (including non-executive directors) provided during the financial year is set out in the following table. Further details are disclosed in the Remuneration Report on pages 48 to 62.

Short-term employee benefits	9,857	10,044
Post-employment benefits	273	284
Long-term benefits	(18)	261
Share-based payments	2,425	1,892
Total	12,537	12,481

The share-based payments reflects the expense for performance rights issued under the ASX Long-Term Incentive Plan, shares issued under equity plans and shares purchased under the employee share scheme. The expense is calculated using the fair value of performance rights or shares at grant date, less any write-back for performance rights lapsed as a result of non-market hurdles not attained.

F4 Parent entity financial information

(a) Summary financial information

The individual financial statements for the parent entity show the following aggregate amounts:

Statement of comprehensive income

For the year ended 30 June	2019 \$m	2018 \$m
Total revenue	399.4	465.0
Total expenses	(0.4)	(20.4)
Profit before income tax expense	399.0	444.6
Income tax expense	(0.6)	(1.7)
Net profit for the period	398.4	442.9
Other comprehensive income for the period, net of tax	0.1	(10.3)
Total comprehensive income for the period	398.5	432.6

Balance sheet

As at 30 June	2019 \$m	2018 \$m
Current assets	600.6	245.9
Non-current assets	3,264.7	3,657.3
Total assets	3,865.3	3,903.2
Current liabilities	89.9	17.0
Non-current liabilities	-	72.3
Total liabilities	89.9	89.3
Net assets	3,775.4	3,813.9
Issued capital	3,027.2	3,027.2
Retained earnings	734.8	608.3
Asset revaluation reserve	(0.1)	168.5
Equity compensation reserve	13.5	9.9
Total equity	3,775.4	3,813.9

The financial information for the parent entity, ASX, has been prepared on the same basis as the consolidated financial statements, except as set out below.

Unlisted shares in subsidiaries are accounted for at cost in the financial statements of ASX.

ASX elected to form a tax consolidated group (tax group) for income tax purposes. ASX is the head entity and is therefore liable for the income tax liabilities of the tax group. The consolidated current and deferred tax amounts arising from temporary differences of the members of the tax group are recognised in the separate financial statements of the members of the tax group using the 'separate taxpayer within group' approach. ASX has entered into a tax funding agreement with members of the Australian tax group. The agreement has the objective of achieving an appropriate allocation of the Group's income tax expense to the main operating subsidiaries within the Group. The tax funding agreement also has the objective of allocating deferred tax assets relating to tax losses only, and current tax liabilities of the main operating subsidiaries to ASX. The subsidiaries will reimburse ASX for their portion of the Group's current tax liability and will recognise this payment as an inter-entity payable or receivable in their financial statements for that financial year. ASX will reimburse the subsidiaries for the deferred tax asset from any unused tax losses or credits by making a payment equal to the carrying value of the deferred tax asset.

Notes to the consolidated financial statements continued

Group disclosures

(b) Guarantees entered into by the parent entity

The parent entity, ASX, is party to a Deed of Cross Guarantee together with the entities defined in note F2. Under the Deed, the Company guarantees to each creditor payment in full of any debt in the event of winding up of any of the subsidiaries under certain provisions of the *Corporations Act 2001*. No deficiencies of assets exist in any of these entities.

(c) Contractual commitments and contingencies

ASX has an agreement with ASX Clear for a \$150.0 million (2018: \$150.0 million) standby liquidity loan facility that may be used in limited and specific circumstances following the default of clearing participants.

ASX has an agreement with CHESS Depository Nominees Pty Limited (CDN) which provides \$10.0 million (2018: \$10.0 million) in funds to support CDN's licence obligations if required.

No payments were made under either facility in the current or prior financial year.

The NGF, which is administered by SEGC, is maintained to provide compensation for prescribed claims arising from dealings with market participants as set out in the *Corporations Act 2001*. If the net assets of the NGF fall below the minimum amount determined by the Minister, SEGC may determine that ASX or participants must pay a levy to SEGC. No levies were called on ASX in the current or prior financial year.

In accordance with the Financial Stability Standards recovery rules the parent entity, ASX, is obligated in certain circumstances to replenish a shortfall in the financial resources available to the CCPs up to predetermined levels for any one participant default. No replenishments were made in the current or prior year. In accordance with the Australian Financial Services Licence of ASX Collateral Management Services Pty Limited, ASX Limited has an obligation to fund any amounts required by the subsidiary.

ASX Limited did not have any other contractual commitments or contingent liabilities for the years ended 30 June 2019 or 2018.

(d) Borrowings

The Group did not have any drawn borrowings during the current or prior financial year. ASX Limited has an unsecured committed facility that can only be called upon to provide short-term liquidity to ASX Clear following a clearing participant default. The facility limit is \$100.0 million (2018: \$100.0 million) and remained undrawn at the date of this report.

