



Annual Report and
Financial Statements
2019



RELX is a global provider of information-based analytics and decision tools for professional and business customers.

We help scientists make new discoveries, doctors and nurses improve the lives of patients and lawyers win cases. We prevent online fraud and money laundering, and help insurance companies evaluate and predict risk. Our events enable customers to learn about markets, source products and complete transactions.

In short, we enable our customers to make better decisions, get better results and be more productive.

Forward-looking statements

This Annual Report contains forward-looking statements within the meaning of Section 27A of the US Securities Act of 1933, as amended, and Section 21E of the US Securities Exchange Act of 1934, as amended. These statements are subject to risks and uncertainties that could cause actual results or outcomes of RELX PLC (together with its subsidiaries, "RELX", "we" or "our") to differ materially from those expressed in any forward-looking statement. The terms "outlook", "estimate", "project", "plan", "intend", "expect", "should", "will", "believe", "trends" and similar expressions may indicate a forward-looking statement. Important factors that could cause actual results or outcomes to differ materially from estimates or forecasts contained in the forward-looking statements include, among others, current and future economic, political and market forces; changes in law and legal interpretations affecting RELX intellectual property rights and internet communications; regulatory and other changes regarding the collection, transfer or use of third-party content and data; demand for RELX products and services; competitive factors in the industries in which RELX operates; ability to realise the future anticipated benefits of acquisitions; significant failure or interruption of our systems; compromises of our data security systems or other unauthorised access to our databases; legislative, fiscal, tax and regulatory developments and political risks; exchange rate fluctuations; and other risks referenced from time to time in the filings of RELX PLC with the US Securities and Exchange Commission.

Contents

Overview*

- 2 2019 Financial highlights
- 3 Chair's statement
- 4 Chief Executive Officer's report
- 5 RELX business overview

Market segments*

- 12 Scientific, Technical & Medical
- 18 Risk & Business Analytics
- 24 Legal
- 30 Exhibitions

Corporate Responsibility*

- 37 Corporate Responsibility overview

Financial review*

- 52 Chief Financial Officer's report
- 58 Principal and emerging risks

Governance

- 64 Board Directors
- 66 RELX Senior Executives
- 68 Chair's introduction to corporate governance
- 70 Corporate governance review
- 85 Report of the Nominations Committee
- 88 Directors' remuneration report
- 112 Report of the Audit Committee
- 115 Directors' report

Financial statements and other information

- 120 Independent auditor's report
- 128 Consolidated financial statements
- 177 RELX PLC annual report and financial statements
- 182 Summary financial information in euros
- 183 Summary financial information in US dollars
- 184 Reconciliation of adjusted to GAAP measures
- 186 Shareholder information
- IBC 2020 financial calendar

* Comprises the Strategic Report in accordance with The (UK) Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013.



Get more information online

A PDF of the full Annual Report and further information about our businesses can be found online at our website: www.relx.com

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

2019 Financial highlights

- Underlying revenue growth of 4%
- Underlying adjusted operating profit growth of 5%
- Reported operating profit £2,101m (£1,964m)
- Adjusted EPS at constant currency up 7%; in sterling up 10% to 93.0p
- Reported EPS 77.4p (71.9p)
- Full-year dividend up 9% to 45.7p
- Strong financial position and cash flow; cash flow conversion at 96%

RELX financial summary

REPORTED FIGURES	2019 £m	2018 £m	Change	Change at constant currencies	Change underlying
For the year ended 31 December					
Revenue	7,874	7,492	+5%	+2%	+4%
Operating profit	2,101	1,964	+7%		
Profit before tax	1,847	1,720	+7%		
Net profit attributable to RELX PLC shareholders	1,505	1,422	+6%		
Net margin	19.1%	19.0%			
Net borrowings	6,191	6,177			
Reported earnings per share	77.4p	71.9p	+8%		
Ordinary dividend per RELX PLC share	45.7p	42.1p	+9%		
ADJUSTED FIGURES	2019 £m	2018 £m	Change	Change at constant currencies	Change underlying
For the year ended 31 December					
Operating profit	2,491	2,346	+6%	+3%	+5%
Operating margin	31.6%	31.3%			
Profit before tax	2,200	2,145	+3%	0%	
Net profit attributable to RELX PLC shareholders	1,808	1,674	+8%	+5%	
Net margin	23.0%	22.3%			
Cash flow	2,402	2,243	+7%		
Cash flow conversion	96%	96%			
Return on invested capital	13.6%	13.2%			
Adjusted earnings per share	93.0p	84.7p	+10%	+7%	

The shares of RELX PLC are traded on the London, Amsterdam and New York stock exchanges. RELX PLC and its subsidiaries, joint ventures and associates are together known as 'RELX'.

RELX uses adjusted and underlying figures as additional performance measures. Adjusted figures primarily exclude the amortisation of acquired intangible assets and other items related to acquisitions and disposals, and the associated deferred tax movements. In 2018, we excluded exceptional tax credits, see note 9 on page 145. Reconciliations between the reported and adjusted figures are set out on page 184. Underlying growth rates are calculated at constant currencies, excluding the results of acquisitions until twelve months after purchase, and excluding the results of disposals and assets held for sale. Underlying revenue growth rates also exclude exhibition cycling. Constant currency growth rates are based on 2018 full-year average and hedge exchange rates.

Chair's statement



Sir Anthony Habgood
Chair

We continued to execute well on our strategic priorities in 2019. This was reflected in strong earnings. We also continued to build on our strong environmental, social and governance performance during the year, and this was again recognised in the high ratings given to us by a number of external agencies.

RELX continued to execute well on its strategic priorities aimed at achieving more predictable revenues, a higher growth profile and improving returns. Underlying revenue growth was again 4%, with underlying adjusted operating profits up 5%, as we continued to grow revenues ahead of costs. Adjusted earnings per share grew 10% in sterling to 93.0p (84.7p), and 7% at constant currencies. Reported earnings per share were 77.4p (71.9p).

Dividends

We are proposing a full year dividend increase of 9% to 45.7p. The long-term dividend policy is unchanged.

Balance sheet

Net debt was £6.2bn at 31 December 2019, unchanged from last year. Net debt/EBITDA including pensions and leases was 2.5x, compared with 2.4x in 2018. Capital expenditure represented 5% of revenues.

Share buybacks

In 2019, we deployed £600m on share buybacks. We intend to deploy a total of £400m in 2020. By 13 February, £100m of this year's total had already been completed, leaving a further £300m to be deployed during the year.

The Board

As announced in February, after over ten years as Chair, I have decided to retire from the Board when a successor has been appointed. A comprehensive search is underway. The Group has

made great progress over the past decade and is well positioned for future growth. As a result, I believe that this is the year both from my own perspective and from that of the company in which to make a change of Chair.

At the 2019 Annual General Meeting, Ben van der Veer stood down from the Board after nine years' service, Carol Mills, a Non-Executive director since 2016 left the Board, and Andrew Sukawaty was appointed a Non-Executive Director. Andrew has had a 30-year career in the telecoms industry, he is Chairman of Inmarsat and was a Non-Executive Director of Sky between 2013 and 2018. In December Charlotte Hogg was appointed a Non-Executive Director. Ms Hogg is currently Executive Vice President and Chief Executive Officer for the European operations of Visa, a Board Director of Visa Europe and a member of Visa's global executive committee. In 2020, Suzanne Wood will take over from Adrian Hennah as Chair of the Audit Committee. Adrian, who has been on the Board since 2011, will be stepping down as a Non-Executive Director after the next Annual General Meeting. I would like to thank Ben, Adrian and Carol for their support and advice, and am delighted that Andrew and Charlotte have joined the Board.

Stakeholder consultation

We conducted our biennial survey to understand what matters to different stakeholders: we asked investors, customers, employees, suppliers, and representatives from government and non-governmental organisations among others, to rank the issues they believe have the biggest impact on RELX. The top two issues were having the right people and data privacy and security. We also asked them to identify where we have the biggest impact on society and the environment – our unique contributions as a business came first, followed by access to information.

Corporate responsibility

Corporate responsibility (CR) has been a priority at RELX for many years. The Board of Directors regularly takes time to engage on the subject, overseeing our CR objectives and performance, ensuring we are operating at the highest commercial and ethical standards. Our belief remains firmly that good governance and sustainability are integral to good financial performance.

We believe that CR is a core strength of RELX and it is significant that Environmental, Social and Governance (ESG) performance is increasingly being recognised as an important indicator of a company's overall health, the sustainability of its market positions, its attractiveness to key employees and its ability to generate growing long-term returns to shareholders. As a company with a long-standing record of leadership in this broad field, RELX is now benefitting from the greater profile that is being given to ESG and the increasingly rigorous and objective ways in which it is being measured, monitored and indexed. In 2019 RELX was ranked second in the S&P Global 1200 for ESG performance by CSRHub, and sixth in the newly launched Responsibility 100 index of FTSE 100 companies measured against the United Nations 17 Sustainable Development Goals. In 2019 RELX retained its AAA ESG rating with MSCI for the fourth consecutive year, and in January 2020 a Sustainalytics ESG report put RELX in the top one percent of over 12,000 companies covered.

Our corporate responsibility objectives for the year ahead align with the findings of our stakeholder survey (the full listing is available in the 2019 RELX Corporate Responsibility Report).

Anthony Habgood

Chair

Chief Executive Officer's report



Erik Engstrom
Chief Executive Officer

RELX continued to make good progress in 2019. Our number one strategic priority is unchanged: the organic development of increasingly sophisticated information-based analytics and decision tools that deliver enhanced value to our customers, supplemented by selective acquisitions of targeted data, analytics and exhibition assets that support our organic growth strategies

2019 progress

Our positive financial performance continued in 2019 with underlying revenue growth across all four business areas. Underlying revenue growth was 4%. Underlying operating profit growth was 5%, and adjusted earnings per share grew 7% at constant currencies.

The underlying growth rate reflects good growth in electronic and face-to-face revenues (91% of the total), and the further organic development of our analytics and decision tools.

We also continued to reshape our portfolio through selective acquisitions of targeted data, analytics and exhibitions assets that support our organic growth strategies. We completed 14 acquisitions for a total consideration of £416m, the largest of which was Mack Brooks, a leading organiser of complementary events. Since the year end we acquired ID Analytics, a provider of credit and fraud risk solutions, and Emailage, a provider of email based fraud prevention solutions, both will complement our existing fraud prevention services within Risk & Business Analytics.

With a strong balance sheet and an inherently cash-generative business, the strategic priority order for using our cash is unchanged. First, to invest in the organic development of our business to drive underlying revenue growth; second to support our organic growth strategy with targeted acquisitions; third to grow dividends predictably, broadly in line with EPS growth; fourth to maintain our leverage in a comfortable range; and finally use any remaining cash to buy back shares. As part of this we bought back shares for £600m in 2019 and announced £400m in buybacks for 2020.

Corporate responsibility

We have long recognised that corporate responsibility is important to RELX and is critical to the company's long-term success. We define corporate responsibility as the way we do business, working to increase our positive impact and reduce any negative impact. It ensures good management of risks and opportunities, helps us attract and retain the best people and strengthens our corporate reputation.

During 2019, RELX remained committed to advancing its unique contributions as a business, which are aligned with the United Nations Sustainable Development Goals (SDGs). Knowledge is critical to achieving the SDGs by 2030, and during the year we strengthened the free RELX SDG Resource Centre, reaching 1000 sources from across our business and from partners, including UN University and the Global Partnership for Sustainable Development Data. We used our Scopus citations database and SciVal analytical tool to produce two new SDG graphics on water (SDG 6) and sustainable cities (SDG 11), which reveal the state of research underpinning these goals.

To progress corporate responsibility (CR) across RELX, we prioritised training for employees on our culture of integrity; expanded ISO27001 data protection compliance certification to more parts of our business; focused on inclusion, and increased the number of women in our tech mentoring programme to 95 pairs. We reached 30% women on our executive team. We rolled out our updated Editorial Policy and helped embed accessibility further by creating an Accessibility Advisory Board. Globally 45% of staff volunteered in our communities and 56% of our businesses reached the RELX Environmental Standards.

We also launched the LexisNexis Rule of Law Foundation to facilitate projects with key partners on the rule of law. We held Rule of Law Cafés in London, Singapore and Malaysia to bring together the legal community, business, government and non-governmental organisations to share information on going beyond legal minimums to advance the rule of law.

In the year ahead we will work to further strengthen our CR performance.

Outlook

Key business trends in the early part of 2020 are consistent with the full year 2019, and we are confident that, by continuing to execute on our strategy, we will deliver another year of underlying growth in revenue and in adjusted operating profit, together with growth in adjusted earnings per share on a constant currency basis.

Erik Engstrom
Chief Executive Officer

RELX business overview

Strategic direction

Our number one strategic priority is the organic development of increasingly sophisticated information-based analytics and decision tools that deliver enhanced value to professional and business customers across the industries that we serve.

Our goal is to help our customers make better decisions, get better results and be more productive. We do this by leveraging a deep understanding of our customers to create innovative solutions which combine content and data with analytics and technology in global platforms.

We aim to build leading positions in long-term global growth markets and leverage our skills, assets and resources across RELX, both to build solutions for our customers and to pursue cost efficiencies.

We are systematically migrating all of our information solutions across RELX towards higher value-add decision tools, adding

broader data sets, embedding more sophisticated analytics and leveraging more powerful technology, primarily through organic development.

We are transforming our core business, building out new products and expanding into higher growth adjacencies and geographies. We are supplementing this organic development with selective acquisitions of targeted data sets and analytics, and assets in high-growth markets that support our organic growth strategies, and are natural additions to our existing businesses.

By focusing on evolving the fundamentals of our business we believe that, over time, we are improving our business profile and the quality of our earnings. This has led to more predictable revenues through a better asset mix and geographic balance; a higher growth profile as we expand in higher growth segments, exit from structurally challenged businesses, and gradually reduce the drag from print format declines; and improved returns by focusing on organic development with strong cash generation.

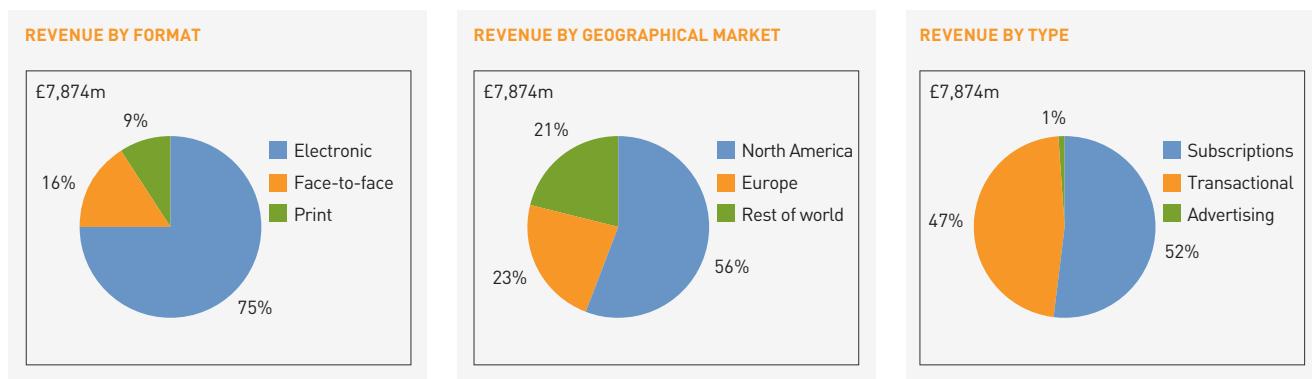


RELX business model

RELX is a global provider of information-based analytics and decision tools for professional and business customers. We leverage deep customer understanding to combine leading content and data sets with powerful global technology platforms to build sophisticated analytics and decision tools that deliver enhanced value to our customers.

These products are generally sold through dedicated sales forces direct to customers and are priced on a subscription or transactional basis, often under multi-year contracts. They are predominantly delivered in electronic and face-to-face formats, and, to a small extent, in print.

Our products often account for less than 1% of our customers' total cost base but can have a significant and positive impact on the economics of the remaining 99%. Our objective is to continue to enhance the value that we deliver to our customers and over time to grow our own total cost base below our rate of revenue growth on an underlying basis.



Key performance indicators

RELX's key performance indicators (KPIs) track progress against long-term priorities. At the group level, given the diverse nature of our end markets, we look at the continued migration of the business towards electronic delivery, the increasing introduction of electronic decision tools, group level financial metrics, and corporate responsibility and sustainability metrics. The executive directors' remuneration policy includes measures linked to the financial KPIs and may also include non-financials. See pages 97 to 109 for details of the implementation of the policy in 2019, page 110 for the implementation in 2020 and pages 88 to 96 for the remuneration policy to be proposed for approval by shareholders at the Annual General Meeting to be held in April 2020.

In addition, we track KPIs within each market segment, at the product level, relevant to the performance of the specific business units.

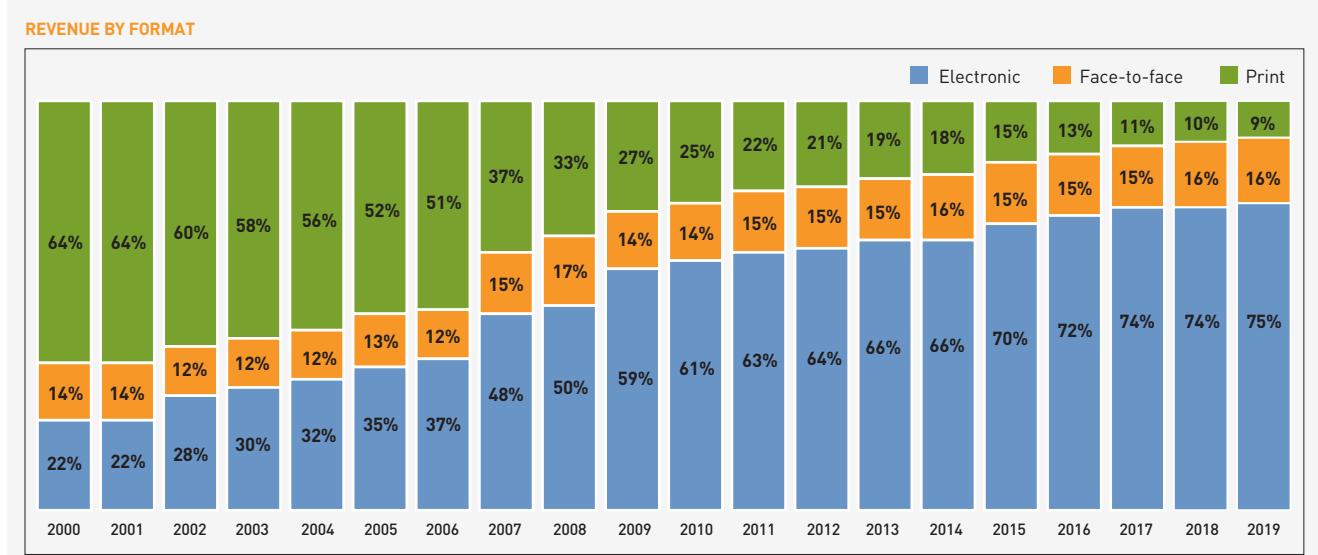
Significant group financial KPIs are set out below.

For non-financial KPIs a summary of the corporate responsibility and sustainability performance metrics and targets are set out on pages 37 to 49 in the Corporate Responsibility overview.

Financial KPIs



Revenue by category



Market segments

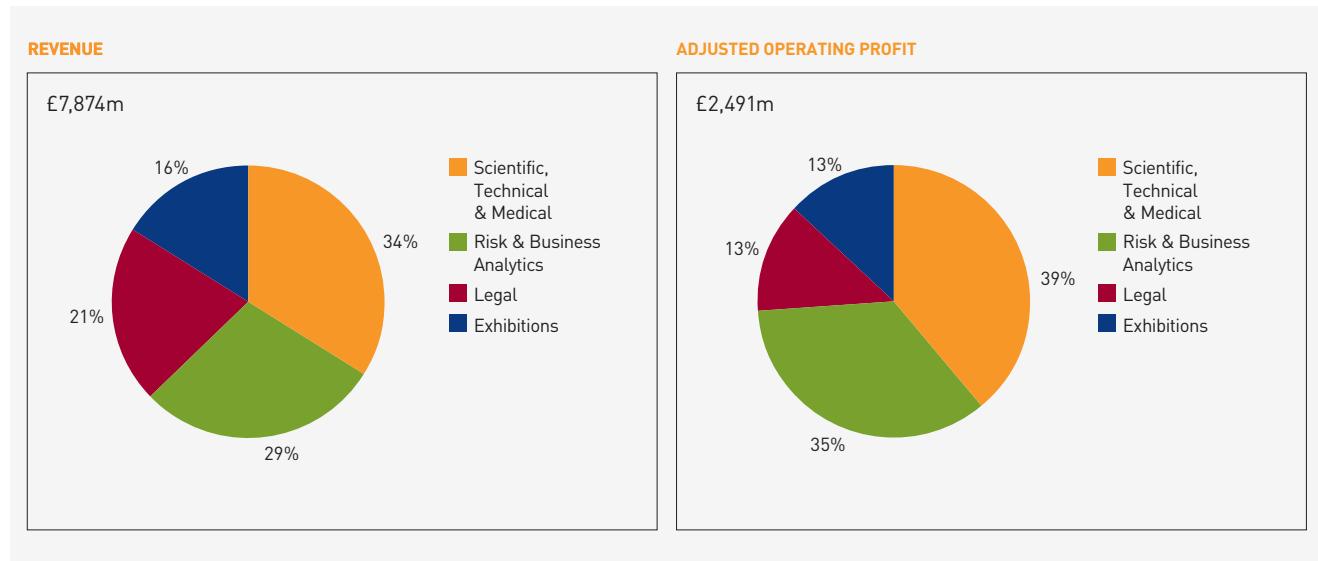
RELX serves customers in more than 180 countries and has offices in about 40 countries. It employs over 33,000 people, of whom almost half are in North America.

	Segment position
Scientific, Technical & Medical provides information and analytics that help institutions and professionals progress science, advance healthcare and improve performance	Global #1
Risk & Business Analytics provides customers with information-based analytics and decision tools that combine public and industry-specific content with advanced technology and algorithms to assist them in evaluating and predicting risk and enhancing operational efficiency	Key verticals #1
Legal provides legal, regulatory and business information and analytics that help customers increase their productivity, improve decision-making and achieve better outcomes	US #2 Outside US #1 or 2
Exhibitions is a leading global events business. It combines face-to-face with data and digital tools to help customers learn about markets, source products and complete transactions at over 500 events in almost 30 countries, attracting more than 7m participants	Global #2

Financial summary by market segment

	Revenue		Adjusted operating profit	
	2019 £m	Change underlying	2019 £m	Change underlying
Scientific, Technical & Medical	2,637	+2%	982	+3%
Risk & Business Analytics	2,316	+7%	853	+8%
Legal	1,652	+2%	330	+8%
Exhibitions	1,269	+6%	331	-1%
Unallocated items	7,874	+4%	(5)	
			2,491	+5%

RELX uses adjusted and underlying figures as additional performance measures. Adjusted figures primarily exclude the amortisation of acquired intangible assets and other items related to acquisitions and disposals, and the associated deferred tax movements. In 2018, we excluded exceptional tax credits, see note 9 on page 145. Reconciliations between the reported and adjusted figures are set out on page 184. Underlying growth rates are calculated at constant currencies, excluding the results of acquisitions until twelve months after purchase, and excluding the results of disposals and assets held for sale. Underlying revenue growth rates also exclude exhibition cycling. Constant currency growth rates are based on 2018 full-year average and hedge exchange rates.