F5 Other disclosures

F5.1 Commitments

(a) Capital commitments

Capital commitments contracted for but not yet incurred as at balance date are as follows:

As at 30 June	2019 \$m	2018 \$m
Intangible assets – software	19.8	24.5

(b) Operating lease commitments

Commitments for minimum lease payments of non-cancellable leases are as follows:

Due:		
Not later than one year	9.7	8.5
Later than one year but not later than five years	36.1	35.4
Later than five years	24.4	27.3
Total	70.2	71.2

The Group's major leases are for the premises from which it operates. These leases are all generally long-term with unexpired periods up to 10 years. Future rentals are subject to indexation and periodical rent reviews. The operating lease expense for the year was \$9.4 million (2018: \$10.2 million).

Operating leases are those in which a significant portion of the risks and rewards of ownership are not transferred to the Group as lessee. Minimum lease payments, which includes fixed rental increases, are recognised in profit or loss on a straight-line basis over the period of the lease.

F5.2 Share-based payments

(a) Long-Term Incentive Plan

The Group provides performance rights to ordinary shares of the Company to employees as part of the LTI Plan to recognise performance, skills and behaviours that deliver sustainable long-term shareholder value. They entitle certain KMP to performance rights over ASX Limited shares.

Participants are granted performance rights that only vest if certain performance conditions are met. All performance rights are to be settled by physical delivery of ordinary shares in ASX Limited subject to the performance conditions being attained. The number of rights that vest depends on an EPS hurdle being achieved and ASX's total shareholder return (TSR) relative to a comparator group. Under all of the plans, 50% of the performance rights are dependant on relative EPS growth and 50% on relative TSR. All plans have a contractual life of four years and do not carry rights to dividends.

Notes to the consolidated financial statements continued

Group disclosures

The following table shows the movement in the number of performance rights during the current and prior year.

For the year ended 30 June	2019 No. of rights	2018 No. of rights
Opening balance at 1 July	72,838	71,807
Granted during the year	23,764	28,463
Vested during the year ¹	-	(8,065)
Lapsed during the year ¹	-	(19,367)
Closing balance at 30 June	96,602	72,838

¹ The prior year relates to the September 2014 plan.

Details of each of the plans and the number of grants outstanding at the end of the reporting period is shown in the following table.

Grant date/employees entitled	Number of instruments granted	Weighted average fair value
Performance rights granted to KMP on 4 October 2018	23,764	\$38.91
Performance rights granted to KMP on 26 September 2017	28,463	\$34.30
Performance rights granted to KMP on 28 September 2016	31,334	\$29.68
Performance rights granted to KMP on 30 September 2015	13,041	\$23.34
Total	96,602	

(b) Deferred equity plans

The Group operates deferred equity plans for KMPs and other employees. Under the plan, an employee receives between 40% - 50% of their STI in cash and the remainder as shares which are deferred for two to four years in equity. If the employee ceases employment during the deferred share period, the shares are forfeited, except in certain limited circumstances.

Employees have full ownership rights of the shares under the schemes including voting rights and entitlement to dividends. Provided the employee remains employed by the ASX Group and maintains satisfactory individual performance, the shares are subject to a holding lock until vesting. Post vesting, employees can only deal with the shares in accordance with ASX's dealing rules. The shares cannot be transferred to another person or disposed of during this period.

The number of shares allocated to each eligible employee is the amount of the STI award deferred into shares divided by the volume weighted average price (VWAP) over the five business days up to and including the offer close date, rounded to the nearest share.

During the year, there were 100,544 (2018: 116,801) shares allocated. The shares are recognised at their fair value, being the market price on purchase date. The weighted average fair value of the shares issued under the deferred equity plans during the year was \$67.00 (2018: \$53.07).

(c) Employee share purchase plan

The ASX employee share purchase plan offers the opportunity for employees to purchase fully paid ordinary shares in ASX through salary sacrifice up to the value of \$1,000 at a discount of 10%. All Australian permanent full-time and part-time employees, and maximum-term contractors with end dates beyond 30 June are eligible to participate in the scheme.

Employees have full ownership rights of the shares under the scheme including voting rights and entitlement to dividends. The shares are subject to a three-year holding lock and as such cannot be transferred to another person or disposed of until the earlier of cessation of employment or three years from grant date, and subject to compliance with ASX's dealing rules.

The number of shares allocated to each employee is the offer amount divided by the VWAP over the five business days up to and including the offer close date, rounded down to the nearest share.

Under the plan, 5,852 shares (2018: 5,627) were issued. The shares are recognised at their fair value of \$70.67 (2018: \$57.85), being the market price on the purchase date.

(d) Employee expenses

The following table shows the total share-based payments recognised within staff expenses during the year and includes the impact of reversals resulting from non-market based performance hurdles not being achieved.

	2019 \$m	2018 \$m
Long-Term Incentive Plan	0.3	0.5
Deferred equity plans	5.4	4.7
Employee share purchase plan	0.4	0.3
Total	6.1	5.5

The fair value of the performance rights for the EPS component is calculated using the share price at market close on the grant date, less the present value of the expected dividends over the performance period. The fair value of performance rights for the TSR component is calculated by an independent valuer using a Black-Scholes option valuation model.

Fair values are recognised over the vesting period as an expense with a corresponding increase in the equity compensation reserve. Fair values include the impact of any market performance conditions and the impact of any non-vesting conditions, but excludes the impact of any service and non-market performance vesting conditions. Non-market vesting conditions are included in assumptions about the number of performance rights that are expected to vest. The impact of any revisions to the original estimates are recognised in profit or loss with a corresponding adjustment to equity.

Notes to the consolidated financial statements continued

Group disclosures

F5.3 Auditor's remuneration

The following fees were paid or payable by the Group for and on behalf of all Group entities for services provided by the auditor and its related practices during the financial year:

PricewaterhouseCoopers Australia	2019 \$'000	2018 \$'000
Statutory audit services:		
Audit and review of the financial statements and other audit work under the <i>Corporations Act 2001</i>	729	627
Audit of information technology platforms	191	184
Other audit services:		
Code of Practice compliance	80	90
Non-audit services:		
Tax compliance services	154	105
Other review services	51	55
Total remuneration for PricewaterhouseCoopers Australia	1,205	1,061

F5.4 Subsequent events

From the end of the period to the date of this report, no matter or circumstance has arisen which has significantly affected the operations of the Group, the results of those operations or the state of affairs of the Group.

Directors' declaration

In the opinion of the directors of ASX Limited (the Company):

- a. the financial statements and notes that are contained in pages 67 to 107 and the Remuneration Report set out on pages 48 to 62 in the Annual Report, are in accordance with the *Corporations Act 2001*, including:
 - i. giving a true and fair view of the consolidated entity's financial position as at 30 June 2019 and of its performance for the financial year ended on that date, and
 - ii. complying with Australian Accounting Standards, the *Corporations Regulations 2001* and other mandatory professional reporting requirements
- b. there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable
- c. at the date of this declaration, there are reasonable grounds to believe that the members of the Extended Closed Group identified in note F2 will be able to meet any obligations or liabilities to which they are, or may become, subject by virtue of the Deed of Cross Guarantee described in note F2, and
- d. the financial statements also comply with International Financial Reporting Standards.

The directors have been given the declarations required by section 295A of the *Corporations Act 2001* from the Chief Executive Officer and the Chief Financial Officer for the financial year ended 30 June 2019.

Signed in accordance with a resolution of the directors:



Rick Holliday-Smith
Chairman



Dominic Stevens
Managing Director and Chief Executive Officer

Sydney, 15 August 2019



Independent auditor's report to the members of ASX Limited

Report on the audit of the financial report

Our opinion

In our opinion:

The accompanying financial report of ASX Limited (the Company) and its controlled entities (together the Group) is in accordance with the *Corporations Act 2001*, including:

- a) giving a true and fair view of the Group's financial position as at 30 June 2019 and of its financial performance for the year then ended
- b) complying with Australian Accounting Standards and the *Corporations Regulations 2001*.

What we have audited

The Group financial report comprises:

- the consolidated balance sheet as at 30 June 2019
- the consolidated statement of comprehensive income for the year then ended
- the consolidated statement of changes in equity for the year then ended
- the consolidated statement of cash flows for the year then ended
- the notes to the consolidated financial statements, which include a summary of significant accounting policies
- the directors' declaration.

Basis for opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial report* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

Our audit approach

An audit is designed to provide reasonable assurance about whether the financial report is free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial report.

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial report as a whole, taking into account the geographic and management structure of the Group, its accounting processes and controls and the industry in which it operates.



Materiality

- For the purpose of our audit we used overall Group materiality of \$35 million, which represents approximately 5% of the Group's profit before tax.
- We applied this threshold, together with qualitative considerations, to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial report as a whole.
- We chose Group profit before tax because, in our view, it is the benchmark against which the performance of the Group is most commonly measured.
- We utilised a 5% threshold based on our professional judgement, noting it is within the range of commonly acceptable thresholds.

Audit scope

- We tailored the scope of our audit to ensure we obtained sufficient appropriate audit evidence to express an opinion on the financial report as a whole, taking into account the structure of the Group, its processes and controls, and the industry in which it operates. The accounting processes are structured around a Group Finance function at its corporate head office in Sydney, where we performed most of our audit procedures.

PricewaterhouseCoopers, ABN 52 780 433 757

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Independent auditor's report to the members of ASX Limited

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial report for the current period. The key audit matters were addressed in the context of our audit of the financial report as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. Further, any commentary on the outcomes of a particular audit procedure is made in that context. We communicated the key audit matters to the Audit and Risk Committee.