Harnessing technology across RELX

Around 9,000 technologists, half of whom are software engineers, work at RELX. Annually, the company spends \$1.4bn on technology. The combination of our rich data assets, technology infrastructure and knowledge of how to use next generation technologies, such as machine learning and natural language processing, allows us to create effective solutions for our customers.

4

new drug candidates to treat chronic pancreatitis, identified on Elsevier's AI-powered life sciences platform Entellect in 60 days through analysis of 10 million drug target interactions



Helping discover new drugs to treat rare diseases

Chronic pancreatitis, which affects about one million people globally, is a painful disease with no current cure. Because of the high cost and low return for finding treatments for such relatively rare diseases, drug makers devote little time and effort to finding cures.

Elsevier, with its vast stores of drug data and artificial intelligence (AI) technologies, including Entellect, its newest AI-powered life sciences platform, felt this was the perfect opportunity to make a difference in the community. Elsevier teamed with non-profit organisations, industry and academic partners, as well as researchers across the globe to find drugs already in existence that could be repurposed to treat the rare disease.

The company hosted a datathon collaboration 'Repurposing Drugs for Rare Diseases' with non-profit organisations Cures Within Reach, Mission: Cure, and the Pistoia Alliance (which represents 14 of the top 20 global pharmaceutical companies), life sciences and technology companies including Ariel Precision Medicine, and academia including Cincinnati Children's Hospital Medical Center and University of Northern Iowa.

The datathon leveraged Elsevier's expertise, with Entellect as the underpinning AI platform. They combined data from Elsevier's Life Sciences products (including Reaxys) and third party external data from Open Targets, including data scientists and researchers from the participating organisations.

After 60 days of intense work, the datathon revealed four drugs that could potentially be repurposed to treat chronic pancreatitis. These drugs were validated by independent experts and will now be taken for clinical testing.



“

We are enthusiastic about the discoveries made in the Elsevier-Pistoia Alliance datathon. The problem-solving and teamwork focused on chronic pancreatitis were inspiring. We look forward to taking the promising candidates to the next step where we hope they will help us find effective treatments for this difficult, rare disease. The datathon exceeded our expectations, producing four repurposing candidates to address multiple chronic pancreatitis targets.

Megan Golden
co-founder and co-director,
Mission: Cure



10m

financial transactions
processed every day
using machine learning
capabilities from
LexisNexis Risk
Solutions' HPCC Systems



DataSeers is based in Atlanta, Georgia

Managing complex financial data quickly and efficiently with HPCC Systems

DataSeers is a Georgia-based company that was created in 2017 and provides a reconciliation, analytics and fraud-prevention engine (FinanSeer) for the financial services space. The DataSeers platform is comprised of four modules, one of which is ReconSeer – a rule-based engine that oversees reconciliation of millions of prepaid cards and accounts at unprecedented speeds, helping make monetary decisions in a fast and efficient manner.

The global market for prepaid cards is expected to reach \$3,600bn by 2022. Much of this growth is fuelled by the rising need for financial inclusion of unbanked consumers, increasing volumes of online transactions, and the demand for cost-effective payment solutions. The industry continues to be plagued with problems when it comes to back office data management.

Prepaid cards generate a tremendous amount of data that need to be linked and analysed quickly. Companies must replicate data within multiple systems which can create trust issues.

DataSeers needed a big data partner that could handle what it termed the 4V big data conundrum – volume, velocity, variety, and veracity. DataSeers decided to leverage the robust capabilities of LexisNexis Risk Solutions' HPCC Systems to create a machine learning-based approach to managing financial data.

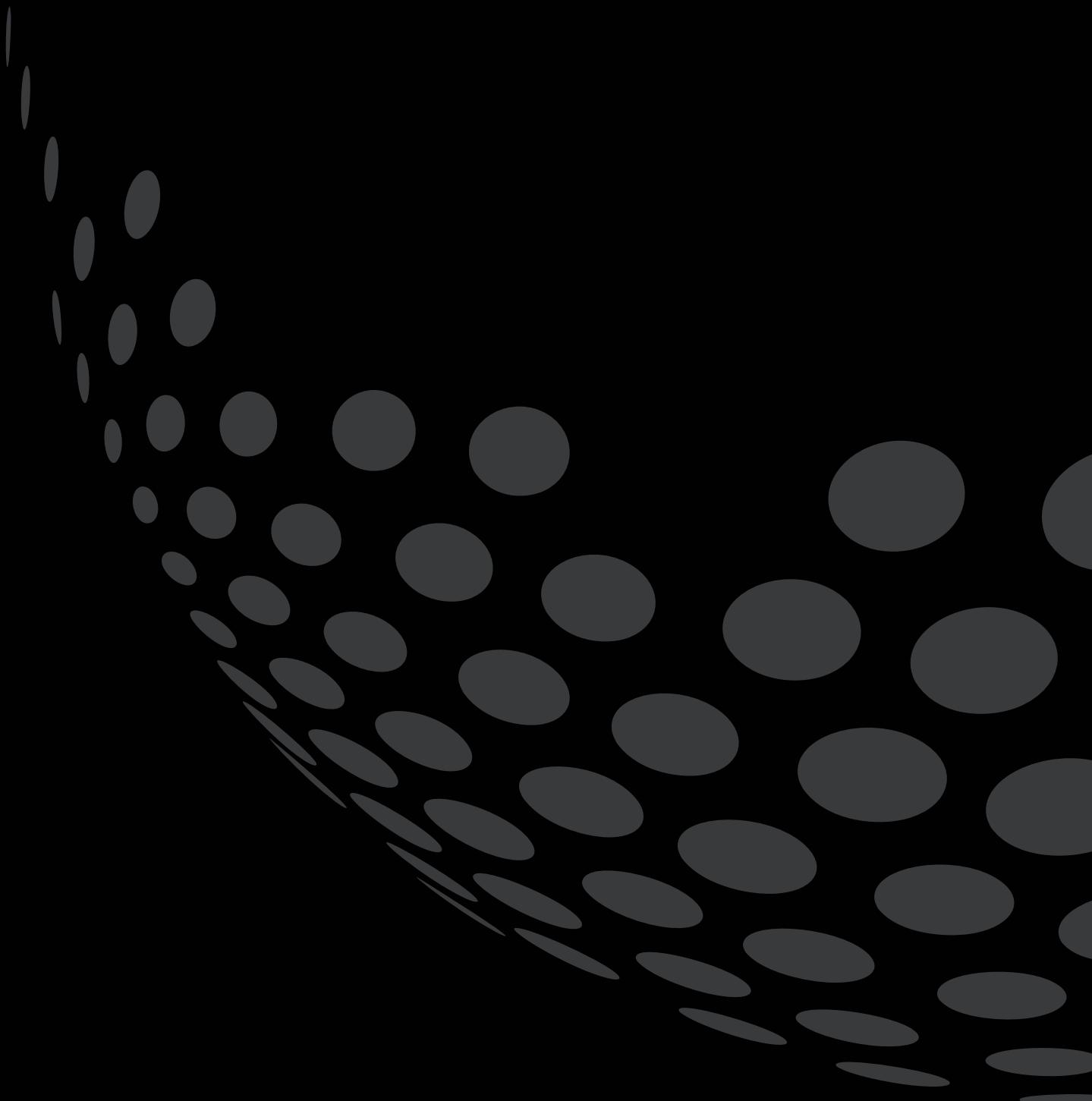
Typically it takes hours to reconcile records, but with ReconSeer, millions of records on various platforms can be reconciled within seconds, enabling clients to make smarter decisions faster than ever before. The system identifies fraud and compliance issues using machine learning capabilities from HPCC Systems, which is important since FinTech companies have very little to no time to react to these transactions. Ultimately, this helps increase trust in the use of prepaid cards and helps prevent fraud and money laundering.



66

Our choice of HPCC Systems as a core technology has allowed us to reduce our integration time to customers and provide results back in a timeline that was not possible before. A great partnership with LexisNexis Risk Solutions around Know Your Customer and Know Your Business helps us even further, and we can now provide a completely unified experience from onboarding to account closure all on a single platform.

Adwait Joshi
CEO and founder,
DataSeers



Market segments

In this section

- 12 Scientific, Technical & Medical
- 18 Risk & Business Analytics
- 24 Legal
- 30 Exhibitions

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Scientific, Technical & Medical

We help researchers make new discoveries, collaborate with their colleagues and give them the knowledge they need to find funding. We help governments and universities evaluate and improve their research strategies. We help doctors and nurses improve the lives of patients, providing insight to find the right clinical answers.

- We enhance the quality of scientific research output by organising the review, editing and dissemination of 18% of the world's scientific articles
- ScienceDirect, the world's largest platform dedicated to peer-reviewed primary scientific and medical research, hosts over 17m pieces of content including from over 40,000 e-books and has over 17m monthly unique visitors
- Scopus is a leading source-neutral abstract and citation database of research literature, with over 76m records across 25,000 journals, sourced from more than 5,000 publishers
- SciVal offers insights into the research performance of over 16,000 research institutions
- ClinicalKey, the flagship clinical reference platform, is accessed in around 100 countries and territories, and by over 1,900 institutions in North America alone
- Elsevier journals have at some point featured articles by 195 of 196 science and economics Nobel Prize winners since 2000

Business overview

Scientific, Technical & Medical provides information and analytics that help institutions and professionals progress science, advance healthcare and improve performance.

Elsevier is headquartered in Amsterdam, with further principal operations in Boston, New York, Philadelphia, St. Louis and Berkeley in North America, London, Oxford, Frankfurt, Munich, Madrid and Paris in Europe, Beijing, Chennai, Delhi, Singapore and Tokyo in Asia Pacific and Rio de Janeiro in South America. It has 8,100 employees and serves customers in over 180 countries.

Revenues for the year ended 31 December 2019 were £2,637m, compared with £2,538m in 2018 and £2,473m in 2017. In 2019, 45% of revenue came from North America, 24% from Europe and the remaining 31% from the rest of the world. Subscription sales generated 75% of revenue, transactional sales 23% and advertising 2%.

Elsevier serves the needs of scientific, technical and medical markets by organising the review, editing and dissemination of primary research, reference and professional education content. Growing from its roots in publishing, Elsevier is creating analytical solutions to serve the needs of science and health, applying technology to authoritative information, providing tools that enable faster and more efficient ways of working, freeing up users to focus on their goals.

Elsevier's customers are scientists, academic institutions, research leaders and administrators, medical researchers, doctors, nurses, allied health professionals and students, as well as hospitals, research institutions, health insurers, managed healthcare organisations, research-intensive corporations and governments.

Elsevier services fall into four market categories: Primary Research, Databases & Tools, Reference and Pharma Promotion.

Primary Research accounts for around half of revenues. Elsevier serves the global scientific research community, publishing over 496,000 articles in 2019, 60% more than a decade ago. 2019 saw continued strong growth both in article submissions and usage, with over 2m articles submitted and 1bn articles consumed by researchers. In 2019, Elsevier published over 49,000 gold open access articles, a double-digit growth on the previous year, making it one of the largest open access publishers in the world.

Elsevier's portfolio of 2,500 journals is managed by more than 22,000 editors and many of its journals are the foremost publications in their field. They include flagship titles such as Cell and The Lancet family of journals. Elsevier's article output accounts for 18% of global research output while garnering a 26% share of citations, demonstrating Elsevier's commitment to delivering research quality significantly ahead of the industry average.

In 2019, Elsevier launched six new subscription and 100 full open access journals, including Physics Open, Cell Press' Patterns and JACC: Case Reports.

Research content is distributed and accessed via ScienceDirect, the world's largest platform dedicated to peer-reviewed primary scientific and medical research. Elsevier continues to invest in and deploy advanced Machine Learning (ML) and Artificial Intelligence (AI) capabilities to help power personalised article recommenders on ScienceDirect, suggesting new knowledge to ScienceDirect readers to expand the scope of their search and discovery.

In **Databases & Tools**, Elsevier offers a suite of products for academic and corporate researchers. Significant products include Scopus, Reaxys and ClinicalKey. Scopus is a source-neutral abstract and citation database curated by independent subject matter experts with over 76m records across 25,000 journals, sourced from more than 5,000 publishers. It places powerful discovery and analytics tools in the hands of researchers, librarians, institutional research managers and funders. Reaxys is a chemistry research and education database with chemical substance, properties, reaction and medicinal chemistry data for both bench chemists and data scientists supporting drug discovery and chemical R&D in industries such as pharmaceuticals, chemicals and academic & government.

Elsevier serves academic and government research administrators and leaders through its Research Intelligence suite of products. SciVal is a decision tool that helps institutions to establish, execute and evaluate research strategies by leveraging bibliometric data from Scopus and other data types such as patent citations and usage data. Elsevier expanded its leadership position in research institution benchmarking analytics through further investment in its SciVal Topic Prominence in Science. Big data technology takes into consideration nearly all of the articles available in Scopus since 1996 and clusters them into nearly 96,000 global, unique research topics based on citations patterns. In 2019, we launched new functionality in SciVal to help customers analyse research done on the UN Sustainable Development Goals.

Elsevier's flagship clinical reference platform, ClinicalKey, provides physicians, nurses and pharmacists with access to leading Elsevier and third-party reference and evidence-based medical content, including over 500 clinical overviews that provide quick clinical answers and summaries; over 4.2m images and 58,000 medical and surgical videos in a single, fully integrated site. ClinicalKey is accessed in around 100 countries and territories, and by over 1,900 institutions in North America alone. Elsevier has

developed a Healthcare Knowledge Graph, which utilises ML and Natural Language Processing (NLP) to knit together its collection of the world's foremost clinical knowledge. The Healthcare Knowledge Graph enhances ClinicalKey, the portal into Elsevier's vast medical content library by providing more timely clinical results for users.

In medical education, Elsevier serves students of medicine, nursing and allied health professions in multiple formats including electronic books and electronic solutions. For example Sherpath, an adaptive teaching and learning solution for nursing and health education, now provides highly focused, personalised and adaptive learning paths at over 400 institutions, supporting more than 50,000 enrolments.

For healthcare professionals, Elsevier's clinical solutions include Interactive Patient Education and Care Planning. Elsevier's ClinicalPath (formerly Via Oncology) provides clinical pathways delivering personalised, evidence-based oncology guidance at the point of care. Elsevier's analytics capabilities in oncology support our ClinicalPath customers in answering increasingly complex questions around the delivery of cancer care, such as appropriate use of precision oncology and treatment adherence.

In commercial healthcare, consumer, provider and medical claims data is used to deliver leading identity, fraud, compliance and health risk analytics solutions for payers, providers, pharmacies and life sciences organisations.

In **Reference**, Elsevier is a global leader in providing authoritative and current professional reference content to scientific, technical and medical reference markets. Flagship titles include Gray's Anatomy, Nelson's Pediatrics and Netter's Atlas of Human Anatomy. Reference content is delivered in both electronic and print formats, with print reference now accounting for less than 10% of Elsevier revenues.



ScienceDirect®

The world's largest platform dedicated to peer-reviewed primary scientific and medical research

Reaxys®

Chemistry research and education database with chemical substance, properties, reaction and medicinal chemistry data for both bench chemists and data scientists supporting drug discovery and chemical R&D

Scopus®

A leading source-neutral abstract and citation database of peer-reviewed literature featuring smart tools to track, analyse and visualise research

Cell

Science that inspires: premier life sciences journal with the highest impact factor in biochemistry and molecular biology

ClinicalKey®

Combines leading reference and evidence based medical content into its fully integrated clinical insight engine specialised for doctors, nurses, or pharmacists

SciVal

Ready-to-use tools to analyse the world of research, and establish, execute and evaluate the best strategies for research organisations

THE LANCET

Science for better lives: one of the world's leading medical journals since 1823

Mendeley

An innovative research management and social collaboration platform

CiteScore™

CiteScore™ metrics are a set of comprehensive, transparent, current and free metrics to help measure the citation impact of journals

Aries®

A leader in scientific publication workflow solutions used by journals, books and other publications for manuscript submission, peer review, production tracking and e-commerce

ClinicalPath

Designed to help improve patient outcomes, ClinicalPath provides clinical pathways delivering personalised, evidence-based guidance at the point of care

Pharma Promotion offers customised commercial marketing services to pharmaceutical and medical device companies, building on Elsevier's trusted global content brands to connect and engage with doctors, nurses and other healthcare professionals who are influential decision makers.

Market opportunities

Scientific, technical and medical information markets have good long-term growth characteristics. The importance of research and development to economic performance and competitive positioning is well understood by governments, academic institutions and corporations. This is reflected in the long-term growth in research and development spending and in the number of researchers worldwide. Growth in health markets is driven by ageing populations in developed markets, rising prosperity in developing markets and the increasing focus on improving medical outcomes and efficiency. Given that a significant proportion of scientific research and healthcare is funded directly or indirectly by governments, spending is influenced by governmental budgetary considerations. The commitment to research and health provision does, however, remain high, even in more difficult budgetary environments.

Strategic priorities

Elsevier's strategic priorities are to: continue to increase content volume and quality; expand content coverage, building out integrated solutions and decision tools combining Elsevier, third-party and customer data; increase content utility, using 'Smart Content' to enable new e-solutions; combine content with analytics and technology, focused on measurably improved productivity and outcomes for customers; and continue to drive operational efficiency and effectiveness.

In the primary research market, Elsevier aims to deliver journal and article quality above the industry average at below average cost, leveraging the scale of its platform. We work directly with our customers to understand their objectives and help them reach their research goals in a way that is satisfactory from a content, service and economic perspective. Elsevier looks to enhance quality by building on its premium brands and grow article volume through new journal launches, the expansion of open access journals and growth from emerging markets; and add value to core platforms by implementing capabilities such as advanced recommendations on ScienceDirect and social collaboration through reference manager and collaboration tool Mendeley.

In reference markets, Elsevier's priorities are to expand content coverage and ensure consistent and seamless linking of content assets across products.

In every market, Elsevier is applying advanced ML and NLP techniques to help researchers, engineers and clinicians perform their work better. For example, in research, ScienceDirect Topics, a free layer of content that enhances the user experience, uses ML and NLP techniques to classify scientific content and organise it thematically, enabling users to get faster access to relevant results and related scientific topics. The feature, launched in 2017, is proving popular, generating 15% of monthly unique visitors to ScienceDirect via a topic page. Elsevier also applies advanced ML techniques that detect trending topics per domain, helping researchers make more informed decisions about their research. Coupled with the automated profiling and extraction of funding body information from scientific articles, this process supports the whole researcher journey; from planning, to execution and funding.

Similarly, in health, Elsevier is developing clinical decision support applications utilising cognitive technologies to map patient and claims data sets, and large image and text content repositories. These applications embedded in technology platforms will enhance the delivery of the right content, in the right care setting, to the right care providers. This will help health professionals perform their work better, make more accurate diagnoses, ensure appropriate care delivery, and save more human lives.

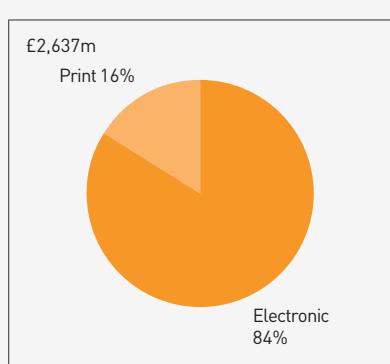
In 2019, Elsevier acquired Parity Computing Inc., further strengthening capabilities in AI to provide high-accuracy entity resolution, profiling and recommendations for scientific, technical & medical content and applications. Elsevier also acquired 3D4Medical, an anatomy education business headquartered in Dublin, Ireland. A recipient of the Apple Design & Innovation Award, 3D4Medical brings world class 3D technology to enhance Elsevier's leading medical content and education offerings.

Business model, distribution channels and competition

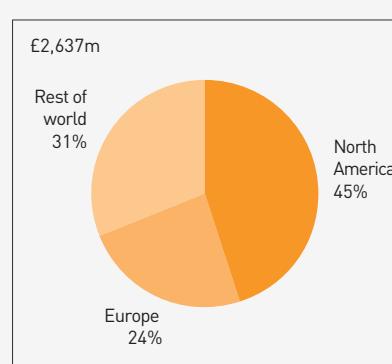
In Primary Research, science and medical research is principally disseminated on a paid subscription basis to the research facilities of academic institutions, governments and corporations and, in the case of medical and healthcare journals, to health institutions, individual practitioners and medical society members.

While paid subscriptions continue to be the primary distribution model, alternative payment models for the dissemination of research have evolved over the past 20 years. Elsevier has long

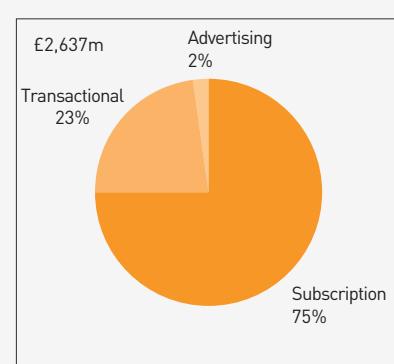
REVENUE BY FORMAT



REVENUE BY GEOGRAPHICAL MARKET



REVENUE BY TYPE



invested in all business models to support the preferences of authors and research institutions. Author pays open access is one example, with over 1,900 of Elsevier's journals now offering the option of funding publication and distribution via a sponsored article fee. In addition, Elsevier now publishes over 370 full open access titles.

For well over a decade, content has been provided for free or at very low cost in more than 100 countries and territories in the developing world through Research4Life, a United Nations partnership initiative. For some journals, advertising and promotional income represents a small proportion of revenues, predominantly from pharmaceutical companies in healthcare titles.

Next to journals, Elsevier has also invested in other solutions to serve the needs of the research community. SSRN is an open access online preprint community where researchers post early-stage research, prior to publication in academic journals. Mendeley data enables researchers to make their research data publicly available through an open research data repository, while

Digital Commons helps academic libraries showcase and share their institutions' research via institutional repositories for greatest impact.

Electronic products, such as ScienceDirect, Scopus and ClinicalKey, are generally sold direct to customers through a dedicated sales force that has offices around the world. Subscription agents facilitate the sales and administrative process for remaining print journal sales. Reference and educational content is sold directly to institutions and individuals and accessed on Elsevier platforms, while printed books are sold through retailers, wholesalers and directly to end users.

Competition within science and medical reference content is generally on a title-by-title and product-by-product basis and is typically with learned societies and professional information providers, such as Springer Nature, Clarivate Analytics and Wolters Kluwer. Decision tools face similar competition, as well as from software companies and internal solutions developed by customers.