Key audit matter	How our audit addressed the key audit matter
<p>Impairment of assets</p> <p>A) Goodwill impairment assessment (Refer to note E2)</p> <p>The Group's goodwill is recognised in two Cash Generating Units (CGUs): 'exchange-traded' (\$2,242.2 million) and 'non-exchange traded' (\$75.4 million).</p> <p>We considered this a key audit matter due to the size of the goodwill balance (\$2,317.6 million as at 30 June 2019) and because the Group's assessment of the value-in-use of the CGUs involves judgements about the future results of the business and the discount rates applied to future cash flow forecasts.</p> <p>The Group performed an annual impairment assessment over the goodwill balance, as required by Australian Accounting Standards.</p> <p>The Group also performed a sensitivity analysis over the value-in-use calculations, by varying the assumptions used (terminal growth rate and discount rate) to assess the impact on the valuations.</p>	<p>We performed testing over both CGUs (exchange-traded and non-exchange traded) within the Goodwill balance, which included the following procedures, amongst others:</p> <ul style="list-style-type: none"> • We evaluated the Group's cash flow forecasts and the process by which they were developed, including considering the mathematical accuracy of the underlying calculations in the cash flow model (the model). We assessed whether the budgets used in the value-in-use calculations were consistent with the Board-approved budgets and that key assumptions in the budget were subject to oversight by the directors. • We also: <ol style="list-style-type: none"> 1. Compared the Group's assumptions, including growth rates used in the cash flow forecasts, to historical results and economic and industry forecasts 2. Assessed the discount rate used in the model by comparing the cost of capital for the Group to market data and industry research • Together with PwC valuation experts, we assessed the reasonableness of the discount and growth rates by comparing them to market data, comparable companies and industry research • We found that the discount rate used by the Group was consistent with market data and industry research • We performed a sensitivity analysis over the assumptions used by the Group to establish the impact on results from using other reasonably possible growth rates and discount rates. We found that headroom remained between the value-in-use calculations used in our sensitivity analysis and the carrying value of the CGUs in the financial statements.



Independent auditor's report to the members of ASX Limited

Key audit matter	How our audit addressed the key audit matter
<p>Impairment of assets – continued</p> <p>B) Yieldbroker impairment assessment (Refer to note D2)</p> <p>At 30 June 2019, the Yieldbroker investment (Yieldbroker) is carried at \$46.5 million.</p> <p>We considered this a key audit matter due to the level of judgement required by the Group in determining the recoverable amount of Yieldbroker.</p> <p>In line with Australian Accounting Standards, where there is an indication that an asset may be impaired, the Group is required to estimate the recoverable amount of the asset and where this is less than its carrying amount, recognise any impairment loss immediately in the profit or loss. Following an estimation of the recoverable amount of Yieldbroker, the Group determined that no impairment loss was required as at year end. This was determined by the Group as follows:</p> <ol style="list-style-type: none"> 1. Performing a value-in-use calculation for Yieldbroker. Key assumptions in this model include projected future cash flows, the growth rate used to extrapolate cash flow projections beyond five years (terminal growth rate) and the discount rate. The output of the model is the recoverable amount of the investment 2. Comparing the recoverable amount to Yieldbroker's carrying amount at 30 June 2019 value. 	<p>We performed testing over the Group's impairment assessment of Yieldbroker, which included the following procedures, amongst others:</p> <ul style="list-style-type: none"> • Together with PwC valuation experts, we assessed the methodology used by the Group, to calculate the recoverable amount of the investment, against Australian Accounting Standards • We evaluated the cash flow forecasts used in the value-in-use calculation and the process by which they were determined, including considering the mathematical accuracy of the underlying calculations in the model. We found that the estimated cash flows used in the model were consistent with board-approved budgets and the three year plans proposed to the Board. <p>We also:</p> <ol style="list-style-type: none"> 1. Compared the Group's estimated cash flows to historic earnings and economic and industry forecasts 2. Together with PwC valuation experts, we assessed the reasonableness of the discount and growth rates by comparing them to market data, comparable companies and industry research. <ul style="list-style-type: none"> • We assessed the sensitivity of the recoverable amount by varying the key assumptions to where reasonably possible, including cash flow growth rates, the discount rate and terminal growth rate. <p>We found that the Group's calculations are reasonable to support the carrying value of the investment in the financial statements.</p>

Key audit matter	How our audit addressed the key audit matter
<p>Valuation and existence of financial instruments</p> <p>A) Valuation and existence of other financial assets at amortised cost (Refer to note C3)</p> <p>As at 30 June 2019, other financial assets at amortised cost were \$10,825.4 million and comprised of term deposits, reverse repurchase agreements, negotiable certificates of deposit, promissory notes and floating rate notes.</p> <p>In the current period, these financial assets were reclassified from available-for-sale financial instruments to amortised cost, in accordance with the classification requirements under Australian Accounting Standards. These financial assets are held in order to collect contractual cash flows (CCFs) and those cash flows represent solely payments of principal and interest (SPPI).</p> <p>We considered this a key audit matter due to the size of the balance as at 30 June 2019.</p>	<p>We performed testing over the carrying value of other financial assets at amortised cost, which included assessing the accuracy of the Group's measurement calculations through performing the following procedures, amongst others:</p> <ul style="list-style-type: none"> • We agreed a sample of key inputs from the Group's measurement calculations to source documentation • We reperformed the Group's measurement calculations for mathematical accuracy. <p>We found that the carrying value of these financial assets was consistent with the Group's calculations.</p> <p>We performed testing over the existence of all other financial assets at amortised cost. We confirmed the existence of all of the securities held as other financial assets at amortised cost by the Group at 30 June 2019 with counterparties.</p>