2019 financial performance

	2019 £m	2018 £m	Underlying growth	Portfolio changes	Currency effects	Total growth
Revenue	2,637	2,538	+2%	-1%	+3%	+4%
Adjusted operating profit	982	942	+3%	-1%	+2%	+4%

Key business trends remained positive in 2019, with underlying revenue growth in line with the prior year.

Underlying revenue growth was +2%. The reported revenue growth rate of +4% benefited from the strength of the US dollar versus sterling, with the difference between constant currency and underlying growth rates reflecting the impact of portfolio changes.

Underlying adjusted operating profit growth was +3%, slightly ahead of underlying revenue growth.

Electronic revenues saw continued good growth, partially offset by print declines. In primary research we continued to enhance customer value by providing broader content sets across our research offering, increasing the sophistication of our analytics, and evolving our technology platforms.

The number of article submissions to our subscription journals continued to grow strongly. Our open access publishing programme, which now includes over 370 dedicated open access

journals, saw its growth rate in articles submitted and published accelerate further as we continue to gain market share.

Databases & tools continued to drive growth across our market segments through content development and enhanced machine learning and natural language processing based functionality.

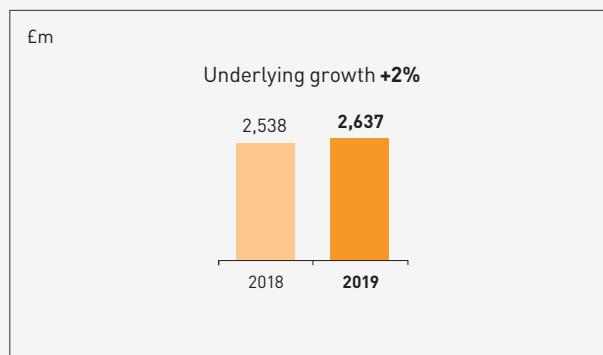
Print book revenues were down in a market that declined in line with historical trends, and print pharma promotion revenues continued to decline.

In 2019 we made three small acquisitions, including 3D4Medical, a provider of advanced 3D anatomy solutions, and disposed of minor print assets.

2020 outlook

Our customer environment remains largely unchanged from recent years, and we expect another year of modest underlying revenue growth, with underlying operating profit growth exceeding underlying revenue growth.

REVENUE



ADJUSTED OPERATING PROFIT



Pure: Building a scholarly reporting system to capture university success

1000

number of faculty days saved annually by using CityU Scholars based on Pure to maintain a comprehensive and up-to-date overview of research production data across CityU.



Working with Elsevier, we were able to create a solution that shows CityU's research outputs most comprehensively, showcasing its true academic performance. The success of CityU Scholars, powered by Elsevier's Pure, stems from its data accuracy, ease of use, and the benefits it creates for all CityU stakeholders.

Christian Wagner
CIO and Associate Provost
of Quality Assurance,
City University of Hong Kong



About Pure

Elsevier's Pure is a performance capture and reporting portal.

Connected to many data sources including Elsevier's data feeds, Pure updates faculty performance records in real time, enabling accurate performance reporting and easy maintenance of faculty expertise web profiles and personalised CVs. Pure can report individual researcher data or the performance data of research teams, academic units, and the university. Pure reveals university research networks and promotes collaboration between universities.

City University of
Hong Kong (CityU)

City University of Hong Kong (CityU) is a publicly funded university in Hong Kong.

CityU produces world-class research and is a leading provider of professional education. CityU is ranked No. 126 globally by Times Higher Education and No. 52 by Quacquarelli Symonds (2020 rankings).

CityU is a young university. In 2015, CityU's management realised a need for data on its research productivity and accomplishments to build reputation, deliver impact data for government reporting, and provide insights during faculty career advancement reviews.

However, CityU's management realised its records for academic faculty and department productivity, including field weighted citation counts, H-indices and awarded grants were out of sync with actual performance. Were CityU faculty under-reporting their accomplishments? Was performance data 'lost' somewhere in the reporting chain? How could they see the rate of impact between their research inputs, for example funding and time of staff, and their academic outputs such as research impact measures?

CityU embarked on an effort to implement CityU Scholars, a performance system for academic achievement based on Elsevier's Pure, a research information system that can import data from over 20 sources of publications, awarded research grants and research data sets. The 18 month effort, which began in 2016, consisted of configuring the Pure system towards CityU's specific reporting interests, refining performance records during a complete review of CityU researcher identities and their outputs.

Every researcher received an Open Researcher and Contributor ID (ORCID), and CityU worked with Elsevier to consolidate multiple researcher profiles. In addition, all CityU researchers and their publications were reviewed to ensure they were properly attributed to CityU within Elsevier's Scopus database and not to other universities in Hong Kong. This was also important to the university's reputation development, since Scopus data is the underlying source of bibliometric data feeding into major global university rankings, such as the Times Higher Education University Rankings and Quacquarelli Symonds (QS) world university rankings.

Ongoing cleaning and capturing of publication data in CityU Scholars, powered by Elsevier Pure, ensured the accuracy of CityU's academic performance data. With this increased accuracy, the launch of CityU Scholars in mid-2017 raised average faculty publication counts by 21, citation counts by 580, and h-indices by 3.5.

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and
other information

Risk & Business Analytics

We combine data and analytics with deep industry expertise to help customers make better decisions and manage risk. We deliver insight to insurance companies and help detect and prevent online fraud and money laundering. We provide digital tools that help airlines and farmers improve their operations.

- 85% of new US auto insurance policies issued to consumers in 2019 benefited from our products
- We do business with 95 out of the top 100 personal lines insurance companies; 78% of the Fortune 500; and seven of the world's top ten banks
- The LexisNexis Digital Identity Network analyses more than 100m transactions daily, or over 38bn transactions annually. Every week, activities on more than 70,000 websites are captured and analysed within the LexisNexis Digital Identity Network
- Accuity has information on nearly 22,000 banks, and hosts over 700,000 documents in its Bankers Almanac data set. Over 95 of the world's largest 100 banks use its data
- Cirium tracks over 100,000 commercial flights every day, monitors 90m passenger itineraries a year, analyses over 2.5bn travel segments per annum worth about \$380bn and holds up to 300 datapoints on every commercial aircraft
- ICIS enables trading in the energy and chemicals sectors, providing pricing intelligence to over 130 markets. 90% of the world's top 20 chemical companies use its data
- The Homestead Exemption Fraud Detection Solution helped six Florida counties uncover more than \$16m in new tax revenue in 2019 and place over \$140m back on tax rolls

Business overview

Risk & Business Analytics provides customers with information-based analytics and decision tools that combine public and industry-specific content with advanced technology and algorithms to assist them in evaluating and predicting risk and enhancing operational efficiency.

Risk & Business Analytics, headquartered in Alpharetta, Georgia, has principal operations in California, Florida, Illinois, New York and Ohio in North America as well as London and Paris in Europe and Beijing and Singapore in Asia Pacific. It has about 9,100 employees and serves customers in more than 170 countries.

Revenues for the year ended 31 December 2019 were £2,316m, compared with £2,117m in 2018 and £2,073m in 2017. In 2019, 79% of revenue came from North America, 14% from Europe and the remaining 7% from the rest of the world. Subscription sales generated 37% of revenues, transactional sales 62% and advertising 1%.

Risk & Business Analytics comprises the following market-facing industry/sector groups: Insurance Solutions, Business Services, Data Services (including banking, energy and chemicals, aviation, agriculture and human resources) and Government Solutions.

Insurance Solutions, the largest segment, provides comprehensive data, analytics and decision tools for personal, commercial and life insurance carriers in the US to improve critical aspects of their business. Information solutions, including the most comprehensive US personal loss history database, C.L.U.E., help insurers assess risks and provide important inputs to pricing and underwriting insurance policies. Additional key products include LexisNexis Data Prefill, which provides information on insureds directly into the insurance work stream for 89% of the insurance auto market and LexisNexis Current Carrier, which identifies insurance coverage details and any lapses in coverage.

The focus is on delivering innovative decision tools through a single point of access within an insurer's infrastructure. LexisNexis Active Insights, our solution for active risk management, connects proprietary linking algorithms with vast amounts of data to proactively inform insurers of key events impacting their policyholders. Insurance Solutions is advancing its strategy to drive more consistency and efficiency in claims through its solution suite, Claims Compass, with Claims Datafill providing data and decisions at first notice of loss and throughout the claim life cycle. Risk Classifier solution, which uses public and motor vehicle records and predictive modelling, is used by around a quarter of the top 50 life insurers to better understand risk and improve underwriting efficiency.

Insurance Solutions continues to make progress outside the US. In the UK, contributory solutions including No Claims Discount module, which automates verification of claims history and Policy Insights, a predictor of motor claims loss, are delivered through the LexisNexis Informed Quotes platform to provide real-time data in the quoting process. In China, Genilex is delivering key vehicle data to auto insurers and is looking to add more analytics solutions. In Brazil, Insurance Solutions is delivering telematics solutions, data and analytics to help motor insurers in underwriting.

Business Services enables global financial transparency and inclusion by providing holistic and actionable insights for all risk and compliance segments. We address some of the greatest challenges facing financial institutions, small businesses and e-commerce today, including identity theft, financial inclusion, cybercrime, bribery and corruption, trafficking, economic sanctions, global terrorism, and abusive practices. We leverage machine learning (ML) and artificial intelligence (AI) in our solutions to provide our customers greater insights, enabling faster decisions with a greater degree of confidence.

The growth strategy for Business Services is primarily driven by maximising penetration in our current markets across our customers' workflow and through deeper international expansion.

In 2018, LexisNexis Risk Solutions added digital identity capability as a natural complement to its existing robust physical identity suite through the acquisition of ThreatMetrix. As a result, our customers gained access to solutions that provide a physical, digital, device and behavioural view into an identity. This perspective helps customers make decisions that thwart bad actors while enabling legitimate consumers to transact more securely and seamlessly.

The ThreatMetrix integration was completed in November 2019, creating a combined go-to-market organisation that consists of global sales and marketing teams; combining our physical and digital identity solutions into a holistic fraud prevention and

identity management solution; and expanding the Digital Identity Network into new use cases and markets.

Data Services provides indispensable business information, data, software and analytics solutions to professionals in many of the world's biggest industries. Our brands include: Accuity, a provider of services and technology solutions to financial, corporate and government sectors focused on financial crime screening, payment services and counterparty Know Your Customer (KYC), and benefits eligibility; ICIS, an independent intelligence and services provider for global petrochemical and energy markets; Cirium, an aviation and air travel data and analytics company for the wider travel industry; Proagrlica, a provider of connectivity solutions, workflow tools and actionable insight for the global agriculture and animal health segment; XpertHR, a compliance and benchmarking business driving global HR topics from pay equality to compliance and HR policies; EG, which delivers data analytics, decision tools and high-value analysis and news for the UK's commercial real estate segment; and Nextens, a provider of workflow solutions, content and analytics for tax professionals.

Data Services has continued to reshape its portfolio, exiting areas not core to its strategy, divesting the publishing and events business (FlightGlobal) of Cirium during 2019 and Farmers Weekly early in 2020.

Government Solutions provides a variety of identity assessment, fraud detection and prevention, collections and recovery, data quality management, due diligence, regulatory compliance, and



LexisNexis Active Insights

An active risk management solution that provides timely alerts of recent changes occurring in the household to help insurers enhance customer relationships with better service

Claims Compass

Data analytics suite with LexisNexis Claims Datafill and LexisNexis Police Records that improves the claims process from first notice of loss, triage, investigation and resolution through recovery



Aviation and air travel data and analytics for the world's airlines, airports, aircraft finance, manufacturers, tech giants and travel companies

Risk Intelligence Network

The Risk Intelligence Network provides government agencies with the first step of identity assessment across a number of services including benefits applications, claims filing and tax return filing. With a powerful combination of contributory systems and analytics, emerging threats can be identified before they have a significant impact

ACCUTY

Leading provider of trusted and accurate data and analytics that transform how payments and compliance professionals manage accounts and transactions with confidence across the global financial ecosystem

Accurint® Virtual Crime Center

Policing platform used for analytics, crime analysis and investigations linking public records to national law enforcement data for a complete picture across jurisdictions



Global source of Independent Commodity Intelligence Services, connecting data, markets and customers to create a comprehensive, trusted view of global commodities markets

World Compliance

Our curated content related to economic sanctions, financial crime enforcement actions, politically exposed persons (PEPs), and adverse media enables customers to comprehensively and efficiently protect their enterprises from reputational, regulatory, legal and enforcement risks

Risk Defense Platform

A fraud prevention and identity management platform that seamlessly delivers the broadest of solutions, including the latest in machine learning that adapts to ever changing fraud schemes, simplifying efforts to detect and prevent risks associated with the merging of digital and physical identities

LexisNexis® Digital Identity Network®

A network that provides insight into true digital identity, by analysing global shared intelligence across more than 38bn annual transactions to distinguish legitimate consumers versus fraudsters



A global agricultural network, empowering customers to be better connected, to make more informed decisions, driving better decisions from seed, to field, to fork

criminal investigation and analysis solutions to US federal, state and local and government agencies. These solutions assist health and human services agencies in verifying the identity of, and delivering access for, those in need of public programmes and benefits. We help tax and regulatory agencies verify identities and confirm businesses and assets within the workflow of automated enterprise systems. Our data sharing solutions help public safety agencies find missing children and solve criminal investigations. Our solutions prevent fraud in government programmes, recapture lost revenue, keep communities safe and further national security initiatives.

Market opportunities

We operate in markets with strong long-term growth in demand for high-quality advanced analytics based on industry information and insight, including: insurance underwriting transactions; insurance acquisition, retention and claims handling; tax and public benefits fraud; financial crime compliance; business risk; fraud and identity solutions; due diligence requirements surrounding customer enrolment; security and privacy considerations; and data and advanced analytics for the banking, energy and chemicals, aviation and human resources sectors.

In the insurance segment, growth is supported by increasing transactional activity in the auto, commercial and life insurance markets and the increasing adoption by insurance carriers of more sophisticated data and analytics in the prospecting, underwriting and claims evaluation processes, to assess risk, increase competitiveness and improve operating cost efficiency. Transactional activity is driven by growth in insurance quoting and policy switching, as consumers seek better policy terms.

This activity is stimulated by competition among insurance companies, high levels of carrier advertising and rising levels of internet quoting and policy binding. We continue to expand our services to make it easier for the consumer to transact with an insurer throughout the insurance process. We are developing solutions that bridge insurers and automakers, utilising connectivity as a means to leverage and monetise the data from Advanced Driver Assistance Systems and connected cars, and engage consumers with driving behaviour information, collision detection and other insurance-related services. Our relationships with automakers, currently representing more than 25% of new car sales in the US market, and ability to provide insights to insurers in their workflows make this possible.

Within Business Services, growth opportunities are spurred by evolving fraud schemes resulting in mounting fraud losses, anti-money laundering fines, sanctions, anti-bribery and corruption enforcement, consumer and business credit expansion, and heightened regulatory scrutiny. Demand for compliance solutions in banking and financial services markets includes cross-border payments and trade finance levels. In collections, demand is driven mainly by the ongoing escalation of consumer debt and the prospect of recovering that debt.

Expansion of mobile and digital use cases will continue driving opportunity for solutions that incorporate global data and drive efficiency in risk decision making. Increased regional and country-level demand for data consortia and compliance utilities is also expected to continue.

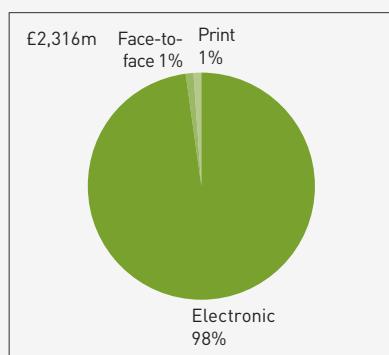
The increasing demand for our contributory solutions and enriched data to combat criminal activity and deliver better access to services for citizens and businesses is driving growth in government markets. It is about secure, near frictionless service through a multi-layered approach. The level and timing of demand in this market is influenced by government funding and revenue considerations.

Growth in the global energy and chemicals markets is led by changing trade patterns, a drive to embrace sustainability and demand for more sophisticated supply chain solutions. Aviation information markets are being driven by increases in air traffic and the number of aircraft transactions and the digital transformation of the airline industry. Growth in agriculture markets is being driven by adoption of technology and data solutions plus increasing supply chain connectivity.

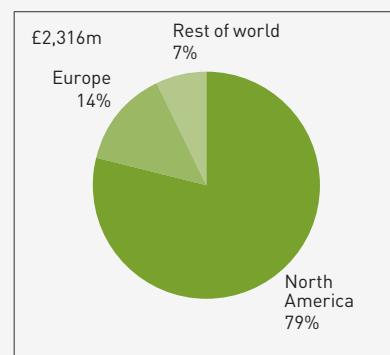
Strategic priorities

Our strategic goal is to help businesses and governments achieve better outcomes with information and decision support through better insight into the risks and opportunities associated with individuals, other businesses, transactions and regulations. By providing high quality industry data and decision tools, we assist customers in understanding their markets and managing risks efficiently and cost effectively. To achieve this, we are focused on: delivering innovative new products; expanding the range of risk management solutions across adjacent markets; addressing international opportunities in selected markets to meet local needs; further growing our data services businesses, continuing to strengthen our content, technology and analytical capabilities and investing in sales and marketing.

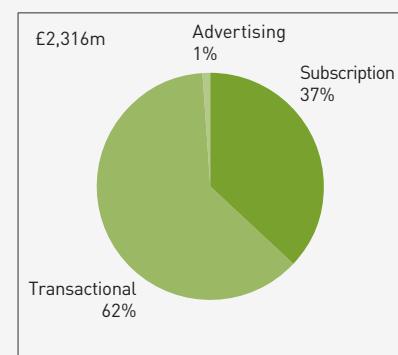
REVENUE BY FORMAT



REVENUE BY GEOGRAPHICAL MARKET



REVENUE BY TYPE



Risk & Business Analytics has been developing AI and ML techniques for a number of years to generate the actionable insights that help our customers to make accurate, better informed and more timely decisions. The successful deployment of AI and ML techniques starts with a deep understanding of customer needs and leverages the breadth and depth of our data sets, coupled with the expertise and domain knowledge to discern which AI/ML algorithm to use, in what context, to solve our customers' business problems most effectively.

Business model, distribution channels and competition

Our products are mainly sold directly, typically on a subscription or transactional basis. Pricing is predominantly on a transactional basis in the Insurance and Business Services segments, and primarily on a subscription basis in Data Services and Government.

In the insurance sector, our competitor Verisk sells data and analytics solutions to insurance carriers but largely addresses different activities to ours. Principal competitors in the Business Services and Government Solutions segment include the major credit bureaus, which in many cases address various capabilities within each solution offering.

Data Services competes with a number of information providers on a service and title-by-title basis including S&P Global Platts, Thomson Reuters and IHS Markit as well as a number of niche and privately owned competitors.

2019 financial performance

	2019 £m	2018 £m	Underlying growth	Portfolio changes	Currency effects	Total growth
Revenue	2,316	2,117	+7%	-2%	+4%	+9%
Adjusted operating profit	853	776	+8%	-3%	+5%	+10%

Strong underlying revenue growth continued in 2019.

Underlying revenue growth was +7%. The reported revenue growth rate of +9% benefited from the strength of the US dollar versus sterling, with the difference between constant currency and underlying growth reflecting the impact of portfolio changes.

Underlying adjusted operating profit growth of +8% was slightly ahead of underlying revenue growth and in line with the prior year.

In Insurance, we continued to drive growth through the roll-out of enhanced analytics, the extension of data sets, and by further expansion in adjacent verticals. The US market environment for the year as a whole was less supportive than in the prior year, but improved gradually throughout 2019. International initiatives continued to progress well.

In Business Services, further development of analytics that help our customers to detect and prevent fraud and to manage risk continued to drive growth. The US and international market environment was in line with historic trends for the year as a whole after a brief period of variability at the beginning of the year.

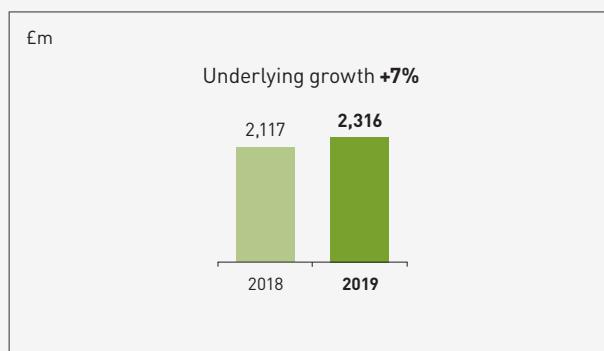
In Data Services, organic development of innovative new products and expansion of the range of decision tools drove strong growth in all key market verticals. In Government, we continued to drive customer value through the introduction of sophisticated analytics.

In 2019 we made two small acquisitions and disposed of minor print assets. Since the year end we have completed the acquisition of ID Analytics, a provider of credit and fraud risk solutions, and agreed to acquire Emailage, a provider of email based fraud prevention solutions.

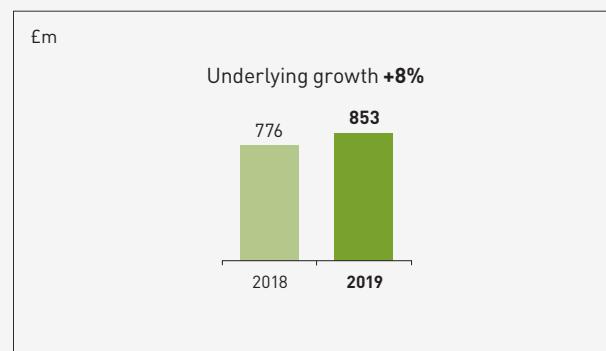
2020 outlook

The fundamental growth drivers of Risk & Business Analytics remain strong, in line with recent years, and we expect underlying operating profit growth to continue to broadly match underlying revenue growth.

REVENUE



ADJUSTED OPERATING PROFIT



LexisNexis Risk Solutions: reducing customer friction and stopping fraud for Commercial Bank of Dubai

87%

decrease in managing the number of
Commercial Bank of Dubai's policies
leading to improved efficiency and a
reduction in overall operating cost



66

Moving from static business rules to more dynamic rules with LexisNexis Risk Solutions means we have developed a trusted area for customer transactions. This incorporates rolling windows of time and averages per user so that when there is a significant change to that behaviour, we see it in real time.

Vinay Sugunanandan
Head of Fraud Risk Management
Commercial Bank of Dubai



About LexisNexis Digital Identity Network

LexisNexis Risk Solutions leverages global digital and physical identity intelligence, machine learning and advanced big data analytics to accelerate risk management decisions and fortify fraud defences for businesses across the globe. Our solutions combine powerful LexisNexis Risk Solutions technology and intuitive analytics with around 95 billion data records augmented by the digital identity coverage of the LexisNexis Digital Identity Network to deliver a physical, digital, device and behavioural view into an identity at any point in the customer life cycle. LexisNexis Risk Solutions provides robust, actionable risk insights, enabling secure and seamless transactions while limiting friction intelligently across every channel via a multi-layered approach.

View across the marina,
Dubai, UAE

Headquartered in Deira, Dubai, the Commercial Bank of Dubai (CBD) is one of the largest banking and financial services corporations in the United Arab Emirates, offering a full range of financial products and services .

Simplicity and innovation lie at the heart of CBD's core values. Championing these values in a climate of rising fraud, a diverse user base and a huge proliferation in online interactions has created a number of key challenges. CBD wanted to offer customers banking freedom through a market-leading mobile banking app that provided users with a creative, easy, fun and personalised interaction while striving to make the online banking experience as frictionless as possible.

The most effective way to tackle complex, global cybercrime is using the power of a global shared network. The LexisNexis Digital Identity Network collects and processes global shared intelligence from millions of daily consumer interactions including logins, payments, and new account applications. Using this intelligence, CBD is now able to better distinguish between trusted customer behaviour and potential fraud, reducing false positives and improving genuine fraud detection.

Using Digital Identity Network helped CBD to make an end-to-end decision flow so that intelligence built in one channel or event can be used throughout the customer journey. In addition, CBD reduced step-up verification significantly which resulted in an increase in the number of trusted customer transactions, thereby streamlining the user experience.

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Legal

We help lawyers win cases, manage their work more efficiently, serve their clients better and grow their practices. We assist corporations in better understanding their markets and preventing bribery and corruption within their supply chains. We partner with leading global associations and customers to help advance the Rule of Law across the world.

- The LexisNexis legal and news database contains 119bn documents and records
- 1.3m new legal documents are added daily to the database from 69,000 sources, generating 70bn connections. In all, 28m legal documents are processed daily
- Nexis news and business content includes 40,000 premium sources in 33 languages, covering more than 150 countries. It has data including 350m company profiles with a content archive that dates back 40 years
- The LexisNexis database includes 250m court dockets and documents, more than 132m patent documents, 2.5m State Trial Orders, and 1.3m Jury verdict and settlement documents
- PatentSight's database includes objective ratings of the innovative strength (Patent Asset Index) of more than 97m patent documents from more than 80 countries
- In 2019, Law360 produced over 50,000 news and analysis articles
- Legal analytics tool Lex Machina has normalised over 47m counsel mentions and 29m party mentions since 2016
- LexisNexis is committed to advancing the Rule of Law through operations and solutions that provide transparency into the law in more than 150 countries

Business overview

Legal provides legal, regulatory and business information and analytics that help customers increase their productivity, improve decision-making and achieve better outcomes.

LexisNexis Legal & Professional is headquartered in New York and has further principal operations in Ohio, North Carolina and Toronto in North America, London and Paris in Europe, and cities in several other countries in Africa and Asia Pacific. It has 10,600 employees worldwide and serves customers in more than 150 countries.

Revenues for the year ended 31 December 2019 were £1,652m, compared with £1,618m in 2018 and £1,686m in 2017. In 2019, 67% of revenue came from North America, 21% from Europe and the remaining 12% from the rest of the world. Subscription sales generated 78% of revenue and transactional sales 22%.

LexisNexis Legal & Professional is organised in market-facing groups. These are supported by global shared services organisations providing platform and product development, operational and distribution services, and other support functions.

In North America, electronic reference, decision tools and analytics help legal and business professionals make better informed decisions in the practice of law and in managing their businesses. The flagship product for legal research and analytics is Lexis Advance, which provides statutes and case law together with analysis and expert commentaries from secondary sources, such as Matthew Bender. Lexis Advance includes the leading citation service, Shepard's, which advises on the continuing relevance of case law precedents. In North America, LexisNexis also provides customers with news and business information, ranging from daily news to company filings, public records information, legal analytics tools, practical guidance, and efficiency solutions. LexisNexis also partners with law schools to provide services to students as part of their training.

In 2019, LexisNexis continued to enhance Lexis Advance, an innovative web and mobile application designed to transform how legal professionals conduct research and use analytics and data to drive decision-making. Enabled by the New Lexis platform, Lexis Advance allows customers within legal and professional organisations to find relevant information more efficiently, helping drive better outcomes.

LexisNexis continues to invest in and deploy advanced Machine Learning (ML) and Artificial Intelligence (AI) capabilities that help power Lexis Advance. In 2019, these technologies expanded the capabilities of Lexis Answers, a service that semantically understands a user query and provides a starting point answer to legal research. Lexis Advance Answer Cards now include summaries and analytics on judges and expert witnesses, as well as supporting an extended array of question types.

In 2019, LexisNexis expanded the Lexis Advance legal product ecosystem to ensure a more seamless user experience by integrating Intelligize, an analytics solution for review and analysis of SEC filings; CourtLink, a leading supplier of court docket information in the United States; Lexis Advance Quicklaw, a leading research solution in Canada; and Lexis Practice Advisor Canada, a practical guidance solution for Canadian attorneys.

LexisNexis continued to expand the reach of its decision tools and analytics. In 2019, LexisNexis further expanded the analytics offering of Lex Machina with four new practice areas including Environmental Litigation and Consumer Protection Litigation, bringing the total to 16 active practice areas; Context, with new analysis of Courts to complement Judge and Expert Witness modules released late in 2018; and a suite of new offerings from Intelligize, including M&A Market Analytics, No Action Letter, and SEC Comment Letter Analytics.

LexisNexis expanded its strong position in analytics by also introducing new tools to allow law firms to enrich and mine their own data stores. Lexis Search Advantage was enhanced with new ML and algorithmic capabilities for both for litigation and transactional attorneys.

During 2019, LexisNexis also added three new modules for Lexis Practice Advisor, the company's practical guidance and 'how to' service, bringing the total to 20 practice area modules. The service also launched Evolving Guidance, a joint offering with LexisNexis' news solution Law 360, that offers early analysis of legal changes that could impact businesses in rapidly developing areas such as Employment Law.

In July 2019, LexisNexis formed a joint venture with Knowable, a ML enabled enterprise contracts intelligence platform. By converting legal language into structured data, the solution provides users with insight into their contracts, portfolio risks, obligations and entitlements.

In the Intellectual Property analytics space, LexisNexis proprietary Patent Asset Index, created by PatentSight, is used by corporations worldwide to manage and value their intellectual property portfolios.

In Canada, LexisNexis enhanced Lexis Advance Quicklaw through the continued integration of international content and search enhancements.

LexisNexis also supplies Business of Law Software Solutions to law firms and corporate legal departments. These solutions

include practice management solutions, case management, and cost recovery services.

In international markets outside North America, LexisNexis serves legal, corporate, government, accounting and academic markets in Europe, Africa and Asia Pacific with local and international legal, regulatory and business information. The most significant of these businesses are in the UK, France, Australia and South Africa.

In the UK, LexisNexis is a leading legal information provider offering an extensive collection of primary and secondary legislation, case law, expert commentary, practical guidance, and current awareness. In 2019, LexisNexis continued to grow its content sets and improve user functionality. In Legal, the company re-platformed its market-leading LexisLibrary product, enabling ongoing improvements to the customer experience. LexisNexis UK also grew adoption of LexisPSL and introduced a range of Brexit-related content and tools. Contract productivity and proofreading tool LexisDraft, alongside the automation software VisualFiles, has grown LexisNexis' footprint in legal workflow solutions. In Tax, LexisNexis continued to expand its reach, with firms of all sizes leveraging TolleyLibrary and TolleyGuidance.

In France, LexisNexis' main offering, Lexis360, is a leading integrated solution combining legal information, in-depth analysis with JurisClasseur content, and practical guidance. In 2019, LexisNexis enhanced the Lexis360 solution by improving user experience, content and product functionality.

In South Africa, LexisNexis introduced Lexis MetrolQ, a subscription solution designed to assist South African municipalities in maintaining an accurate and up-to-date property registry.

In Austria, Lexis SmartScan, a recently launched advanced legal document analysis tool placed first in innovation at the Digital Impuls Award.

In the Middle East, LexisNexis launched the new Lexis Middle East platform, which features improved search relevancy and product performance.



Lexis Practice Advisor®

LexisNexis North American Research Solution's practical guidance service

Lexis Advance®

Flagship online legal research tool that transforms the way legal professionals conduct research

Lexis®PSL

LexisNexis UK legal practical guidance service

Shepard's® Citations Service

Premier citations service

Context

Litigation solution providing legal language analytics on judges and expert witnesses

Lexis®Library

LexisNexis UK flagship legal online product

Lex Machina®

Provides Legal Analytics to companies and law firms, enabling them to craft successful strategies, win cases and close business



LexisNexis enterprise contract intelligence offering

Intelligize®

Provides analytics and benchmarking of SEC filings to optimise compliance strategies

PATENTSIGHT

Patent analytics solution that provides insights into the strength, quality and value of patent portfolios

In the Pacific region, LexisNexis continued its focus on providing authoritative local online content embedded in decision tools for legal professionals. In 2019, LexisNexis enhanced Lexis Advance Pacific by incorporating advanced data visualisation with the introduction of Search Term Maps and released integrated search results combining Lexis Advance and Practical Guidance content.

In Asia, LexisNexis successfully migrated all customers to the new Lexis Advance platform, providing new functionalities and an improved user experience to legal professionals across the region. In 2019, Lexis Advance launched new AI and deep-learning tools on the platform, such as Case Recommendation in Malaysia, and won the Technology Excellence Awards for Online Services – Legal in Hong Kong.

Supporting its Rule of Law mission, LexisNexis partnered with the Office of the Attorney-General to launch the consolidated Laws of Fiji online, the region's first online version of the authorised legislation. LexisNexis Australia is also an official partner in a landmark inquiry led by the Australian Human Rights Commissioner into the challenges to human rights and freedoms presented by emerging technologies such as AI, social media, and big data. As part of this partnership LexisNexis Pacific jointly developed a Vietnamese language version of the Australian Human Rights Commission's RightsApp.

LexisNexis signed a partnership with the Maldives Family Legal Clinic to provide plain language versions of domestic violence laws to be disseminated to 200 islands across the Maldives. LexisNexis also partnered with the East Malaysia Mobile Court Program and participated in the Matanggal Village expedition in Sabah to help adjudicate cases of statelessness.

Market opportunities

Longer term growth in legal and regulatory markets worldwide is driven by increasing levels of legislation, regulation, regulatory complexity and litigation, and an increasing number of lawyers. Additional market opportunities are presented by the increasing demand for online information solutions, legal analytics and other solutions, along with decision support solutions that improve the quality and productivity of research, deliver better legal outcomes and improve business performance. Notwithstanding this, legal activity and legal information markets are also influenced by economic conditions and corporate activity, as has been seen with the continued subdued environment in North America and Europe.

Strategic priorities

LexisNexis Legal & Professional's strategic goal is to enable better legal outcomes and be the leading provider of productivity-enhancing information, analytics and information-based decision tools in its market. To achieve this, LexisNexis is focused on introducing next-generation products and solutions on the global New Lexis platform and infrastructure; incorporating advanced technologies including Machine Learning and Natural Language Processing; driving long-term international growth; and upgrading operational infrastructure, improving process efficiency and gradually improving margins.

In the US, LexisNexis is focused on the ongoing development of legal research and practice solutions that help lawyers make data-driven decisions. Over the coming years, progressive product introductions will combine advanced technologies, enriched content and sophisticated analytics to enable LexisNexis customers to make data-driven legal decisions and drive better outcomes for their organisations and clients.

Outside the US, LexisNexis is focused on growing online services and developing further high-quality actionable content and decision tools, including the development of additional practical guidance and analytics tools. Additionally, LexisNexis is focusing on the expansion of its activities in emerging markets.

LexisNexis is also continuing the mission of spreading equality, transparency and access to legal remedies globally through the recently formed LexisNexis Rule of Law Foundation, a non-profit entity that provides financial and other support for projects that aim to advance the Rule of Law around the world.

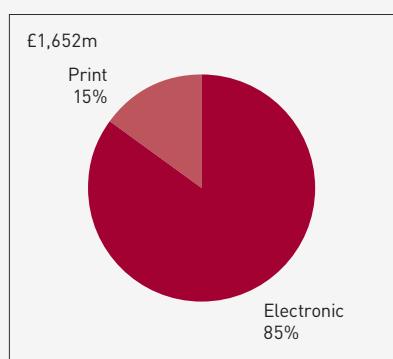
Business model, distribution channels and competition

LexisNexis Legal & Professional products and services are generally sold directly to law firms and to corporate, government, accounting and academic customers on a paid subscription basis, with subscriptions with law firms often under multi-year contracts.

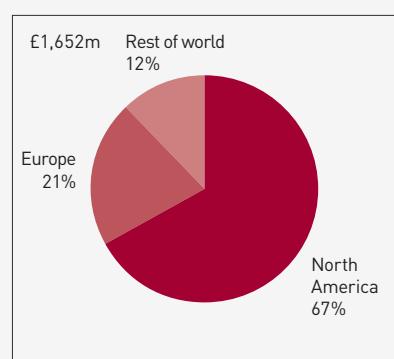
Principal competitors for LexisNexis in US legal markets are Westlaw (Thomson Reuters), CCH (Wolters Kluwer) and Bloomberg. In news and business information key competitors are Bloomberg and Factiva (News Corporation).

Significant international competitors include Thomson Reuters, Wolters Kluwer and Factiva.

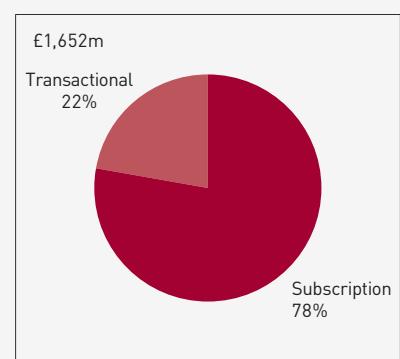
REVENUE BY FORMAT



REVENUE BY GEOGRAPHICAL MARKET



REVENUE BY TYPE



2019 financial performance

	2019 £m	2018 £m	Underlying growth	Portfolio changes	Currency effects	Total growth
Revenue	1,652	1,618	+2%	-3%	+3%	+2%
Adjusted operating profit	330	320	+8%	-7%	+2%	+3%

Underlying revenue growth in 2019 was in line with the prior year.

Underlying revenue growth was +2%. The reported revenue growth rate of +2% benefited from the strength of the US dollar versus sterling, with the difference between the constant currency and underlying growth rates reflecting the impact of portfolio changes.

Underlying adjusted operating profit growth of +8% was ahead of underlying revenue growth reflecting continued efficiency gains. The increase in operating profit margin reflects ongoing process improvements as the platform transition process comes to an end.

The market environment for legal services, and for legal information providers, remained stable. Electronic revenues saw continued growth, partially offset by print declines.

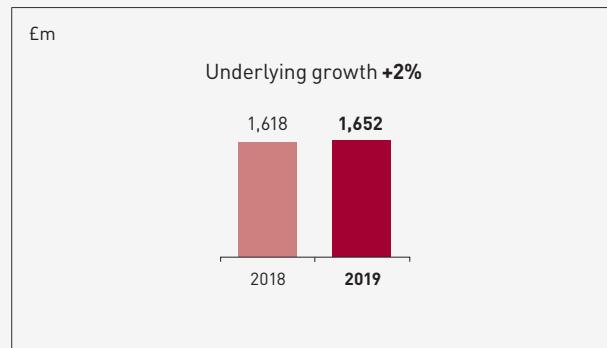
The completion of the new platform roll-out has enabled the continued release of broader data sets and further application of machine learning and natural language processing technologies that enhance our research products and market leading analytics.

In 2019 we acquired a majority stake in Knowable, a US contract analytics business, and disposed of a number of small software assets.

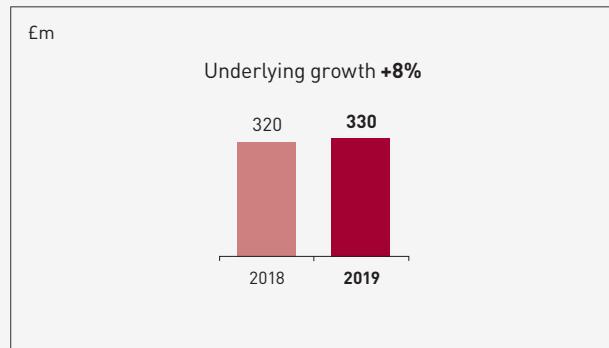
2020 outlook

Trends in our major customer markets remain largely unchanged, and we expect another year of modest underlying revenue growth. We expect good underlying operating profit growth to continue.

REVENUE



ADJUSTED OPERATING PROFIT



LexisNexis Practical Guidance: helping specialist and boutique law firms to grow

80%

time saved for Curlington Legal,
when conducting research for clients
using LexisNexis products



66

Practical Guidance is essential for my business. It streamlines research and information gathering and helps me understand the process; what's meant to happen and when. I'm able to practise in areas I don't traditionally delve into.

David Sigler
Principal Lawyer,
Curlington Legal



David Sigler is the sole practitioner at Curlington Legal, a boutique law firm in the Sydney Central Business District, specialising in technology law.

While David has over 30 years' experience in technology law, he is often asked by clients for advice on other aspects of their business. To offer a full service for his clients, and scale his firm, David relies on LexisNexis Practical Guidance to increase his capability and provide expertise in less familiar areas of law.

The highly practical workflow tools in Practical Guidance provide David with a clear research road map and access to relevant points of law to guide him in areas where he has less extensive experience.

Over the last year, David has used resources from Practical Guidance to act on several matters which he would normally hand over to a specialist practitioner. He estimates that Practical Guidance has helped him generate additional fees of AU\$50,000 in the last 12 months alone.

To conduct deeper research, David takes advantage of Practical Guidance as a gateway to the extensive world class research available on Lexis Advance. Premium Australian legal publications including CaseBase Case Citator, LawNow Plus, Halsbury's Laws of Australia and the Australian Encyclopaedia of Forms & Precedents form part of David's powerful Lexis Advance library.

This has transformed the way David conducts legal research, allowing him to provide confident advice in broader areas of law, helping Curlington Law to diversify and scale.

About Lexis Advance

Lexis Advance in Australia is an innovative online research platform.

Via a single sign on and cutting-edge search technology, the platform provides centralised access to LexisNexis' extensive range of trusted legal publications. This includes LexisNexis Practical Guidance, a powerful online solution offering practically-focused legal content across 24 Australian practice areas. Practical Guidance provides access to step-by-step guidance, legislation, cases, checklists, tools and forms and precedents all in one place in the context of a lawyer's workflow.

Sydney Harbour Bridge east side at sunset

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Exhibitions

Our events leverage industry expertise, large data sets and technology to enable our customers to generate billions of dollars of revenues for the economic development of local markets and national economies around the world.

- More than 500 events are in the Reed Exhibitions portfolio
- In 2019 Reed Exhibitions launched 50 new events
- 43 industry sectors are served in almost 30 countries across the globe
- Each year around 130,000 businesses choose to exhibit at our events. They connect with the more than 7m people who attend to find new products or suppliers, learn about their industry and be inspired
- Our digital products increase the value of our events to participants, enabling them to make new contacts and meet face-to-face to do business. In 2019, 283 events offered proactive matchmaking to around 3.2 million customers. Direct customer feedback from around 100,000 customers demonstrates those who use the service tend to have a better event, reporting higher levels of value and satisfaction

Business overview

Reed Exhibitions is a leading global events business. It combines face-to-face with data and digital tools to help customers learn about markets, source products and complete transactions at over 500 events in almost 30 countries, attracting more than 7m participants.

Reed Exhibitions has its headquarters in London and has further principal offices in Paris, Vienna, Düsseldorf, Moscow, Norwalk (Connecticut), Mexico City, São Paulo, Abu Dhabi, Beijing, Shanghai, Tokyo, Singapore and Sydney. Reed Exhibitions has 4,600 employees worldwide and its portfolio of events serves 43 industry sectors.

Revenues for the year ended 31 December 2019 were £1,269m compared with £1,219m in 2018 and £1,109m in 2017. In 2019, 20% of Reed Exhibitions' revenue came from North America, 40% from Europe and the remaining 40% from the rest of the world on an event location basis.

Reed Exhibitions organises influential events in key markets focused on addressing the needs of the industry, where participants from around the world meet face-to-face to do business, to network and to learn. Its events encompass a wide range of sectors. They include construction, cosmetics, electronics, energy and alternative energy, engineering, entertainment, gifts and jewellery, healthcare, hospitality, interior design, logistics, manufacturing, media, pharmaceuticals, real estate, recreation, security and safety, transport and travel. Following the acquisition of Mack Brooks, Reed Exhibitions now has strong and growing global positions in new sectors including sheet metal processing (through the Blech portfolio), rail (through the Railtex portfolio), airports (through the Inter Airport portfolio) and industrial fasteners (through the Fastener Fair portfolio).

Market opportunities

Growth in the exhibitions market is influenced both by business-to-business marketing spend and by business investment. Historically, these have been driven by levels of corporate profitability, which in turn has followed overall growth in gross domestic product. Emerging markets and higher growth sectors provide additional opportunities. Reed Exhibitions' broad geographical footprint and sector coverage allows it to effectively respond to changes in global trade and capture growth opportunities as they emerge.

As some events are held other than annually, growth in any one year is affected by the cycle of non-annual exhibitions.

Strategic priorities

Reed Exhibitions' strategic goal is to deliver measurably higher value and improved outcomes to its customers. It is achieving this organically by focusing on understanding and responding to individual customers' needs and business objectives.

Reed Exhibitions delivers a platform for industry communities to conduct business, network and learn through a range of market-leading events in all major geographic markets and higher growth sectors, enabling exhibitors to target and reach new customers quickly and cost effectively.

Organic growth will be achieved by continuing to generate greater customer value through combining the best of face-to-face with data and decision tools, launching new events, and by leveraging its global network and technology platforms for faster and more agile development and deployment of innovation. Reed Exhibitions is also actively shaping its portfolio through a combination of new launches, strategic partnerships and selective acquisitions in faster growing sectors and geographies, as well as by withdrawing from markets and industries with lower long-term growth prospects.

Reed Exhibitions is committed to continuously improving customer solutions and experience by developing global technology platforms based on industry databases, digital tools and analytics. By providing a variety of services, including its integrated web platform, the company continues to increase customer value and satisfaction by proactively putting the right buyers and sellers together on the event floor. Increasingly, digital and multichannel services such as active matchmaking are becoming a normal part of the customer expectation and product offering, enhancing the value delivered through attendance at the event. Using customer insights, Reed Exhibitions has developed an innovative product offering that underpins the value proposition for exhibitors by broadening their options in terms of the type and location of stand they take and the channels through which they can address potential buyers.

In 2019 Reed Exhibitions launched 50 new events. These included many events which delivered on the strategy of taking sector expertise, customer relationships and leading brands from one market and extending them into new geographies using local operational capability.

Strong brands and value propositions in long established sectors continued to be cloned into new geographic markets, with CMEF (medical equipment) expanding into Indonesia.

There was also rapid cloning of successful launches and recently acquired brands into new markets. Bar Convent Berlin, in the bar equipment sector, was successfully extended into the USA in 2018 and in 2019 taken to South America with the launch of Bar Convent São Paulo. After launching in London in 2018, Proud Experiences (serving the LGBTQ+ travel community) was successfully run in New York in 2019.