Independent auditor's report to the members of ASX Limited

Key audit matter	How our audit addressed the key audit matter
<p>Valuation and existence of financial instruments – continued</p> <p>B) Valuation and existence of financial assets at fair value (Refer to note C3)</p> <p>As at 30 June 2019, financial assets at Fair Value Through Profit and Loss (FVTPL) was \$1,106.5 million and comprised of non-cash collateral.</p> <p>In the current period, these financial assets were reclassified from available-for-sale financial instruments to FVTPL, in accordance with the classification requirements under Australian Accounting Standards. These financial instruments do not meet the criteria to be measured at amortised cost or Fair Value Through Other Comprehensive Income (FVTOCI).</p> <p>Of these assets, \$1,044.9 million was classified as 'level 1' financial instruments in accordance with the classification under Australian Accounting Standards where quoted prices in active markets are available for identical assets.</p> <p>The remaining \$61.6 million were classified as 'level 2' in accordance with the classification under Australian Accounting Standards where values are derived from observable prices (or inputs to valuation models) other than quoted prices included within 'level 1'.</p> <p>We considered this a key audit matter due to the size of the balance classified as at 30 June 2019.</p>	<p>We performed testing over the valuation of financial assets at fair value. Together with PwC valuation experts, we developed an independent expectation of the valuation for all of the financial assets at fair value through profit and loss held by the Group at 30 June 2019 by reference to quoted prices in active markets for those assets classified as 'level 1', and by reference to observable prices other than quoted prices for those assets classified as 'level 2'.</p> <p>We found that all securities tested were recorded at values materially consistent with our independent valuations.</p> <p>We performed testing over the existence of financial assets at fair value. We confirmed the existence of all of the securities held as financial assets at fair value by the Group at 30 June 2019 with counterparties.</p> <p>We assessed the appropriateness of fair value disclosures in the financial statements, including the classification of the financial assets as 'level 1' due to the use of quoted prices in active markets; and as 'level 2' due to the use of observable prices, other than quoted prices included within 'level 1', in the valuations in light of the requirements of Australian Accounting Standards.</p>

Other information

The directors are responsible for the other information. The other information comprises the information included in the Annual Report for the year ended 30 June 2019, but does not include the financial report and our auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.



Independent auditor's report to the members of ASX Limited

Responsibilities of the directors for the financial report

The directors of the Company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

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

Auditor's responsibilities for the audit of the financial report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial report.

A further description of our responsibilities for the audit of the financial report is located at the Auditing and Assurance Standards Board website at:

http://www.auasb.gov.au/auditors_responsibilities/ar1.pdf.

This description forms part of our auditor's report.

Report on the Remuneration Report

Our opinion on the Remuneration Report

We have audited the Remuneration Report included on pages 48 to 62 of the Directors' Report for the year ended 30 June 2019.

In our opinion, the Remuneration Report of ASX Limited for the year ended 30 June 2019 complies with section 300A of the *Corporations Act 2001*.

Responsibilities

The directors of the Company are responsible for the preparation and presentation of the Remuneration Report in accordance with section 300A of the *Corporations Act 2001*. Our responsibility is to express an opinion on the Remuneration Report based on our audit conducted in accordance with Australian Auditing Standards.

PricewaterhouseCoopers

Voula Papageorgiou
Partner

Sydney, 15 August 2019

Key financial ratios

Year ended 30 June	Notes	FY15	FY16	FY17	FY18	FY19
Basic earnings per share (EPS)	1	205.7c	220.4c	224.5c	230.0c	254.1c
Diluted EPS	1	205.7c	220.4c	224.5c	230.0c	254.1c
Underlying EPS	2	208.4c	220.4c	224.5c	240.4c	254.1c
Dividend per share – interim		92.3c	99.1c	102.0c	107.2c	114.4c
Dividend per share – final		95.1c	99.0c	99.8c	109.1c	114.3c
Dividend per share – special		-	-	-	-	129.1c
Statutory return on equity	3	10.8%	11.4%	11.4%	11.5%	12.8%
Underlying return on equity	4	10.9%	11.4%	11.4%	12.0%	12.8%
EBITDA/operating revenue	5,6	77.1%	77.1%	76.3%	76.2%	75.1%
EBIT/operating revenue	5,6	71.6%	71.4%	70.3%	70.5%	69.6%
Total expenses (including depreciation and amortisation)/operating revenue	5,6	28.4%	28.6%	29.7%	29.5%	30.4%
Capital expenditure (\$m)		\$44.4	\$50.2	\$50.3	\$54.1	\$75.1
Net tangible asset backing per share		\$50.2	\$7.25	\$7.59	\$7.79	\$7.53
Net asset backing per share		\$50.3	\$19.75	\$20.19	\$20.38	\$20.23
Shareholders' equity as a % of total assets (excluding participants' balances)		\$54.1	87.6%	76.2%	89.1%	86.5%
Shareholders' equity as a % of total assets (including participants' balances)		\$75.1	36.6%	29.6%	30.5%	25.5%
Share price at end of period		\$39.90	\$45.76	\$53.61	\$64.39	\$82.37
Ordinary shares on issue at end of period		193,595,162	193,595,162	193,595,162	193,595,162	193,595,162
Weighted average number of ordinary shares (excluding treasury shares)	7	193,413,893	193,413,893	193,415,430	193,507,104	193,576,187
Market value of ordinary shares on issue at end of period (\$m)		\$7,724	\$8,859	\$10,379	\$12,466	\$15,946
Market to book ratio at end of period		2.05	2.32	2.66	3.16	4.07
Full-time equivalent permanent staff						
Number at period end		515	546	554	587	689
Average during the period		524	534	556	560	650
1. Based on statutory net profit after tax (NPAT) including significant items and weighted average number of shares. 2. Based on underlying NPAT excluding significant items and weighted average number of shares. 3. Based on statutory NPAT including significant items. 4. Based on underlying NPAT excluding significant items. 5. Operating revenue excludes interest and dividend revenue (underlying). 6. EBITDA – earnings before interest, tax, depreciation and amortisation; EBIT – earnings before interest and tax. These metrics along with total expenses exclude significant items. 7. Weighted average number of ordinary shares used to calculate EPS.						

Transaction levels and statistics

Year ended 30 June	FY15	FY16	FY17	FY18	FY19
Listings and Issuer Services					
Total domestic market capitalisation (\$bn) – period end	\$1,612	\$1,620	\$1,777	\$1,957	\$2,069
Total number of listed entities (includes stapled entities) – period end	2,220	2,204	2,239	2,285	2,269
Number of new listings	120	124	152	137	111
Average annual listing fee	\$31,859	\$34,101	\$35,419	\$37,569	\$41,356
Initial capital raised (\$m)	\$38,916	\$23,587	\$14,652	\$25,693	\$37,402
Secondary capital raised (\$m)	\$38,787	\$45,299	\$37,160	\$43,022	\$38,830
Other secondary capital raised including scrip-for-scrip (\$m)	\$11,170	\$9,704	\$4,156	\$12,998	\$9,783
Total capital raised (\$m)	\$88,873	\$78,590	\$55,968	\$81,713	\$86,015
Number of new warrant series quoted	2,903	2,959	1,828	1,967	1,849
Total warrant series quoted	3,050	2,886	2,827	2,976	2,789
Cash market					
Trading days	254	254	253	252	252
Total cash market trades ('000)	190,647	235,923	266,433	292,528	359,985
Average daily cash market trades	750,578	928,829	1,053,096	1,160,826	1,428,512
Continuous trading (\$bn)	\$698.315	\$770.805	\$735.447	\$677.893	\$722.111
Auctions (\$bn)	\$193.292	\$209.412	\$236.983	\$262.126	\$333.979
Centre Point (\$bn)	\$74.933	\$78.941	\$107.043	\$106.481	\$113.030
Trade reporting (\$bn)	\$145.909	\$144.991	\$167.377	\$185.316	\$211.568
Total cash market value (\$bn)	\$1,112.449	\$1,204.149	\$1,246.850	\$1,231.816	\$1,380.688
Average daily on-market value (\$bn)	\$3.805	\$4.170	\$4.267	\$4.153	\$4.639
Average daily value (including trade reporting) (\$bn)	\$4.380	\$4.741	\$4.928	\$4.888	\$5.479
Average trade size	\$5,835	\$5,104	\$4,680	\$4,211	\$3,835
Average trading fee per dollar of value (bps)	0.32	0.33	0.37	0.37	0.37
Velocity (total value/average market capitalisation) ¹	82%	92%	88%	83%	87%
Number of dominant settlement messages (m)	15.7	17.1	17.8	17.9	19.6
¹ Total value transacted on all venues.					