In Japan more events were launched outside the venue-restricted Tokyo area including Industrial AI & IoT Expo in Osaka and Administration, Human Resources & Accounting in Nagoya.

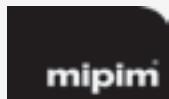
Reed Exhibitions continued to work with carefully selected media partners to offer new live events to highly targeted audiences such as Outside Experience and Complex Con Chicago in the US. Reed Exhibitions announced the acquisition of Mack Brooks in January 2019, a business with a portfolio of more than 30 events in 14 countries, including Germany and the United Kingdom, serving nine industry sectors.

In addition Reed Exhibitions made several small acquisitions to secure positions in high growth markets. These included Big 7 (corporate gifts) and PackPlus (packaging) in India and Florida Supercon (entertainment) in the US.

Business model, distribution channels and competition

Over 70% of Reed Exhibitions' revenue is derived from exhibitor fees, with the balance primarily consisting of admission charges, conference fees, sponsorship fees and online and offline advertising. Exhibition space is sold directly or through local agents where applicable. Reed Exhibitions often works in collaboration with trade associations, which use the events to promote access for members to domestic and export markets, and with governments, for which events can provide important support to stimulate foreign investment and promote regional and national economic activity. Increasingly, Reed Exhibitions is offering visitors and exhibitors the opportunity to interact before and after the show through the use of digital tools such as online directories, matchmaking and mobile apps.

Reed Exhibitions is one of the largest global event organisers in a fragmented industry, holding a global market share of less than 10%. Other international exhibition organisers include Informa, Clarion and some of the larger German Messen, including Messe Frankfurt, Messe Düsseldorf and Messe Munich. Competition also comes from industry trade associations and convention centre and exhibition hall owners.



The world's property market



Asia's sourcing and networking platform for the complete aluminium industry chain



International trade fair for the building industry



CHINA DAILY-USE ARTICLES TRADE FAIR
China's event for suppliers and buyers in the housewares industry



A premier comic book and pop culture convention



Latin America's event for hardware, electronics and construction



The leading international trade show for fitness, wellness & health



Asia Pacific's luxury travel event



International exhibition for airport equipment, technology, design and services



The North American jewellery industry's premier event



International perfumery and cosmetics exhibition



The No.1 machine tools and metalworking exhibition serving ASEAN



Leading international exhibition for personal care ingredients



International Security Conference & Exposition



An exhibition gathering equipment, solutions and services for electronics manufacturing



Japan's one-stop shop for office related products and services



Premier global event for the travel industry

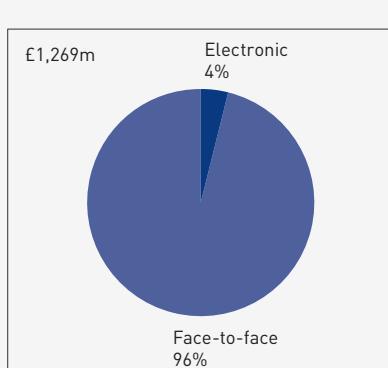


International trade fair for autoparts, equipment and services

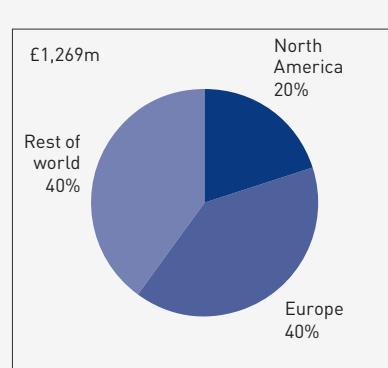


International art fair for photography

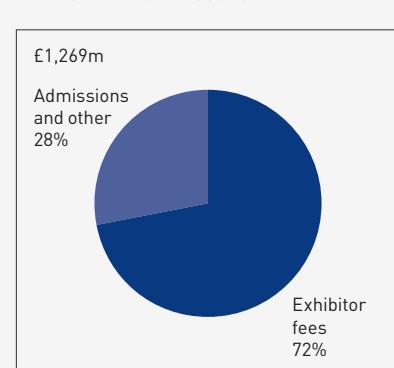
REVENUE BY FORMAT



REVENUE BY GEOGRAPHICAL MARKET



EVENTS REVENUE BY SOURCE



2019 financial performance

	2019 £m	2018 £m	Underlying growth	Portfolio changes	Currency effects	Total growth
Revenue	1,269	1,219	+6%	+2%	+2%	+4%
Adjusted operating profit	331	313	-1%	+5%	+2%	+6%

Underlying revenue growth rates exclude exhibition cycling effects.

Exhibitions achieved strong underlying revenue growth in 2019, in line with the prior year.

Underlying revenue growth was +6%. After portfolio changes and six percentage points of cycling-out effects, constant currency growth was +2%. Reported revenue growth of +4% benefited from the strength of the US dollar versus sterling.

Underlying adjusted operating profit declined by -1%, primarily reflecting cycling-out effects. Constant currency adjusted operating profit growth was +4%, and the margin increased to 26.1% after portfolio effects and integration benefits.

We continued to pursue organic growth opportunities, launching 50 new events during the year, and piloting and rolling out further data analytics initiatives. In addition we acquired Mack Brooks, a leading organiser of over 30 highly complementary events, and we made a number of minor disposals.

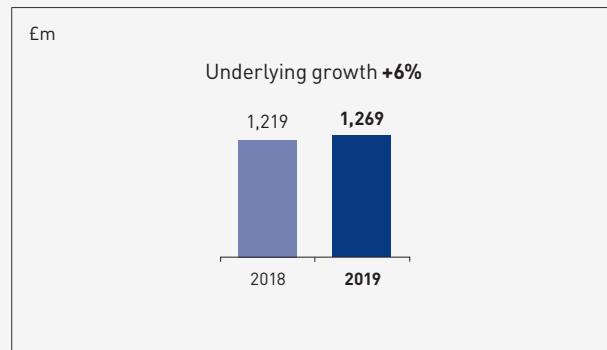
In 2019 market conditions were good in Europe and the US, and remained strong in China. The negative impact of venue constraints associated with the Tokyo Olympics was offset by higher growth elsewhere, supported by our active launch programme.

In 2020 the Tokyo venue constraints could negatively impact the overall divisional revenue growth rate by one or two percentage points, before the new and expanded permanent venue capacity comes on stream at the end of the year. The extent to which the novel coronavirus outbreak will impact our business in China, or other regions, remains uncertain.

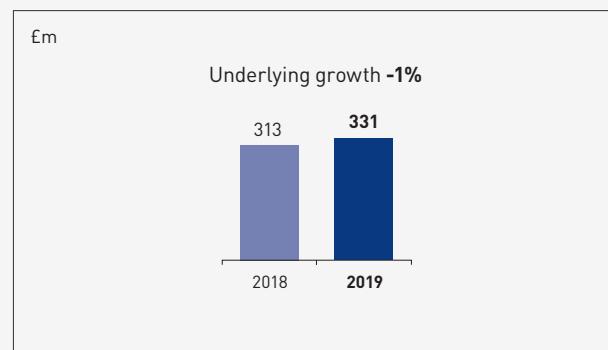
2020 outlook

We expect underlying revenue growth trends to continue in line with recent years, the above temporary venue constraints and coronavirus impacts aside, and we expect cycling-in effects to increase the reported revenue growth rate by around five percentage points.

REVENUE



ADJUSTED OPERATING PROFIT





66

We have a lot of people who ask us how to get started in this business and we say there's one show you have to go to and that's the National Hardware Show.

Bob Thorsen
Founder
The Little Burros



The National Hardware Show: the event that powers businesses

1200

Little Burros secured its first order of 1,200 pieces from a major retailer at the National Hardware Show

About the National Hardware Show

The National Hardware Show, which takes place annually in Las Vegas, is a showcase for home improvement innovations and retail trends.

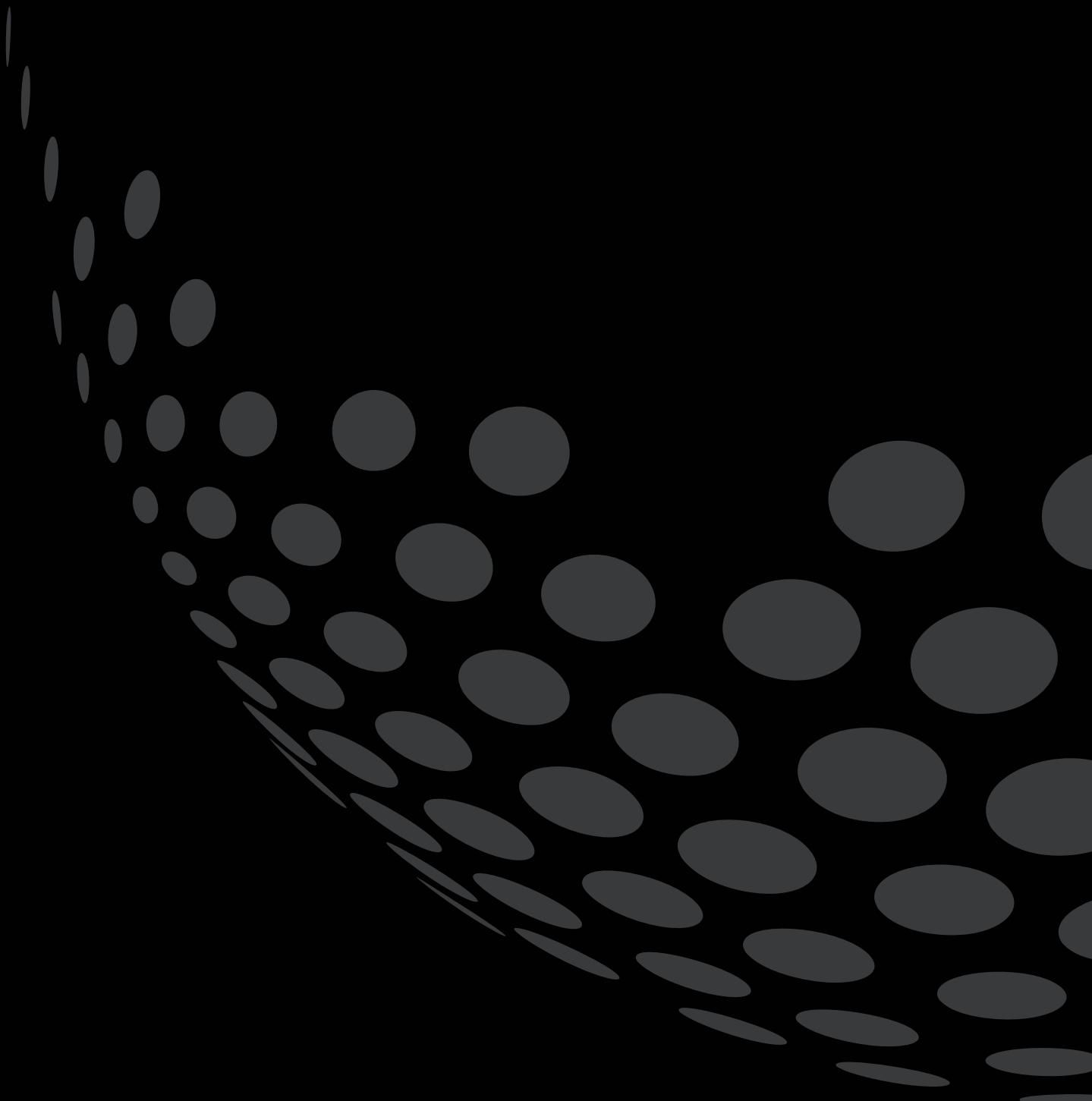
Each year it brings together over 25,000+ home improvement professionals and some 120 media outlets for three days of face-to-face sourcing, trading, networking and learning.

The Little Burros is a family operated, garden tool brand, co-founded, owned and run by innovator Bob Thorsen and his family.

The family of five launched their brand at The National Hardware Show in 2014 and in five years have built an impressive following by providing innovative solutions to everyday garden problems.

Based in Virginia, US, Bob and his wife Sudie were working in the garden when Bob thought up an ingenious tool organiser for attaching to your wheelbarrow. The whole family came together to build a 3D prototype of the 'Original Little Burro' and decided to present it at the National Hardware Show. They ended up securing their first order of 1,200 pieces from a major retailer at the show.

The Thorsen family, who have won countless awards for their innovative product, attribute their initial success to The National Hardware Show, and return to the event each year with their expanded offering of garden products.



Corporate Responsibility

The Corporate Responsibility Report is an integral part of our Annual Report and Financial Statements. This section highlights progress on our 2019 corporate responsibility objectives. The full 2019 Corporate Responsibility Report is available at www.relx.com/go/CRReport

Non-financial information statement

RELX is required to comply with the reporting requirements of sections 414CA and 414CB of the Companies Act 2006, which relate to non-financial information. The list below outlines for our stakeholders where this information for RELX can be found:

Reporting Requirement:

Environmental matters	48-49
Employees	45-46
Social matters	38-42, 44-47
	38, 40-42, 44,
Human rights	46-48
Anti-corruption and anti-bribery matters	40, 42-43, 47-48
Policies, due diligence processes and outcomes	42-43, 47-48
Description and management of principal and emerging risks and impact of business activity	58-61
Description of business model	5, 14-15, 21, 26, 31
Non-financial metrics	12, 18, 24, 30, 38, 45-49

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and
other information

Corporate responsibility overview

We define corporate responsibility (CR) as the way we do business, working to increase our positive impact and reduce any negative impact. It ensures good management of risks and opportunities, helps us attract and retain the best people and strengthens our corporate reputation.

It means performing to the highest commercial and ethical standards and channelling our knowledge and strengths, as global leaders in our industries, to make a difference to society. We regularly survey key stakeholders including, in 2019, shareholders, employees, governments and the communities where we operate, to help us identify our material CR issues and to set and test our CR objectives. The Board of Directors, senior management and our Corporate Responsibility Forum oversee CR objectives and performance.

We concentrate on the contributions we make as a business and on good management of the material areas that affect all companies:

- 1. Our unique contributions**
- 2. Governance**
- 3. People**
- 4. Customers**
- 5. Community**
- 6. Supply chain**
- 7. Environment**

We are a signatory of the United Nations Global Compact (UNGC) and are dedicated to advancing the UN's Sustainable Development Goals (SDGs) by 2030. These aim to end poverty, protect the planet and ensure prosperity for all people by 2030.

1. Our unique contributions

We make a positive impact on society through our knowledge, resources and skills, including:

- Universal sustainable access to information
- Advance of science and health
- Protection of society
- Promotion of the rule of law and justice
- Fostering communities

Scientific, Technical & Medical

Elsevier, the world's leading provider of scientific, technical and medical information, plays an important role in advancing human welfare and economic progress through its science and health information, which spurs innovation and enables critical decision-making. Elsevier makes a significant contribution to SDG 3 (Good Health and Well-being). To broaden access to its content, Elsevier supports programmes where resources are often scarce. Among them is Research4Life, a partnership with UN agencies and up to 160 publishers; we provide core and cutting-edge scientific information to researchers in more than 100 developing countries. As a founding partner and leading contributor, Elsevier provides over a quarter of the material available in Research4Life, encompassing approximately 23,500 journals and 86,000 e-books. In 2019, there were over 1.3m Research4Life downloads from ScienceDirect.

Elsevier serves the global scientific research community, publishing over 496,000 articles in 2019. In addition, the Elsevier Foundation supports partnerships to advance inclusion and diversity in science, research in developing countries and global health. In 2019, 35 women scientists from across Africa participated in a Water First! three-day workshop in Accra, Ghana. The aim was to empower African women researchers to advance their work, helping address the disparity of African women on the forefront of the struggle for water security without a proportionate share of agency to affect change. The workshop was led by Elsevier Foundation Board member, Dr. Geri Richmond, who founded the University of Oregon's COACH programme which aims to increase the scientific success and leadership capacity of women scientists and engineers.

In the year, we created new SDG Graphics to explore the state of science underpinning the SDGs, including for SDG 6 (Clean Water and Sanitation). Research in the field between 2014-2018 had an annual compound growth rate of 8.5% (compared to 2% for all research fields), yet only 1% of the share of output was from low income countries, those most affected by access to decent water and sanitation.

To help address the output gap for low income countries, Elsevier runs Research Without Borders in association with the African Journals Partnership Program, supported by the US National Library of Medicine, US National Institute of Health and the Council of Science Editors. Elsevier experts help their African peers improve the visibility of their research by funding skilled volunteers who provide strategic, editorial communication, and operational guidance. In 2019, participants included Anne Roca, Deputy Editor of Lancet Global Health, and Christine Aime Sempe, a publisher with Elsevier Paris, who worked with Annales Africaines de Medecine in the Democratic Republic of Congo and held author workshops with African editors at Amref's African Health Agenda International Conference in Rwanda.

Technology unites missing people with their families

“I’ve lost touch with someone and am not sure what to do.” This statement on the website of Missing People – the only British organisation focused on uniting missing children and adults with their families and others of importance in their lives – is apt. According to Missing People, 186,000 people are reported missing each year in the United Kingdom.

300

applications to Missing People’s Lost Contact service in 2019



Missing People’s Lost Contact service uses LexisNexis Risk Solutions tools to reconnect missing people with their families and others

According to Missing People, 186,000 people are reported missing each year in the United Kingdom.

In 2019, with free access to LexisNexis Risk Solutions’ TraceIQ, Missing People re-launched its Lost Contact service. Lost Contact helps people reconnect with someone missing who is not at risk or missing in the eyes of the law.

TraceIQ allowed Missing People to find more people through faster and more efficient searches. During 2019, the relaunch led to over 300 applications for support. Of completed cases, 64% of missing family members were found and given the chance to reconnect. This was the result for three brothers, separated for over a decade: “We lost contact with my younger brother 12 years ago and had been unable to find him through other channels but Missing People found him and we had an amazing reunion with all the family so thank you for your amazing work.”



66

TraceIQ has enabled Missing People to reinvigorate our vital Lost Contact service which can reunite the missing with the people who matter most to them.

Jo Youle
CEO
Missing People

1. Our unique contributions (continued)

Risk & Business Analytics

Risk & Business Analytics' (RBA) tools and resources help law enforcement keep communities safe and protect society by detecting and preventing fraud across a range of business sectors and at US federal, state and local government levels. In the year, LexisNexis Risk Solutions partnered with local police departments, including the Graham Police Department, North Carolina, to provide community crime maps with automated alerts notifying citizens of crimes in their area.

RBA colleagues developed the ADAM programme in 2000 to help the National Center for Missing and Exploited Children find missing children. ADAM distributes missing child alert posters to law enforcement, hospitals, libraries and businesses within specific geographic search areas. In 2019, two children were found through the ADAM programme. In the United Kingdom, Missing People is a key partner and LexisNexis Risk Solutions tools helped reconnect the missing with those searching for them.

It is a catch 22 that you need to have credit to access credit. LexisNexis Risk Solutions is working to address a lending blind spot for those seeking to advance personal objectives likely to be creditworthy (like higher education or professional objectives like expanding a small business) but unable to gain credit because of missing or outdated negative information. Lenders need the right data to lend responsibly, ensuring they only provide loans to those with an ability to pay them back. Our RiskView tool widens financial inclusion for marginalised groups, including those without credit history, by providing alternative data sets not in traditional credit reports, such as home ownership, education status and professional licences. In 2019, we held an event with US organisations, including consumer advocacy groups such as the Center for Responsible Lending, UnidosUS, the Pew Charitable Trusts and the Annie E. Casey Foundation to explore improving equality of access to financial services for more citizens.

Issues can be magnified in developing economies as there are two primary challenges to financial inclusion: identity verification and credit risk. LexisNexis Risk Solutions' ThreatMetrix, in partnership with fintech partners, is deriving alternative data that can be used to assess risk from consumers who use smartphones. We launched a pilot in Mexico with plans to spread the pilot to more countries and also deploy an account opening fraud detection service for developing economy lenders in 2020.

Legal

LexisNexis Legal & Professional promotes the rule of law and access to justice through its products and services. In 2019, advancing SDG 16 (Peace, Justice and Strong Institutions), LexisNexis Middle East & North Africa launched a new Lexis Middle East platform, an online database providing access to case law, legislation and regulations in English and Arabic, as well as expert commentary in English for Middle East jurisdictions. Drawn from over 300 regional sources, Lexis Middle East is updated daily to inform the legal community.

In 2019, we launched the LexisNexis Rule of Law Foundation to partner with a wide range of stakeholders on rule of law projects around the world. A key tool on the Foundation site is the LexisNexis Rule of Law Impact Tracker, updated with 2019 data, visualising how key measures such as child mortality, corruption, and life expectancy decrease when the rule of law grows.

In the year, we supported the development of the UNGC's SDG 16 Action Platform and held the first country consultation in Timor-Leste. During the full day workshop, in collaboration with the Timor-Leste Office of Foreign Affairs, seventy entrepreneurs explored how supporting the SDGs can help their businesses and their country.

We also held Rule of Law Cafés throughout 2019 in London, Singapore and Malaysia, bringing together stakeholders, including customers, government, NGOs and law societies, to discuss opportunities to go beyond legal minimums to advance the rule of law. During UN General Assembly week 2019, we held a public event on business and human rights with Ambassador Keith Harper, former US representative to the Council on Human Rights, live-streamed to RELX employees and made available afterward on the RELX SDG Resource Centre.

Exhibitions

Reed Exhibitions events strengthen communities and support the SDGs. In 2019, we held the 12th annual World Future Energy Summit (WFES) which aims to accelerate global commitment to climate change solutions. The event engaged some 34,000 attendees, including 15 heads of state, 100 ministers and more than 3000 business leaders and students, as well as 800 exhibiting companies from over 40 countries. WFES facilitated sustainability deals that will impact 20 countries with a combined estimated value of more than \$10 billion. These included Solar Energy Corporation of India's plans for a \$7 billion Cold Desert Regions Ultra-Mega Solar Power project and Abu Dhabi National Energy Company PJSC and LakeDiamond partnership agreement on photovoltaic cells and power-beaming technology.

In the year, planning advanced for the first Smart Cities Expo & Forum at World Future Energy Summit 2020 to bring together governments and municipalities with leaders in smart infrastructure, future transportation and next-generation building technology to advance sustainable cities.

On the theme of SDG 11, Sustainable Cities and Communities, colleagues at Reed Exhibitions India supported our Good Cities 2019 SDG Inspiration Day in Delhi which connected necessary contributors to more sustainable cities including government, business, and civil society. Among others, Amit Sharma, Head of Energy and Sustainability Services at Schneider Electric India, and Aditi Haldar, South-Asia Director of GRI, explored the challenges of health planning for urban populations and the future jobs and skills required to deliver smart city data and infrastructure.

During Reed Exhibition's World Travel Market 2019, we explored resilient destinations in an age of increased disaster risk. Jamaica's Tourism Minister Edmund Bartlett and the Global Business Coalition for Education's Jake Taesang Cho argued for improved support for disaster relief preparedness. During the session we revealed research underpinning our SDG 11 Graphic on sustainable cities, available on the RELX SDG Resource Centre.