Transaction levels and statistics continued

Year ended 30 June	FY15	FY16	FY17	FY18	FY19
Equity options (excluding ASX SPI 200)					
Trading days (exchange-traded options)	254	254	253	252	252
Total contracts traded – equity options ('000)					
Single stock options	109,546	88,701	93,295	80,091	73,825
Index options and futures	10,958	12,768	10,388	12,461	11,282
Average daily single stock options contracts	431,283	349,218	368,755	317,822	292,957
Average daily index options contracts	43,143	50,269	41,060	49,449	44,770
Average fee per derivatives contract	\$0.20	\$0.23	\$0.21	\$0.24	\$0.23
Futures					
Trading days (futures and options)	256	257	256	255	255
Total contracts traded – futures ('000)					
ASX SPI 200	10,301	12,105	12,255	13,782	15,994
90 day bank bills	28,706	29,567	28,931	33,226	34,698
3 year bonds	49,717	50,105	53,233	56,041	60,488
10 year bonds	29,498	36,079	41,697	47,729	51,883
20 year bonds	N/A	423	545	383	256
30 day interbank cash rate	3,678	4,112	2,455	1,952	4,268
Agricultural	135	132	91	84	93
Electricity	224	257	344	371	413
Other ¹	107	137	102	149	112
NZ\$ 90 day bank bills	1,394	1,915	1,422	1,697	2,329
Total futures	123,760	134,832	141,075	155,414	170,534
Total contracts traded – options on futures ('000)					
ASX SPI 200	454	363	202	140	98
3 year bonds	245	356	152	85	227
Overnight 3 year bonds	896	579	478	314	279
Intraday 3 year bonds	927	660	460	344	610
10 year bonds ²	24	4	19	36	4
Electricity	27	23	27	36	56
Other ³	8	6	5	-	-
Total options on futures	2,581	1,991	1,343	955	1,274
Total futures and options on futures contract volume ('000)					
Daily average contracts – futures and options	493,520	532,386	556,321	613,211	673,757
Average fee per contract – futures and options	\$1.44	\$1.42	\$1.39	\$1.36	\$1.36
OTC markets					
Total notional cleared value (\$bn) ⁴	\$805.869	\$2,742.002	\$5,165.949	\$6,314.322	\$9,710.616
Open notional cleared value (\$bn) – period end	\$440.506	\$1,600.194	\$2,924.287	\$3,773.703	\$7,207.582
¹ Other includes VIX and sector futures.					
² 10 year bonds includes overnight and intraday 10 year bonds.					
³ Other includes agricultural and 90 day bank bills.					
⁴ Cleared notional value is double sided.					

Transaction levels and statistics continued

Year ended 30 June 2018	FY15	FY16	FY17	FY18	FY19
Austraclear					
Settlement days	254	254	253	252	253
Transactions ('000)					
Cash transfers	602	590	582	605	610
Fixed interest securities	774	717	741	770	812
Discount securities	157	150	146	146	147
Foreign exchange	22	11	9	9	9
Other	9	2	1	1	0
Total transactions ('000)	1,564	1,470	1,479	1,531	1,578
Average daily settlement volume	6,156	5,786	5,844	6,076	6,239
Securities holdings (\$bn) – monthly average	\$1,671.5	\$1,857.6	\$1,915.4	\$1,908.5	\$2,003.7
Securities holdings (\$bn) – period end	\$1,752.5	\$1,895.6	\$1,860.3	\$1,948.8	\$2,054.5
Average settlement and depository fee (including portfolio holdings) per transaction (excludes registry services revenue)	\$14.88	\$15.60	\$16.34	\$16.63	\$16.88
ASX Collateral (\$bn) – average	\$3.0	\$4.9	\$10.3	\$19.9	\$21.9
ASX Collateral (\$bn) – period end	\$4.1	\$4.9	\$16.2	\$23.5	\$22.4
System uptime (period average)					
ASX Trade	100.00%	100.00%	99.79%	100.00%	100.00%
CHESS	100.00%	99.98%	100.00%	99.99%	100.00%
Futures trading	99.97%	99.96%	100.00%	100.00%	100.00%
Futures clearing	100.00%	100.00%	100.00%	100.00%	100.00%
Austraclear	100.00%	99.93%	99.98%	99.98%	100.00%
Technical services (number at period end)					
ASX distribution platform					
Australian Liquidity Centre cabinets	188	231	285	301	324
Connection services					
ASX Net connections	126	116	123	112	104
ASX Net service feeds	358	382	437	444	447
Australian Liquidity Centre service connections	679	819	871	984	1,068
ASX service access					
ASX ITCH access	31	39	43	49	54
Futures ITCH access	36	45	74	80	73
ASX market access					
ASX sessions	1,185	1,113	1,033	922	886
ASX gateways	207	192	179	160	155
ASX liquidity cross-connections	55	57	60	64	57
ASX OUCH access	44	58	73	82	75
Futures gateways	228	208	199	251	329
Futures liquidity cross-connections	357	306	334	381	482

Shareholder information

ASX Limited – ordinary shares

ASX has ordinary shares on issue. These are listed on the Australian Securities Exchange under code: ASX. Details of trading activity are published daily in most major Australian newspapers (print, online and mobile) and by electronic information vendors.

At a general meeting, every shareholder present in person or by direct vote, proxy, attorney or representative has one vote on a show of hands and, on a poll, one vote for each fully paid share held unless that share is a default share.

The ASX constitution classifies default shares as any shares held above the 15% voting power limit by one party and its associates.