Across RELX

Recognising that across RELX we have products, services, tools and events that advance the UN's 17 SDGs, we created the free RELX SDG Resource Centre in 2017 to advance their awareness, knowledge and implementation. In the year, we added new partners such as UN University; its original research on the site includes the 2019 report *Unlocking Potential*, which explores public-private partnerships that puts the financial sector at the heart of global efforts to end modern slavery and human trafficking.

In the year, we improved the search functionality of the RELX SDG Resource Centre to ensure queries are returned with greater accuracy and enhanced the SDG News Tracker – which provides up-to-the minute news from over 70,000 global sources in all the UN languages plus German – to allow searching for SDG news by keyword and geography. We also reached the milestone of 1,000 content items from our business and partners on the site and will increase this further in 2020. In addition, we indexed the content of Elsevier's Scopus (a leading citations database with over 76m records) to the SDGs, which will accelerate research underpinning the RELX SDG Graphics.

2019 marked the ninth year of the RELX Environmental Challenge, focused on providing improved and sustainable access to water and sanitation where it is presently at risk. The \$50,000 first-prize winner, SolarSack, uses ultraviolet radiation from direct sunlight to purify water at an exceptionally low cost. The funding will bring the system to people living in refugee camps in Uganda. The \$25,000 second-prize winner was Christopher Mtalimanja, an educator and disability-rights activist, who is creating dry bio latrine system at three primary schools in Malawi. Liquid waste is transformed into fertiliser used to grow seedlings for revenue, while solid waste is transferred to a digester to produce energy for the schools. The winners joined us and past awardees at World Water Week in Stockholm and will also be featured in Elsevier's journal *Water Research* and gain access to Science Direct.

2019 OBJECTIVES	Achievement
Advance of science and health: Meaningful support to advance SDG3 (Good Health and Well-being), including Elsevier Foundation Women in Water in Africa Leadership workshops	<ul style="list-style-type: none"> Water First! three-day workshop in Accra, Ghana in September 2019 with 35 women researchers from across Africa Research Without Borders, African Journals Partnership Program, eight volunteers (12 weeks in total) in 2019; 40 volunteers since 2017 providing expertise in publishing, marketing, operations and technology across the continent, including in Malawi, Ethiopia, Sierra Leone, DRC, Uganda, Mali, Kenya, and Rwanda Increasing capacity at Epicentre's Niger Research Centre encompassing access to ScienceDirect, Scopus, Scival, Clinical Key, and Mendeley, as well as media and speaker assistance for Epicentre Scientific Day – \$300,000 provided of the \$600,000 committed to 2022
Advance of science and health: Create new RELX SDG Graphics on the state of the knowledge underpinning the SDGs	<ul style="list-style-type: none"> Two created in 2019: <ul style="list-style-type: none"> SDG 6 (Clean Water and Sanitation) SDG 11 (Sustainable Cities and Communities)
Protection of society: Workstream on improving financial inclusion for low-income citizens	<ul style="list-style-type: none"> Engaged with US organisations including consumer advocacy groups such as the Center for Responsible Lending, UnidosUS, the Pew Charitable Trusts, and the Annie E. Casey Foundation to discuss how LexisNexis Risk Solutions' alternative data sets in its RiskView tool (e.g., home ownership, education, and bankruptcies) can support access to credit for low scorers in traditional credit bureau reports Pilot in Mexico analysing risk attributes from digital devices, using LexisNexis Risk Solutions' ThreatMetrix to address challenges to financial inclusion for middle income citizens in emerging markets, including identity verification and credit risk
Promotion of the rule of law and access to justice: Meaningful support of SDG 16 (Peace, Justice and Strong Institutions), including support for UNGC SDG 16 Action Platform	<ul style="list-style-type: none"> Launched LexisNexis Rule of Law Foundation Rule of Law Cafés in London, Singapore and Malaysia Supported UNGC SDG 16 Action Platform; hosted first in-country consultation in Timor-Leste UN General Assembly week event with Ambassador Keith Harper, former US representative to the Council on Human Rights on business and human rights

1. Our unique contributions (continued)

2019 OBJECTIVES	Achievement
Fostering communities: Meaningful support of SDG 11 (Sustainable Cities and Communities), including focus at relevant Reed Exhibition shows, and a 'Good Cities' 2019 SDG Inspiration Day India	<ul style="list-style-type: none"> ■ SDG Inspiration Day Delhi, India focused on SDG 11 (Sustainable Cities and Communities): participation from government, peers, media, foundations, NGOs and youth; front page coverage in India's largest circulation newspaper of four million daily ■ Organised panel discussion at World Travel Market focused on disaster relief preparedness with Jamaican Tourism Ministry at which sustainable cities research launched; planning for a first Smart Cities Expo & Forum at World Future Energy Summit 2020
Universal, sustainable access to information: Broaden RELX SDG Resource Centre to include content from new partners and enhance functionality, including for SDG News Tracker	<ul style="list-style-type: none"> ■ New partner content from UN University and Partnership for Sustainable Development Data; new search function and dedicated news section
2020 OBJECTIVES	
<ul style="list-style-type: none"> ■ Advance of science and health: Meaningful support of SDG 3 (Good Health and Well-being) including development of MSF/Epicentre Medical Day in Niger, and Water First! Workshops for Women in Water, encompassing skills training through Elsevier's Research without Borders ■ Protection of society: Meaningful support of SDG 16 (Peace, Justice and Strong Institutions), including expansion of activities to find missing children and adults through US ADAM programme and UK Missing People; SDG 10 (Reduced Inequalities): Advance financial inclusion pilots to more countries including India ■ Promotion of the rule of law and access to justice: Meaningful support of SDG 16 (Peace, Justice and Strong Institutions), including expansion of Rule of Law Cafés to new locations including South Africa; development of new LexisNexis Rule of Law Foundation ■ Fostering communities: SDG 11 (Sustainable Cities and Communities): Enhance sustainability of trade show events ■ Create SDG Champions network ■ More RELX SDG Graphics on the state of knowledge underpinning the SDGs ■ Increase RELX SDG Resource Centre content by 25% 	
OUR 2030 VISION*	
Use our products and expertise to advance the SDGs, among them:	
<ul style="list-style-type: none"> ■ SDG 3: Good Health and Well-being ■ SDG 4: Quality Education ■ SDG 10: Reduced Inequalities ■ SDG 13: Climate Action ■ SDG 16: Peace, Justice and Strong Institutions 	
Enrich the SDG Resource Centre to ensure essential content, tools and events on the SDGs are freely available to all	

* 2030 is the deadline for the UN's Sustainable Development Goals; we aim to do our part toward their achievement.

2. Governance

Our Board recognises the importance of maintaining high standards of corporate governance, which underpins our ability to deliver consistent financial performance, and value to our stakeholders. The 2018 UK Corporate Governance Code (UK Code) applied to RELX PLC from 1 January 2019. During the year, the Board took steps to ensure that RELX fully addressed the requirements of the UK Code. This included reviewing the Company's approach to engaging with key stakeholders, assessing RELX's culture, aligning our purpose, strategy and values, and assessing the Group's Workforce Policies.

RELX PLC is the sole parent company of the group. It owns 100% of the shares in RELX Group plc which, in turn, holds all of the operating businesses, subsidiaries and financing activities of the group. RELX PLC, its subsidiaries, associates and joint ventures are together known as RELX.

Following the simplification of our corporate structure which took place in 2018, the shares of RELX PLC are traded through its primary listing on the London Stock Exchange and its secondary listing on Euronext Amsterdam, while its securities are also traded on the New York Stock Exchange under its American Depository Share Programme. Accordingly, the Board has implemented standards of corporate governance and disclosure applicable to a UK incorporated company, with listings in London, Amsterdam and New York.

During the year the Board took steps to ensure we fully addressed the requirements of the UK Code. This included reviewing the company's approach to engaging with key stakeholders, assessing the company culture and aligning our purpose, values, strategy and workforce policies.

Information and documents detailing our governance procedures are available to stakeholders online at www.relx.com. The RELX financial statements are prepared in accordance with International Financial Reporting Standards.

The RELX Code of Ethics and Business Conduct (the Code) sets the standard for our corporate and individual conduct and, among key issues, covers fair competition, anti-bribery, conflicts of interest, employment practices, data protection and appropriate use of company property and information. It also encourages reporting of violations – with an anonymous reporting option where legally permissible – and prohibits retaliation against anyone for reporting a violation they believe may have occurred.

The Code supports the principles of the UNGC and stresses our commitment to human rights. In accordance with the UN's Guiding Principles on Business and Human Rights, we have considered where and how we operate to ensure we uphold human rights. In 2019, we updated our Modern Slavery Act Statement, available from the RELX homepage, which states how we are working to avoid human trafficking and modern slavery in our direct operations and in our supply chain.

We maintain a comprehensive set of compliance policies and procedures in support of the Code reviewed at least annually to ensure they remain current and effective. Our policies and procedures help us comply with the law and conduct our business in an open, honest, ethical and principled way, and they comprise part of our antibribery adequate procedures for compliance with applicable laws.

Employees receive mandatory training on the Code – both as new hires and at regular intervals during their tenure – in order to maintain a respectful workplace, prevent bribery and protect personal and company data. Mandatory periodic training covers key Code topics in depth and is supplemented by advanced in-person training for higher-risk roles.

In 2019, we focused on fostering our culture of integrity across RELX. We developed Do The Right Thing Principles with Compliance leads across the business and created RELX Ethical Leader online training and embedded them in manager communications and resources, including a new Ethical Leader Toolkit. We also held Compliance Week activities with video, email, posters and a quiz.

We offer employees a confidential reporting line, managed by an independent third party, accessible by telephone or online 24 hours a day, 365 days a year (as allowed under applicable law, employees may submit reports to the confidential line anonymously). Reports of violations of the Code or related policies are promptly investigated, with careful tracking and monitoring of violations and related mitigation and remediation efforts by Compliance teams across the business.

We remained diligent in our ongoing efforts to comply with applicable bribery and sanctions laws and to mitigate risks in these areas. Our anti-bribery and sanctions efforts include enforcement of detailed, risk-based internal policies and procedures on topics such as doing business with government officials, gift and entertainment limits, gift registers, and complying with complex sanctions requirements. Relationships with third-parties and acquisition targets are evaluated for risk using questionnaires, references, detailed electronic searches, and Know Your Customer screening tools. We monitor and assess the implementation of our anti-bribery and sanctions programs by continually reviewing and updating our policies and procedures; conducting periodic programmatic risk-assessments, and conducting quality assurance reviews and internal audits on the operational aspects of the programmes.

As a company focused on knowledge and analytics, each year we are in possession of large amounts of data. It is therefore incumbent on RELX to ensure that we provide our customers and our people with the highest levels of data privacy and security. We continually monitor our procedures and systems to meet this requirement, ensuring compliance with all relevant laws where we do business around the world. In 2019, we provided training and simulations, scenario planning, and released our Incident Response Plan 3.0. ISO 27001 data privacy certification now covers relevant business in India, China, Ireland and the UK. In 2019, we held a Fraud Awareness Month, as well as a Cyber Security Awareness Month for colleagues with videos, newsletters, and security town halls. We also ran our second Great Phishing Challenge contest, giving employees the opportunity to detect suspicious emails, with more than 2000 submissions. We also hosted the US Secret Service's First National Seminar on Cyber Incident Response Preparedness at our offices in Alpharetta, Georgia. We also continued educating our employees on the dangers of phishing attacks by performing monthly simulations, providing reporting tools, and using additional technology to detect and delete suspicious emails.

As a signatory to the UNGC and its principles, encompassing labour, environment, anti-corruption and human rights, we demonstrated leadership by maintaining our LEAD company status, participating in the UNGC SDG Action Platforms Decent Work in Global Supply Chains and Peace, Justice and Strong Institutions and hosted the first country consultation in Timor-Leste. We serve on the boards of the UNGC networks in the UK and Netherlands. We produce an annual Communication on Progress report, required of signatories annually, where we attained the Advanced Level.

Globally, in 2019, RELX paid £464m in corporate taxes. We are a responsible corporate taxpayer and conduct our tax affairs to ensure compliance with all laws and relevant regulations in the countries in which we operate. Tax is an important issue for our stakeholders and society at large. We have set out our approach to tax in our global tax strategy. This incorporates our Tax Principles along with additional disclosures about where we pay taxes and our broader contribution to society, available at: www.relx.com/go/TaxPrinciples. We also progressed a project to make African tax law more transparent to both governments and citizens.

The Statement of Investment Principles for the Reed Elsevier UK pension scheme indicates that environmental, social or governance issues that may have a financial impact on the portfolio or a detrimental effect on the strength of the employer covenant, are taken into account when making investment decisions. CR issues are relevant to other investment decisions we make.

2019 OBJECTIVES	Achievement
Continue corporate security incident response preparedness; expand ISO27001 data protection compliance certification	<ul style="list-style-type: none"> ■ Incident Response Plan 3.0 released ■ Training for senior leadership including simulations ■ UK Cyber Essentials PLUS certification for key product groups ■ ISO 27001 certification expanded to cover Risk and Business Analytics businesses in UK, India and China
New Culture of Integrity manager communications, training and resources	<ul style="list-style-type: none"> ■ RELX Do The Right Thing Principles developed with compliance leads across business areas ■ RELX Ethical Leader manager communications and online training incorporating Do the Right Thing Principles
Advance work on African tax law codification project	<ul style="list-style-type: none"> ■ Advanced discussions with OECD's Centre for Tax Policy and Administration; shortlist of countries for proof of concept in 2020

Inspiring Action on the SDGs in Delhi

On 2 May 2019, we held the fourth RELX SDG Inspiration Day in Delhi, India to catalyse action on the UN Sustainable Development Goals (SDGs). The focus, in partnership with the Ban Ki-Moon Centre for Global Citizens, (UN) Global Compact India, and the Responsible Media Forum, was SDG 11, Sustainable Cities and Communities, and the interconnection with the other 16 SDGs, including Good Health and Well-being (SDG 3) and the Rule of Law (SDG 16).

4th global RELX SDG Inspiration Day



RELX SDG Inspiration Day Delhi in May 2019 engaged stakeholders on SDG 11, Sustainable Cities and Communities

Business, government, investors, academia, youth and NGOs – all stakeholders needed to advance the SDGs – came together to discuss positive, collaborative action.

Kamal Singh, Executive Director of Global Compact India, cited the importance of India; if India achieves the goals, he said, the world is half way to realising the SDGs. Yet the task globally, according to Anna French, Deputy Director of the UK's Department for International Development India, requires around \$5tn USD each year. New approaches are needed to fund the goals, she said, and business must do its part.

There was an Expert Café allowing participants to engage with experts including Arunava Dasgupta, Head of Urban Design at Delhi's School of Planning and Architecture; Amit Sharma, Head of Energy and Sustainability Services at Schneider Electric India and Aditi Haldar, South-Asia Director of GRI. Themes included: health and urban populations, the role of data and technology, green city energy systems and the implications for skills and jobs.

Barbara Müller, Senior Manager at BMW Foundation, highlighted the Foundation's Responsible Leader Networks mobilising leaders to collaborate for a sustainable and just future, such as Yash Ranga, Stakeholder Engagement Partner at Jaipur Rugs Foundation. Ranga stated, "hope is a beggar that makes you walk on fire," don't hope for change, make it happen.

Ambassador Kim Won-Soo, former UN High Representative for Disarmament Affairs and Board Member of the Ban Ki-moon Centre for Global Citizens, made the case for smaller, smart municipalities.



66

The RELX SDG Inspiration Day positively connected those working to achieve the SDGs in India.

Kamal Singh
Executive Director
(UN) Global Compact India

2020 OBJECTIVES

- Continue corporate security incident response preparedness; implement controls to increase resilience to user-based attacks, such as phishing and ransomware
- Assess and develop strategies to address compliance with emerging privacy regulation such as the California Consumer Privacy Act
- Continue to advance African tax law codification project; deploy proof of concept to a shortlist of countries

OUR 2030 VISION

Continued progressive actions that advance excellence in corporate governance within our business and the marketplace

3. People

Our over 33,000 people are our strength. Our workforce is 50% female and 50% male, with an average length of service of 9 years. There were 42% female and 58% male managers, and 33% female and 67% male senior operational managers.

		Female		Male
Board of Directors	4	36%	7	64%
Senior operational managers*	130	33%	261	67%
All employees**	16,600	50%	16,600	50%

* Senior operational managers are defined as those managers up to and including three reporting lines from the CEO with a management level of 16 and above – the senior manager category as defined by our internal job architecture

** Full-time equivalent

At year end 2019, women made up 36% of the members of the Board. The two Executive Directors on the Board are male. The Nominations Committee considers the knowledge, experience and background of individual Board directors.

In the year, we created a new Inclusion and Diversity Policy which recognises that inclusion is important to our future. We need the engagement of people from a wide range of backgrounds, experiences and ideas to achieve real innovation for our customers around the world. It commits us to: creating a positive and supportive working environment for all employees; promoting the diversity of our workforce; recognising and valuing individual differences and supporting the participation of all team members; and responding to changing working patterns, including flexible working as appropriate. In the year, we created an Inclusion Dashboard for real-time information on a range of key metrics including gender, age, generation, leavers, data that can be broken down by job function, business unit and seniority.

Our Inclusion Council is composed of leaders from each area of our business to help us set and track our inclusion and diversity strategy, supported by an Inclusion Working Group with more than 200 participants. In 2019, our Employee Resource Groups (ERGs) grew to 70 networks, such as women's forums and pride groups, to facilitate support, mentoring and community involvement. In the year, we held our first ERG conference with more than 100 ERG representatives from across RELX. Held over two days there were

keynotes by senior leaders, including Marike Van Lier Lels, Workforce Engagement Director on the RELX Board, panel discussions with ERG leads, workshops and more over a two day period. RELX is a signatory to the Women's Empowerment Principles, a UNGC and UN Women initiative to help companies empower women and promote gender equality. In 2019, we were included in Bloomberg's Gender-Equality Index.

We comply with employee-related reporting requirements and, in 2019, we published our second UK gender pay gap data as part of the UK legislation. We engage in efforts to educate our employees on pay principles and equal pay. We invest in research to identify causes of pay differences and regularly evaluate our policies and processes to ensure they are aligned to our inclusion strategy. We commit to building a robust framework for monitoring pay equity across the enterprise and have formally made these pledges as part of the UN's Equal Pay International Coalition.

We operate a number of stock programmes for employees including options, restricted stock and performance stock units. For senior colleagues, these are based on annual allocations of stock – the vesting of which may be related to company performance or service-based. We also offer all employees stock programmes in which employees may elect to participate in certain markets, for example Sharesave in the UK. These incentive programmes are applicable to approximately 20% of our employees. Targets associated with CR performance are embedded within our annual incentive framework to progress our annual and multi-year CR objectives.

Our employees have the right to a healthy and safe workplace, as outlined in our Global Health and Safety Policy. We concentrate on areas of greatest risk for example, warehouses, events and exhibitions. As a primarily office-based company, we also focus on manual handling, slips, trips and falls. To reduce our severity rate [lost days per 200,000 hours worked], we conduct risk assessments and work with a third party in the US to assign a nurse case manager to each complex or severe claim. There were 14 lost time incidents in the year.

In the US, where we have the largest concentration of employees, our programmes promote workplace wellbeing through health screenings, online assessments, stress awareness training and smoking cessation courses, with financial and other incentives for participation.

Dedicated health and well-being programmes are now available to more than 70% of our employees. We also maintain a network of more than 90 Well-being Champions. We held our Fit2Win competition in the year; teams walk, run, cycle or swim, with the chance to win \$1,000 for the charity of their choice. More than 800 participants took part. Collectively they reached a total of 237,945 km/ 147,852 miles.

3. People (continued)

2019 OBJECTIVES	Achievement
Progress UN Equal Pay International Coalition commitments	<ul style="list-style-type: none"> ■ Job architecture project completed and integrated into new human resources information system, Workday ■ Pay equity audits in key functions and geographies completed in 2018, with adjustments made as necessary in 2019
Establish a dashboard for inclusion metrics	<ul style="list-style-type: none"> ■ Inclusion Dashboard created covering gender, age, generation, joiners and leavers by job function, business unit and seniority ■ Our Workforce Engagement Director held a number of meetings with employees across Europe, the US and APAC and reported to the Board
Develop mental health metrics and response plans	<ul style="list-style-type: none"> ■ Mental health metrics developed utilising absence, percentage of annual leave taken and exit interview data ■ Peer benchmarking to identify common indicators and best practice ■ Response plans include expanding Well-being Champions Network and training mental health employee leads
2020 OBJECTIVES	
<ul style="list-style-type: none"> ■ Introduce suite of 2020-2025 inclusion goals ■ Provide manager training on pay principles and equal pay ■ Map and expand Well-being Champions Network and train more mental health employee leads 	
OUR 2030 VISION	
Continued high-performing and satisfied workforce through talent development, D&I and wellbeing; scale support for external human capital initiatives	

4. Customers

In 2019, we surveyed more than 510,000 customers through Net Promoter Score (measuring customer advocacy) and business dashboard programmes. This allows us to deepen our understanding of customer needs and drive improvements. Results are reviewed by the CEO and senior operational managers and communicated to staff.

In the year, we disseminated our updated Editorial Policy to employees, along with a new video series to hear from colleagues on how the Editorial Policy underpins their work. The Editorial Policy indicates our respect for human rights and encourages pluralism of sources, ideas and participants. It makes clear our commitment to data privacy and security and the responsible use of artificial intelligence.

We are committed to improving access to our products and services for all users, regardless of physical ability. Our Accessibility Policy aims to lead the industry in providing accessibility solutions to customers, with products that are operable, understandable and robust. In 2019, members of the

Accessibility Working Group logged over 230 accessibility projects and Elsevier's Global Books Digital Archive fulfilled more than 4,400 disability requests, 87% of them through AccessText.org, a service we helped set-up. We established an Accessibility Advisory Board in the year comprised of accessibility leaders in the business to review approaches to training, customer inquiries, compliance models, and screen reader tools. We also established the second RELX Accessibility Leadership Awards to celebrate employees who show exceptional leadership in advancing accessibility.

CR as a Sales Tool is one of our key CR networks helping employees share information about our commitment to CR with their customers as a way of differentiating the company and creating dialogue to understand customer CR priorities and opportunities for collaboration. In 2019, with the creation of a new global RELX intranet site, we refreshed existing content and added resources such as Talking to Our Customers About the SDGs.

2019 OBJECTIVES	Achievement
Roll out new Editorial Policy training	<ul style="list-style-type: none"> ■ Updated Editorial Policy launched for all staff by Chief Legal Officer and General Counsel ■ New video series, RELX Editorial Policy in Action, made available to all employees
Expand online content for CR as a Sales Tool	<ul style="list-style-type: none"> ■ Migration to new intranet; refresh of all content and introduction of Talking to Our Customers About the SDGs
Develop Accessibility Advisory Board	<ul style="list-style-type: none"> ■ Accessibility Board created representing all business areas focused on standardising accessibility training, compliance models, automated testing and enterprise-wide communications

2020 OBJECTIVES

- New SDG Customer Award to be presented at annual flagship RELX SDG Inspiration Day
- Map customer feedback mechanisms across business areas
- Develop framework for product accessibility self-audits

OUR 2030 VISION

Continue to expand customer base across our four business units through excellence in products and services, active listening and engagement, editorial and quality standards, and accessibility; a recognised advocate for ethical marketplace practice

5. Community

RE Cares, our global community programme, supports employee volunteering and giving that makes a positive impact on society. In addition to local initiatives of importance to employees, the programme's core focus is on education for disadvantaged young people that advances one or more of our unique contributions as a business. Staff have up to two days paid leave per year for their own community work. We donated £4m in cash (including through matching gifts) and the equivalent of £14.7m in products, services and staff time in 2019. Globally, 45% of employees were engaged in volunteering through RE Cares and we reached 26,500

disadvantaged young people through time, in-kind and cash donations. A network of over 240 RE Cares Champions ensures the vibrancy of our community engagement.

Each September, we hold RE Cares Month to celebrate our community commitment. Throughout 2019, we raised funds (\$60,866 to date) to help global fundraising partner, Hope and Homes for Children (HHC), which aims to ensure children grow up in families rather than institutions. Employees will be working to raise \$100,000 over a two-year period to support Hope and Homes' work with hearing-impaired children in Moldova. The country has three orphanages for children with hearing impairment as disability is a common impetus for institutionalising children. Funding will support inclusive education to help hearing-impaired children integrate into mainstream education, through speech therapy, quality hearing aids, support for parents and teacher training. In early September, HHC ran a two-day training course on the issues for 38 representatives from 35 municipalities across Moldova.

We held our annual global book drive, yielding 8,937 books for local and developing world readers and announced the winners of the ninth Recognising Those Who Care Awards to highlight the exceptional contributions to RE Cares of eight individuals. Individual winners from across the business travelled to RELX-supported projects in Ghana with Book Aid International, a charity working to foster a love of reading in children across Africa through book provision and programmes that increase the educational capacity of schools and libraries. RELX has worked with Book Aid for over 20 years and has donated more than one million books including some 143,908 in 2019.

2019 OBJECTIVES	Achievement
New RELX global fundraising partnership	<ul style="list-style-type: none"> ■ Hope and Homes for Children project in Moldova to help children with hearing impairment access specialised speech and language therapy chosen from a shortlist in an all-employee vote ■ Aiming to raise at least \$100,000 during next two years, with almost \$61,000 already raised ■ 35 children assessed by year-end; internal team travelled to Moldova to create a video to be shared with all employees
Create guidance for calculating pro bono contributions	<ul style="list-style-type: none"> ■ Worked with LBG and key stakeholders to improve methodology for calculating in-kind contributions ■ Developed guidance note shared with finance colleagues and lead RE Cares Champions

2020 OBJECTIVES
<ul style="list-style-type: none"> ■ Progress new partnership with global fundraising partner, Hope and Homes for Children ■ Develop RE Cares Manager training ■ Create RE Cares module for staff induction across RELX

OUR 2030 VISION
Through our unique contributions, significant, measurable advancement of education for disadvantaged young people; investments with partners for maximum impact

6. Supply chain

Given the importance of maintaining an ethical supply chain, we have a Socially Responsible Supplier (SRS) programme encompassing all our businesses, supported by colleagues with expertise in operations, distribution and procurement and a dedicated SRS Director from our global procurement function.

We have a comprehensive Supplier Code of Conduct (Supplier Code) available in 16 languages, which we ask suppliers to sign and display prominently in the workplace. It commits them to following applicable laws and best practice in areas such as human rights, labour and the environment. We ask suppliers to require the same standards in their supply chains, including requesting subcontractors to enter into a written commitment to uphold the Supplier Code. The Supplier Code states that where local industry standards are higher than applicable legal requirements, we expect suppliers to meet the higher standards.

Through our SRS database, we track key suppliers and those located in medium and high-risk countries as designated by our supplier risk tool. This incorporates ten indicators, including human trafficking information from the US State Department and Environmental Performance Index results produced by Yale University and partners. The tracking list changes year-on-year based on the suppliers we engage to meet the needs of our business. In 2019, there were 354 suppliers on the SRS tracking list, of which 102 are in high and medium risk countries. At year end, 91% of suppliers on the tracking list were signatories to our Supplier Code. Of the 33 non-signatories, 9 suppliers are in high or medium risk countries. We continue to work with non-signatories to gain agreement to our Code, and/or assess whether they have equivalent standards in place, in order to ultimately decide whether to continue doing business with them. We have embedded the Supplier Code into our sourcing process, and have a total of 3,202 suppliers who have agreed to the Supplier Code in 2019, up from 3,082 in 2018.

We engage a specialist supply chain auditor who undertook 93 external audits on our behalf in 2019. Incidence of non-compliance triggers continuous improvement reports summarising audit results, with remediation plans and submission dates agreed and signed by both the auditor and supplier.

We are committed to proactive engagement with suppliers to ensure our supply chain reflects the diversity of our communities. In 2019, we continued to focus on rolling out our supplier diversity programme. We launched the new RELX Supplier Registration portal to assist our procurement colleagues in identifying qualified diverse suppliers and encouraged diverse supplier inclusion in our sourcing processes. In 2019, 11.9% of our US spend was with diverse suppliers.

We aim to partner with suppliers which uphold the same standards we set for ourselves. One of them, BCD Travel, has maintained their top EcoVadis sustainability rating for four years in a row.

6. Supply chain (continued)

2019 OBJECTIVES	Achievement
Increase the number of suppliers as Code signatories	<ul style="list-style-type: none"> ■ 96% core (target 95%) ■ 100% high risk core (target 100%) ■ 91% total tracking list (target 85%) ■ 3,202 total Code signatories (3,082 YE 2018)
Continue using audits to ensure continuous improvement in supplier performance and compliance	<ul style="list-style-type: none"> ■ 93 audits completed ■ 2 audits scheduled, 6 in progress ■ Reduced open audit points by 21% over 2018
Continue to advance US Supplier Diversity and Inclusion programme	<ul style="list-style-type: none"> ■ 11.9% diversity spend (US rolling four quarters)
2020 OBJECTIVES	
<ul style="list-style-type: none"> ■ Increase number of suppliers as Code signatories ■ Continue using audits to ensure continuous improvement in supplier performance and compliance ■ Advance US Supplier Diversity and Inclusion programme 	
OUR 2030 VISION	
<p>Reduce supply chain risks related to human rights, labour, the environment and anti-bribery by ensuring adherence to our Supplier Code of Conduct through training, auditing and remediation; drive supply chain innovation, quality and efficiencies through a strong, diverse network of suppliers</p>	

7. Environment

Our environmental targets reflect our environmental impacts and input from stakeholders and use science-based methodology. They include a commitment to certify 50% of the business against the ISO 14001 Environmental Management System standard by 2020. In 2019, we purchased 96% of our electricity from renewable energy and Renewable Energy Certificates. Full performance data can be found in the 2019 Corporate Responsibility Report (www.relx.com/go/crreport).

In the year, we attained an A- grade in CDP's climate change programme. RELX is one of the Mayor of London's London Business Climate Leaders committed to cutting pollution and emissions in excess of UK government thresholds. The goal is to help London, where we are headquartered, to become a zero carbon city by 2050.

Our Environmental Champions group, employee-led Green Teams and external networks, such as the Publishers' Database for Responsible Environmental Paper Sourcing, provide significant insight into managing our environmental impacts. Our Environmental Standards programme sets benchmark performance and inspires green competition between offices. In 2019, 45 sites (56% of key locations) achieved five or more standards and attained green status. The RELX CFO, our most senior environmental champion, wrote to all staff on World Environment Day, sharing our environmental priorities and recognising environmental achievements across the business.

We have a positive environmental impact through our environmental products and services, which spread good practice, encourage debate and aid researchers and decision makers. The most recent results from the independent Market Analysis System show that our share of citations in environmental science represented 63% of the total market and 49% in energy and fuels.

The €50,000 winner of Elsevier's 2019 Green and Sustainable Chemistry Challenge was Ramia Albakain, Associate Professor at the University of Jordan, who developed a green technique to remove toxic metal from wastewater, making it safe for agricultural irrigation and addressing chronic water shortages due to Jordan's arid climate.

2019 OBJECTIVES	Achievement
55% of locations to achieve five or more RELX Environmental Standards	<ul style="list-style-type: none"> ■ 56% achieved
Purchase renewable electricity equal to 90% of global consumption	<ul style="list-style-type: none"> ■ Achieved through green tariff purchases in Europe, green-e certified RECs purchase in the United States, and GoldPower iRECs in Asia Pacific
Achieve ISO 14001 Environmental Management System (EMS) certification at three additional locations	<ul style="list-style-type: none"> ■ Additional five sites certified including Alpharetta, Richmond, Horsham, Chennai and Gurgaon

2020 OBJECTIVES
<ul style="list-style-type: none"> ■ Set new environment targets for 2020-2025 ■ Purchase renewable electricity equal to 100% of global consumption ■ Achieve ISO 14001 Environmental Management System (EMS) certification at 50% of the business by headcount
OUR 2030 VISION
Further environmental knowledge and positive action through our products and services and, accordingly, conduct our business with the lowest environmental impact possible

	2019 ENVIRONMENTAL PERFORMANCE			Intensity ratio (per £m revenue)		
	Absolute performance		2018	2019 Variance	2018	2019 Variance
Scope 1 [direct emissions] tCO ₂ e	7,848	5%	7,477	1.00	0%	1.00
Scope 2 [location-based emissions] tCO ₂ e	68,229	-8%	74,279	8.67	-13%	9.91
Scope 2 [market-based emissions] tCO ₂ e	17,704	11%	16,004	2.25	5%	2.14
Total energy (MWh)	163,628	-9%	179,228	20.78	-13%	23.92
UK energy (MWh)	15,050	-16%	18,000	1.91	-20%	2.40
Water (m ³)	331,913	0%	332,490	42.15	-5%	44.38
Waste sent to landfill (t)*	546	-17%	658	0.07	-22%	0.09
Production paper (t)	34,599	-3%	35,555	4.39	-8%	4.75

* From reporting locations

ENVIRONMENTAL TARGETS

Focus area	Targets 2020	2019 Performance
Climate change	Reduce Scope 1 and 2 location-based carbon emissions by 40% against a 2010 baseline	-52%
Energy	Reduce energy and fuel consumption by 30% against a 2010 baseline	-41%
	Purchase renewable electricity equivalent to 100% of RELX's global electricity consumption	96%
Waste	Decrease total waste generated at reporting locations by 40% against a 2010 baseline	-66%
	90% of waste from reporting locations to be diverted from landfill	85%
Production paper*	100% of RELX production papers, graded in PREPS, to be rated as 'known and responsible sources'	100%
Environmental Management System	Achieve ISO 14001 certification for 50% of the business by 2020	42%
	Reporting locations achieving five or more RELX Environmental Standards	56%

* All paper we graded in 2019 – 96% of total production stock – was graded 3 or 5 stars (known and responsible sources).

We have reported on all emission sources required under the Companies Act 2006 [Strategic Report and Directors' Report] Regulations 2013. We have included emissions from all operating companies within the Group.

We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) and the data has been assured by an independent third party, EY. Details on methodology and the assurance statement can be viewed in the 2019 Corporate Responsibility Report at www.relx.com/go/CRReport.

2019 investor and other recognition

Constituent of the Ethibel Sustainability Index
Included in
– Excellence Europe
– Excellence Global



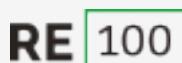
CDP
– Climate programme score:
A-
– Forest programme score: B
– Water programme score: B



Green Power Partnership
– National Top 100



FTSE4Good Index
Included in
– FTSE4Good Global Index
– FTSE4Good UK Index
– FTSE4Good Europe Index



RE100
– Member



Dow Jones Sustainability Index Europe
– Constituent



ISO 14001
– Certified



STOXX Global ESG Leaders Indices
– Included



ECPI Indices
– Included



Tortoise Responsibility100 Index
– 6th out of 100

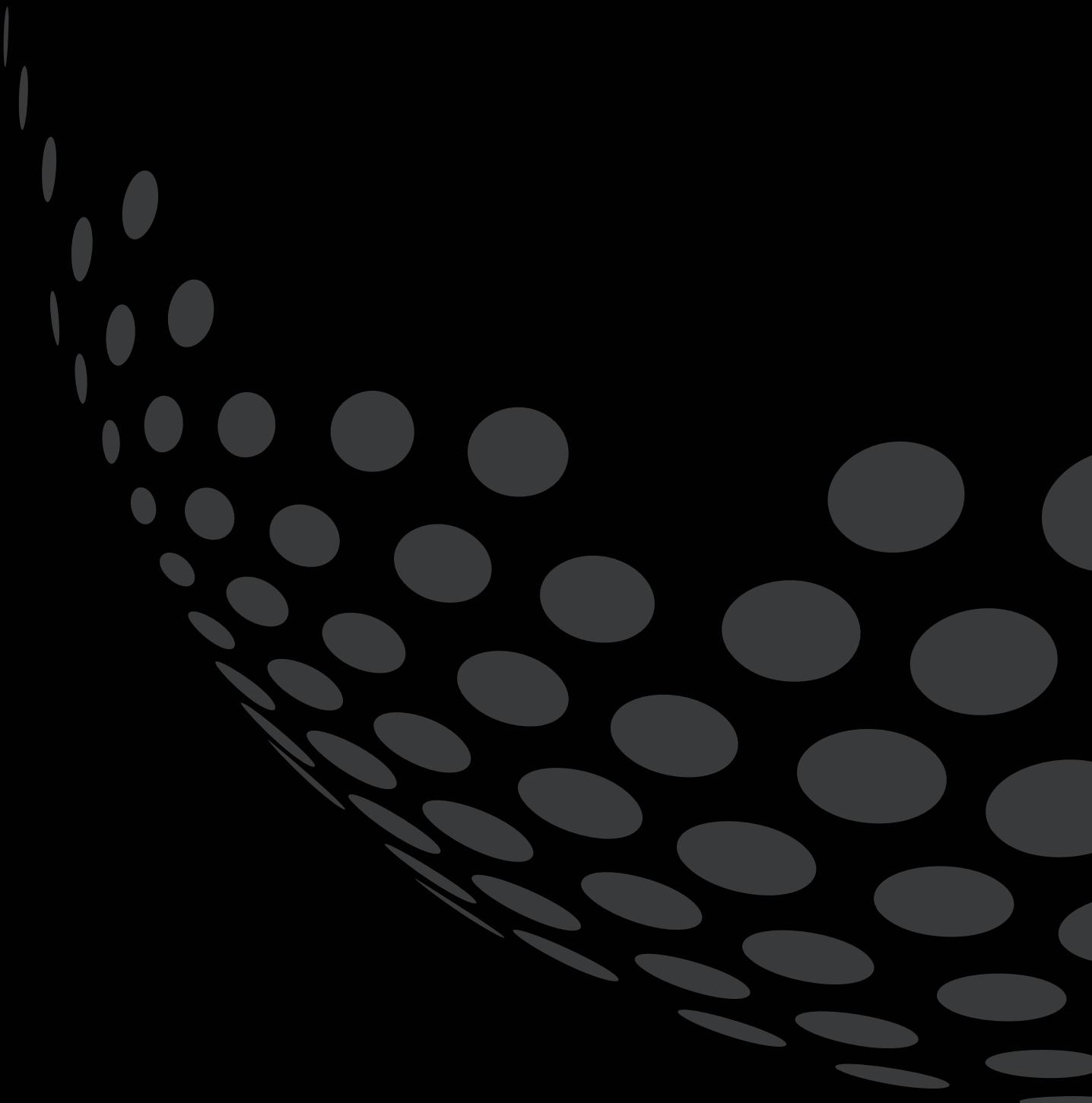


ISS-Oekom Corporate Responsibility Rating
– Prime status



ESG S&P 1200
– 2nd out of 1200 companies
for ESG performance based on
CSRHub data

The full 2019 Corporate Responsibility Report is available at www.relx.com/go/CRReport



Financial review

In this section

- 52 Chief Financial Officer's report
- 58 Principal and emerging risks

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Chief Financial Officer's report



Nick Luff
Chief Financial Officer

Underlying revenue and adjusted operating profit growth in 2019 were 4% and 5% respectively, and adjusted earnings per share grew at 7% at constant currency. We have maintained leverage at an appropriate level and our balance sheet remains strong, with Return on Invested Capital of 13.6%.

Revenue

Underlying revenue growth was 4%, with all four market segments contributing to underlying growth. The underlying growth rate reflects good growth in electronic and face-to-face revenues, partially offset by continued print revenue declines.

Reported revenue, including the effects of exhibition cycling, portfolio changes and currency movements, was £7,874m (2018: £7,492m), up 5%.

Exhibition cycling effects decreased revenue growth by 1%, and the net impact of acquisitions and disposals reduced revenue growth by 1%. The impact of currency movements was to increase revenue by 3%.

Profit

Underlying adjusted operating profit grew at 5%, ahead of underlying revenue, reflecting the benefit of process innovation across the Group.

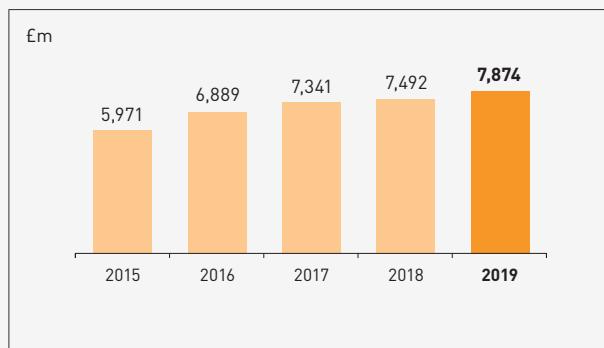
The net impact of acquisitions and disposals decreased adjusted operating profit by 2%. Currency effects increased adjusted operating profit by 3%.

Total adjusted operating profit, including the impact of acquisitions and disposals and currency effects, was £2,491m (2018: £2,346m), up 6%.

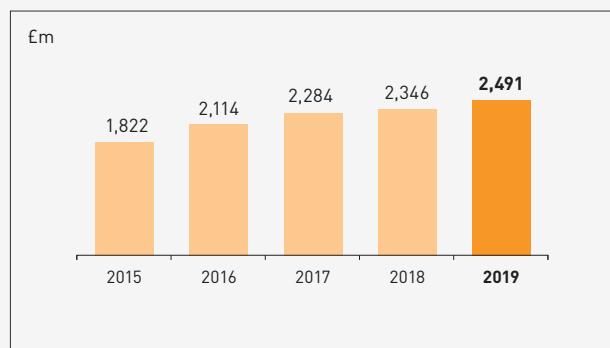
Underlying operating cost growth was 2%, reflecting investment in global technology platforms and the launch of new products and services, partly offset by continued process innovation. Actions continue to be taken across our businesses to improve cost-efficiency. Total operating costs, including the impact of acquisitions, disposals and currency effects, increased by 5%.

The overall adjusted operating margin of 31.6% was 0.3 percentage points higher than in the prior year. On an underlying basis, including cycling effects, the margin improved by 0.6 percentage points. Acquisitions and disposals reduced the margin by 0.3 percentage points and currency effects had no net impact on the margin.

REVENUE



ADJUSTED OPERATING PROFIT



	2019 £m	2018 £m	Change	Change at constant currencies	Change underlying
Reported figures					
Revenue	7,874	7,492	+5%	+2%	+4%
Operating profit	2,101	1,964	+7%		
Profit before tax	1,847	1,720	+7%		
Net profit attributable to RELX PLC shareholders	1,505	1,422	+6%		
Net margin	19.1%	19.0%			
Net borrowings	6,191	6,177			
Earnings per share	77.4p	71.9p	+8%		
Adjusted figures					
Operating profit	2,491	2,346	+6%	+3%	+5%
Operating margin	31.6%	31.3%			
Profit before tax	2,200	2,145	+3%		
Net profit attributable to RELX PLC shareholders	1,808	1,674	+8%		
Net margin	23.0%	22.3%			
Cash flow	2,402	2,243	+7%		
Cash flow conversion	96%	96%			
Return on invested capital	13.6%	13.2%			
Earnings per share	93.0p	84.7p	+10%	+7%	

RELX uses adjusted and underlying figures as additional performance measures. Adjusted figures primarily exclude the amortisation of acquired intangible assets and other items related to acquisitions and disposals, and the associated deferred tax movements. In 2018 we excluded exceptional tax credits, see note 9 on page 145. Reconciliations between the reported and adjusted figures are set out on page 184. Underlying growth rates are calculated at constant currencies, excluding the results of acquisitions until twelve months after purchase, and excluding the results of disposals and assets held for sale. Underlying revenue growth rates also exclude exhibition cycling. Constant currency growth rates are based on 2018 full-year average and hedge exchange rates.

Reported operating profit, after amortisation of acquired intangible assets and acquisition-related costs, was £2,101m (2018: £1,964m).

The amortisation charge in respect of acquired intangible assets, including the share of amortisation in joint ventures, increased to £295m (2018: £288m), with the impact of acquisitions largely offset by disposals and assets which have become fully amortised. Acquisition-related costs were the same as the prior year, at £84m (2018: £84m).

Adjusted interest expense was £291m (2018: £201m). This primarily excludes the net pension financing charge of £12m (2018: £9m). In 2019, the adjusted interest expense includes a charge of £99m in respect of the early redemption of bonds that were due to be repaid in October 2022.

Reported net finance costs were £305m (2018: £211m).

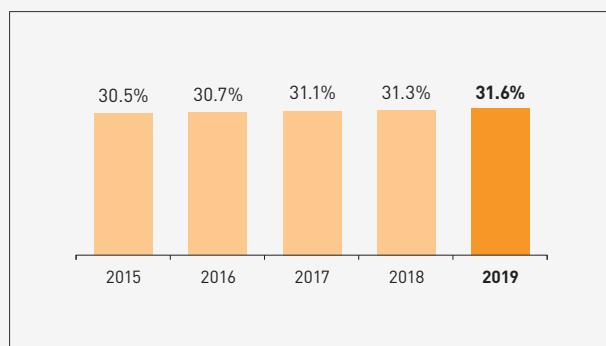
The net pre-tax gain on disposals and non-operating items was £51m (2018: £33m loss) arising largely from the disposal of certain Legal assets and venture capital investments. These gains are partly offset by an associated tax charge of £11m (2018: £14m credit).

Adjusted profit before tax was £2,200m (2018: £2,145m), up 3%.

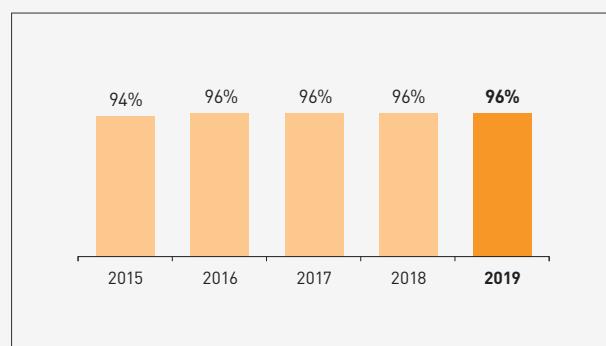
The reported profit before tax was £1,847m (2018: £1,720m).