Distribution of shareholdings at 24 July 2019

Number of shares held	Number of holders	Number of shares	% of issued capital
1 to 1,000	36,014	12,795,948	6.61
1,001 to 5,000	9,189	18,204,001	9.40
5,001 to 10,000	715	5,040,307	2.60
10,001 to 100,000	607	19,004,395	9.82
100,001 and over	89	138,550,511	71.57
Total	46,614	193,595,162	100.00

On-market buy-back

There is no current on-market buy-back.

Substantial shareholders at 24 July 2019

The following organisations have disclosed a substantial shareholder notice to ASX.

Name	Number of shares	% of voting power
UniSuper Limited	23,280,620	12.03%
BlackRock Group	9,701,163	5.01%
Vanguard Group Inc	9,684,443	5.00%

Largest 20 shareholders at 24 July 2019

Name	Number of shares	% of issued capital
1. HSBC Custody Nominees (Australia) Limited	47,560,433	24.57
2. JP Morgan Nominees Australia Pty Limited	32,119,542	16.59
3. BNP Paribas Nominees Pty Limited	28,181,897	14.56
4. Citicorp Nominees Pty Limited	11,218,389	5.79
5. National Nominees Limited	5,468,964	2.82
6. Australian Foundation Investment Company Limited	708,685	0.37
7. Milton Corporation Limited	548,965	0.28
8. AMP Life Limited	523,212	0.27
9. BKI Investment Company Limited	397,750	0.21
10. Senior Master of the Supreme Court	337,032	0.17
11. Pacific Custodians Pty Limited	327,593	0.17
12. Mutual Trust Pty Limited	325,976	0.17
13. Law Venture Pty Limited	308,999	0.16
14. Navigator Australia Limited	268,506	0.14
15. Gwynvill Trading Pty Limited	241,559	0.12
16. Netwealth Investments Limited	215,446	0.11
17. Mr Michael Briody	183,474	0.09
17. Mr Gilles Kryger	183,474	0.09
17. Mr Leslie Paynter	183,474	0.09
17. Raffael Pty Limited	183,474	0.09
17. Trevorann Investments Pty Limited	183,474	0.09
17. Mr Kevin Troy	183,474	0.09
17. Vaucluse Skyline Pty Limited	183,474	0.09
Total	130,037,266	67.13%

Shareholders' calendar

FY19

Full-year financial results announcement	15 August 2019
Full-year final dividend and special dividend	
Ex-dividend date	5 September 2019
Record date for dividend entitlements	6 September 2019
Payment date	25 September 2019

Annual General Meeting 24 September 2019

FY20¹

Half-year financial results announcement	13 February 2020
Half-year interim dividend	
Ex-dividend date	5 March 2020
Record date for dividend entitlements	6 March 2020
Payment date	25 March 2020
Full-year financial results announcement	20 August 2020
Full-year final dividend	
Ex-dividend date	7 September 2020
Record date for dividend entitlements	8 September 2020
Payment date	30 September 2020

Annual General Meeting 30 September 2020

¹ Dates are subject to final ASX Board approval.

Shareholder information continued

Annual General Meeting 2019

The ASX AGM will be held in the ASX Auditorium, lower ground floor, Exchange Square, 18 Bridge Street, Sydney, New South Wales, at 10am (AEST) on Tuesday, 24 September 2019.

ASX's Notice of Annual General Meeting has been released on the Market Announcements Platform. Shareholders will receive a copy of the Notice of Meeting in accordance with their communications election.

The AGM will be webcast live on the internet. Please visit www.asx.com.au/agm.

A copy of the webcast will be placed on the ASX website after the event.

The external auditor will be present at the AGM to answer questions relevant to the external audit.

Electronic communication

ASX encourages shareholders to receive information electronically.

Shareholders who currently receive information by post can log in at www.linkmarketservices.com.au to provide their email address and elect to receive electronic communications.

ASX emails shareholders when important information becomes available such as financial results, dividend statements, notice of meetings, voting forms and annual reports.

Electronic communication allows ASX to communicate with shareholders quickly and reduces ASX's paper usage.

For further information, please contact ASX's share registry, Link Market Services, on 1300 724 911 or asx@linkmarketservices.com.au.

Important information about dividend payments

Australian and New Zealand shareholders receive their dividend payments by direct credit only. No cheque payments are made to these shareholders.

If you have not already done so, please provide direct credit instructions by visiting www.linkmarketservices.com.au.

Directory

Shareholder enquiries

Enquiries about shareholdings in ASX Limited

Please direct all correspondence to ASX's share registry:

Link Market Services

Level 12, 680 George Street
Sydney NSW 2000

Telephone

1300 724 911

Email

asx@linkmarketservices.com.au

Website

www.linkmarketservices.com.au

Questions to the ASX Chairman, Managing Director and CEO, or auditor

These may be emailed to:

company.secretariat@asx.com.au

Or mailed to ASX's registered office (details in right-hand column), marked to the attention of the Company Secretary.

For further information

Website

www.asx.com.au

ASX customer service

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131 279 (for the cost of a local call from anywhere in Australia)

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