The adjusted tax charge was £388m (2018: £465m) including a credit of £89m in respect of the substantial resolution of certain historical tax issues. The adjusted effective tax rate was 17.6% (2018: 21.7%). Excluding the £89m credit, the adjusted effective tax rate would have been 21.7%, in line with the prior year. The adjusted effective tax rate excludes movements in deferred taxation assets and liabilities related to goodwill and acquired intangible assets, but includes the benefit of tax amortisation

ADJUSTED OPERATING PROFIT MARGIN



ADJUSTED CASH FLOW CONVERSION



where available on those items. Adjusted operating profits and taxation are grossed up for the equity share of taxes in joint ventures. The application of tax law and practice is subject to some uncertainty and amounts are provided in respect of this. Discussions with tax authorities relating to cross-border transactions and other matters are ongoing. Although the outcome of open items cannot be predicted, no significant impact on profitability is expected.

The reported tax charge was £338m (2018: £292m).

The adjusted net profit attributable to RELX PLC shareholders of £1,808m (2018: £1,674m) was up 8%. Adjusted earnings per share was up 10% at 93.0p (2018: 84.7p). At constant rates of exchange, adjusted earnings per share increased by 7%.

The reported net profit attributable to RELX PLC shareholders was £1,505m (2018: £1,422m).

Cash flows

Adjusted cash flow was £2,402m (2018: £2,243m), up 7% compared with the prior year and up 4% at constant currencies. The rate of conversion of adjusted operating profit to adjusted cash flow was 96% (2018: 96%).

CONVERSION OF ADJUSTED OPERATING PROFIT INTO CASH

YEAR TO 31 DECEMBER	2019 £m	2018 £m
Adjusted operating profit	2,491	2,346
Depreciation and amortisation of internally developed intangible assets	307	287
Depreciation of right-of-use assets	82	77
Capital expenditure	(380)	(362)
Repayment of lease principal (net)*	(85)	(81)
Working capital and other items	(13)	(24)
Adjusted cash flow	2,402	2,243
Adjusted cash flow conversion	96%	96%

* Excludes repayments and receipts in respect of disposal-related vacant property and is net of sublease receipts.

Capital expenditure was £380m (2018: £362m), including £333m (2018: £306m) in respect of capitalised development costs. This reflects sustained investment in new products and related infrastructure across the business. Depreciation and the amortisation of internally developed intangible assets was £307m (2018: £287m). Capital expenditure was 4.8% of revenue (2018: 4.8%). Depreciation and amortisation was 3.9% of revenue (2018: 3.8%). These percentages exclude depreciation of leased right-of-use assets of £82m (2018: £77m) and principal lease repayments under IFRS 16 of £85m (2018: £81m).

Interest paid was £171m (2018: £155m) with the difference from adjusted interest expense primarily reflecting the charge on the early redemption of the 2022 bonds, part of which was non-cash and part of which was cash paid in January 2020. Tax paid, excluding tax relief on acquisition-related costs and disposals, of £483m (2018: £428m) was higher than the current tax charge, primarily due to the £89m credit discussed above.

Payments made in respect of acquisition-related costs amounted to £63m (2018: £77m).

Free cash flow before dividends was £1,700m (2018: £1,593m). Ordinary dividends paid to shareholders in the year, being the 2018 final and 2019 interim dividends, amounted to £842m (2018: £796m). Free cash flow after dividends was £858m (2018: £797m).

RECONCILIATION OF CASH GENERATED FROM OPERATIONS TO ADJUSTED CASH FLOW

YEAR TO 31 DECEMBER	2019 £m	2018 £m
Cash generated from operations	2,724	2,555
Dividends received from joint ventures	34	30
Purchases of property, plant and equipment	(47)	(56)
Expenditure on internally developed intangible assets	(333)	(306)
Payments in relation to acquisition-related costs	63	77
Pension recovery payment	44	20
Repayment of lease principal (net)	(85)	(81)
Proceeds from disposals of property, plant and equipment	2	4
Adjusted cash flow	2,402	2,243

FREE CASH FLOW

YEAR TO 31 DECEMBER	2019 £m	2018 £m
Adjusted cash flow	2,402	2,243
Interest paid (net)	(171)	(155)
Tax paid	(483)	(428)
Acquisition-related costs*	(48)	(67)
Free cash flow before dividends	1,700	1,593
Ordinary dividends	(842)	(796)
Free cash flow post dividends	858	797

* Including cash tax relief.

Total consideration on acquisitions completed in the year was £416m (2018: £978m). Cash spent on acquisitions was £437m (2018: £960m), including deferred consideration of £24m (2018: £16m) on past acquisitions and spend on venture capital investments of £8m (2018: £13m).

Total consideration for the disposal of non-strategic assets in 2019 was £63m (2018: £45m). Net cash inflow after timing differences and separation and transaction costs, and including the disposal of venture capital investments, was £48m (2018: £5m).

Share repurchases in 2019 were £600m (2018: £700m), with a further £100m repurchased in 2020 as at 12 February. In addition, the Employee Benefit Trust purchased shares of RELX PLC to meet future obligations in respect of share based remuneration totalling £37m (2018: £43m). Proceeds from the exercise of share options were £29m (2018: £21m).

RECONCILIATION OF NET DEBT YEAR-ON-YEAR

YEAR TO 31 DECEMBER	2019 £m	2018 £m
Net debt at 1 January	(6,177)	(5,042)
Free cash flow post dividends	858	797
Net disposal proceeds	48	5
Acquisition cash spend (including borrowings in acquired businesses)	(437)	(960)
Share repurchases	(600)	(700)
Purchase of shares by the Employee Benefit Trust	(37)	(43)
Other*	(117)	12
Currency translation	271	(246)
Movement in net debt	(14)	(1,135)
Net debt at 31 December	(6,191)	(6,177)

* Cash tax relief on disposals, distributions to non-controlling interests, pension deficit payments, leases, share option exercise proceeds and the net debt impact of the bond redemption.

Funding

Debt

Net borrowings at 31 December 2019 were £6,191m, an increase of £14m since 31 December 2018. The majority of our borrowings are denominated in US dollars and euros, and sterling being stronger at the end of the year reduced net borrowings when translated into sterling. Excluding currency translation effects, net borrowings increased by £285m. Expressed in US dollars, net borrowings at 31 December 2019 were \$8,211m, an increase of \$337m.

Gross borrowings of £6,414m (31 December 2018: £6,365m) are comprised of bank and bond borrowings of £6,072m (31 December 2018: £6,005m) and lease liabilities under IFRS 16 of £342m (31 December 2018: £360m). The fair value of related derivative net assets was £52m (31 December 2018: £25m), finance lease receivables totalled £33m (31 December 2018: £49m) and cash and cash equivalents totalled £138m (31 December 2018: £114m). In aggregate, these give the net borrowings figure of £6,191m (31 December 2018: £6,177m).

The effective interest rate on gross bank and bond borrowings was 4.5% in 2019. Excluding the one-off charge relating to the early bond redemption it was 2.9%, 0.3 percentage points lower than the prior year reflecting the benefit of refinancing historical bonds that had higher rates of interest. As at 31 December 2019, gross bank and bond borrowings had a weighted average life remaining of 3.9 years and a total of 46% of them were at fixed rates, after taking into account interest rate derivatives.

The ratio of net debt (including leases and pensions) to 12-month trailing EBITDA (adjusted earnings before interest, tax, depreciation and amortisation) was 2.5x (31 December 2018: 2.4x), calculated in US dollars. Excluding leases and pensions, the ratio was 2.2x (31 December 2018: 2.2x).

Liquidity

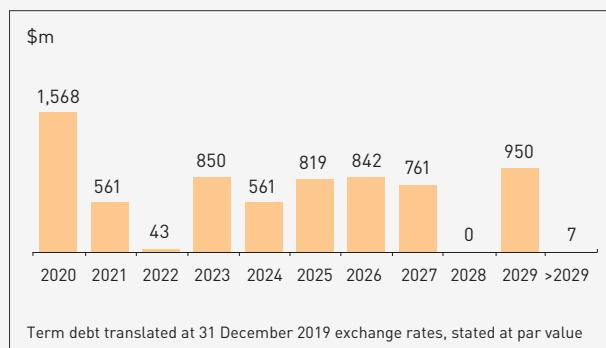
In March 2019, \$950m of dollar denominated fixed rate term debt was issued with a coupon of 4.0% and a maturity of ten years. The Group has ample liquidity and access to debt capital markets, providing the ability to repay or refinance borrowings as they mature and to fund ongoing requirements. In January 2020, \$950m of US term debt maturing in October 2022 was redeemed early, taking advantage of the make-whole election.

In addition, the Group has access to committed bank facilities aggregating \$3bn with various maturities through to 2024. At 31 December 2019 these facilities were undrawn.

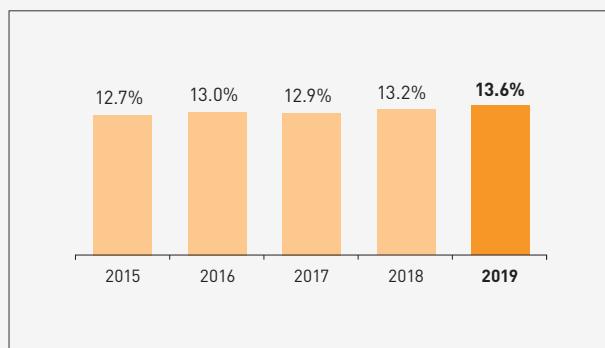
Invested capital and returns

Net capital employed was £9,237m at 31 December 2019 (2018: £9,435m), a decrease of £186m. The carrying value of goodwill and acquired intangible assets decreased by £204m. An amount of £245m was capitalised in the year in respect of acquired intangible assets and £257m was recorded as goodwill. This increase was more than offset by the weakening of the dollar against sterling from the beginning to the end of 2019, and disposals.

RELX TERM DEBT MATURITIES AT 31 DECEMBER 2019



RETURN ON INVESTED CAPITAL



SUMMARY BALANCE SHEET

AS AT 31 DECEMBER	2019 £m	2018 £m
Goodwill and acquired intangible assets*	9,012	9,216
Internally developed intangible assets*	1,264	1,217
Property, plant and equipment*, right-of-use assets* and investments	695	716
Net assets held for sale	–	(3)
Net pension obligations	(520)	(433)
Working capital	(1,214)	(1,278)
Net capital employed	9,237	9,435

* Net of accumulated depreciation and amortisation.

Development costs of £333m (2018: £304m) were capitalised within internally developed intangible assets, most notably investment in new products and related infrastructure across RELX.

Net pension obligations, i.e. pension obligations less pension assets, increased to £520m (2018: £433m). There was a net deficit of £267m (2018: £203m) in respect of funded schemes, which were on average 95% funded at the end of the year on an IFRS basis. The higher deficit mainly reflects lower discount rates in both the UK and US, partly offset by increased asset values.

The post-tax return on average invested capital in the year was 13.6% (2018: 13.2%). The increase is largely due to the change in effective tax rate, discussed on page 53. At an effective tax rate of 21.7%, return on invested capital would have been 13.0%.

RETURN ON INVESTED CAPITAL

AS AT 31 DECEMBER	2019 £m	2018 £m
Adjusted operating profit	2,491	2,346
Tax at effective rate	(438)	(509)
Effective tax rate	17.6%	21.7%
Adjusted operating profit after tax	2,053	1,837
Average invested capital*	15,050	13,924
Return on invested capital	13.6%	13.2%

* Average of invested capital at the beginning and the end of the year, retranslated at average exchange rates for the year. Invested capital is calculated as net capital employed, adjusted to add back accumulated amortisation, impairment of acquired intangible assets and goodwill and to exclude the gross up to goodwill in respect of deferred tax.

Reported earnings per share and dividends

	2019 £m	2018 £m	Change
Reported earnings per share	77.4p	71.9p	+8%
Ordinary dividend per share	45.7p	42.1p	+9%

The reported earnings per share was 77.4p (2018: 71.9p).

The final dividend proposed by the Board is 32.1p per share. This gives total dividends for the year of 45.7p (2018: 42.1p), 9% higher than the prior year.

Dividend cover, being adjusted earnings per share divided by the total interim and proposed final dividends for the year, is 2.0x. The dividend policy is, subject to currency considerations, to grow dividends broadly in line with adjusted earnings per share while maintaining dividend cover of at least two times over the longer term.

During 2019 a total of 33.5m of RELX PLC shares were repurchased at an average price of 1,789p. Total consideration for these repurchases was £600m. A further 2.2m shares were purchased by the Employee Benefit Trust. During 2019, 33.3m shares held in treasury were cancelled. As at 31 December 2019, total shares in issue, net of shares held in treasury and shares held by the Employee Benefit Trust, amounted to 1,932m. A further 5.0m shares have been repurchased in 2020 as at 12 February.

Distributable reserves and parent company balance sheet

As at 31 December 2019, RELX PLC had distributable reserves of £6.8bn. In line with UK legislation, distributable reserves are derived from the non-consolidated RELX PLC balance sheet. The consolidated reserves reflect adjustments such as the amortisation of acquired intangible assets that are not taken into account when calculating distributable reserves. The increase in distributable reserves when compared to the prior year is due to the capitalisation and subsequent capital reduction of £4bn of the merger reserve, as approved by RELX PLC shareholders at the 2019 AGM.

The parent company balance sheet net assets are higher than those of the group due to the investment in RELX Group plc being carried at value of £18bn, which is not reflected on the consolidated balance sheet. Additionally the standalone parent company has few liabilities. The parent company balance sheet can be found on page 178.

Further information on the distributable reserves can be found in the parent company financial statements on page 179.

Alternative performance measures

RELX uses adjusted figures, which are not defined by generally accepted accounting principles ('GAAP') such as IFRS. Adjusted figures and underlying growth rates are presented as additional performance measures used by management, as they provide relevant information in assessing the Group's performance, position and cash flows. We believe that these measures enable investors to track more clearly the core operational performance of the Group by separating out items of income or expenditure relating to acquisitions, disposals and capital items, and by excluding exceptional tax credits. This provides our investors with a clear basis for assessing our ability to raise debt and invest in new business opportunities.

Management uses these financial measures, along with IFRS financial measures, in evaluating the operating performance of the Group as a whole and of the individual business segments. Adjusted financial measures should not be considered in isolation

from, or as a substitute for, financial information presented in compliance with IFRS. The measures may not be directly comparable to similarly reported measures by other companies. Please see page 184 for reconciliations of adjusted measures.

Accounting policies

The consolidated financial statements are prepared in accordance with International Financial Reporting Standards as adopted by the European Union and as issued by the International Accounting Standards Board following the accounting policies shown in the notes to the financial statements on pages 128 to 174. The accounting policies and estimates which require the most significant judgement relate to the valuation of goodwill and intangible assets, the capitalisation of development costs, taxation and accounting for defined benefit pension schemes. Further detail is provided in the accounting policies on pages 133 and in the relevant notes to the accounts.

Tax principles

Taxation is an important issue for us and our stakeholders, including our shareholders, governments, customers, suppliers, employees and the global communities in which we operate. We have set out our approach to tax in our global tax strategy. This incorporates our Tax Principles along with additional disclosures around where we pay taxes and our broader contribution to society. This is all made publicly available on our website: www.relx.com/go/TaxPrinciples

We maintain an open dialogue with tax authorities, and are vigilant in ensuring that we comply with current tax legislation. We have clear and consistent tax policies and tax matters are dealt with by a professional tax function, supported by external advisers. We proactively seek to agree arm's-length pricing with tax authorities to mitigate tax risks of significant cross-border operations. We actively engage with policy makers, tax administrators, industry bodies and international institutions to provide informed input on proposed tax measures, so that we and they can understand how those proposals would affect our businesses. In addition, we participate in consultations with the Organisation for Economic Co-operation and Development ('OECD'), European bodies and the United Nations.

Treasury policies

The Board of RELX PLC agrees policies for managing treasury risks. The key policies address security of funding requirements, the target fixed/floating interest rate exposure for debt and foreign currency hedging and place limits on counterparty exposures. A more extensive summary of these policies is provided in note 18 to the financial statements on pages 157 to 162. Financial instruments are used to finance the RELX businesses and to hedge transactions. The Group's businesses do not enter into speculative transactions.

Capital and liquidity management

The capital structure is managed to support RELX's objective of maximising long-term shareholder value through appropriate security of funding, ready access to debt and capital markets, cost-effective borrowing and flexibility to fund business and acquisition opportunities while maintaining appropriate leverage to ensure an efficient capital structure.

Over the long-term, RELX seeks to maintain cash flow conversion of 90% or higher and credit rating agency metrics that are consistent with a solid investment grade credit rating. These metrics as defined by the rating agencies include net debt to EBITDA, including and excluding pensions and leases, and various measures of cash flow as a percentage of net debt.

RELX uses the cash flow it generates to fund capital expenditure required to drive organic growth, to make selective acquisitions and to provide a growing dividend to shareholders, while retaining balance sheet strength to maintain access to cost-effective sources of borrowing. Share repurchases are undertaken to maintain an efficient balance sheet. Further detail on capital and liquidity management is provided on pages 157 and 158.

Corporate responsibility

We moved closer in 2019 to achieving our 2015-2020 environmental targets by reaching 96% of electricity needs from renewable sources, European green tariff, and green-e certified US and Asian Gold Power renewable energy certificates. We have reduced Scope 1 and Scope 2 (location-based) carbon emissions by 52% from a 2010 baseline. We were part of the London Business Climate Leaders initiative which commits us to taking action to bring about a zero-carbon London, where we are headquartered. We also remained a signatory to We Are Still In, joining more than 2,800 businesses, universities, cities, states and other organisations, aiming to meet the objectives of the 2016 Paris Agreement on climate.

We believe our most important environmental impact is in the environmental knowledge we disseminate through our content, solutions and events. In the year, we published the latest Lancet Countdown on health and climate change which tracks 41 indicators. The Elsevier Foundation Green and Sustainable Chemistry Challenge stimulates innovative chemistry research that benefits the environment and low-resource communities; the 2019 €50,000 first prize was awarded to Dr. Ramia Albakain, Associate Professor at the University of Jordan, for a green technique to remove toxic metal from wastewater. We also held World Future Energy Summit with 800 exhibitors and more than 33,000 visitors from 170 countries, showcasing innovation in areas ranging from energy to water and waste.

Our Supplier Code of Conduct requires suppliers to meet the same standards we set for ourselves. In 2019, 91% of our key suppliers were signatories to the Supplier Code. Intertek conducted 93 audits including nine second tier audits, and reduced open audit points by 21% over 2018. Nearly 12% of our US spend was from diverse suppliers.

For further details on Corporate Responsibility please see pages 38 to 49.

Nick Luff

Chief Financial Officer

Principal and emerging risks

RELX has established risk management practices that are embedded into the operations of the businesses, based on the Internal Control-Integrated Framework (2013) by the Committee of Sponsoring Organisations of the Treadway Commission (COSO). The principal and emerging risks facing the business, which have been assessed by the Audit Committee and Board, are described below. The directors confirm this process is robust and includes consideration of risks, including emerging risks, that could threaten RELX's business models, future performance, solvency, liquidity or reputation.

It is not possible to identify every risk that could affect our businesses, and the actions taken to mitigate the risks described below cannot provide absolute assurance that a risk will not materialise and/or adversely affect our business or financial performance.

Our risk management and internal control processes are described in the corporate governance section. A description of the business and a discussion of factors affecting performance is set out in the Chief Executive Officer's report and the RELX Business Overview and Market Segments sections. Our assessment of RELX's prospects and viability is on page 84. Our approach to the promotion of human rights and to managing corporate responsibility, environmental and other non-financial risks is set out in the RELX Business Overview and Market Segments sections and the separate Corporate Responsibility Report.

EXTERNAL RISKS

Risk	Description and impact	Mitigation
Economy and market conditions	Demand for our products and services may be adversely impacted by factors beyond our control, such as the economic environment in the United States, Europe and other major economies, international trading relations, political uncertainties, epidemics, acts of war and civil unrest, and levels of government funding available to our customers.	Our businesses are focused on professional markets which have generally been more resilient in periods of economic downturn. We deliver information solutions, many on a subscription and recurring revenue basis, which are important to our customers' effectiveness and efficiency. We operate diversified businesses in terms of sectors, markets, customers, geographies and products and services. We have extended our position in long-term global growth markets through organic new launches supported by the selective acquisition of small content and data sets. We continue to dispose of businesses that no longer fit our strategy. We continuously monitor economic and political developments to assess their impact on our strategy which is designed to mitigate these risks. In response to specific uncertainties, our businesses engage in scenario planning and develop contingency plans where relevant.
Intellectual property rights	Our products and services include and utilise intellectual property. We rely on trademark, copyright, patent and other intellectual property laws to establish and protect our proprietary rights in this intellectual property. There is a risk that our proprietary rights could be challenged, limited, invalidated or circumvented, which may impact demand for and pricing of our products and services. Copyright laws are subject to national legislative initiatives, as well as cross- border initiatives such as those from the European Commission and increased judicial scrutiny in several jurisdictions in which we operate. This creates additional challenges for us in protecting our proprietary rights in content delivered through the internet and electronic platforms.	We actively engage in developing and promoting the legal protection of intellectual property rights. Our subscription contracts with customers contain provisions regarding the use of proprietary content. We are vigilant as to the use of our intellectual property and, as appropriate, take legal action to challenge illegal content distribution sources.

EXTERNAL RISKS

Risk	Description and impact	Mitigation
Data resources and data privacy	<p>Our businesses rely extensively upon content and data from external sources. Data is obtained from public records, governmental authorities, customers and other information companies, including competitors. The disruption or loss of data sources, either because of data privacy laws or because data suppliers decide not to supply them, may impose limits on our collection and use of certain kinds of information about individuals and our ability to communicate such information effectively with our customers. Examples of data privacy laws relating to internet communications, privacy and data protection, e-commerce, information governance and use of public records include the European Union's General Data Protection Regulation ('GDPR') and the California Consumer Privacy Act ('CCPA'), as well as evolving regulation in many jurisdictions where RELX operates.</p> <p>Compromise of data privacy, through a failure of our cyber security measures (see 'Cyber security' below), other data loss incidents or failure to comply with requirements for proper collection, storage and transmittal of data, by ourselves or our third-party service providers, may damage our reputation and expose us to risk of loss, fines and penalties, litigation and increased regulation.</p>	<p>We use a mix of publicly available, proprietary, contributory and licensed content. Where content is supplied to us by third parties, we aim to have contracts which provide mutual commercial benefit. We also maintain an active dialogue with regulatory authorities on privacy and other data related issues, and promote, with others, the responsible use of data.</p> <p>We have established data privacy principles, governance structures and control programmes designed to ensure data privacy requirements are met and which protect data and individual's privacy across all jurisdictions where we operate. We have put in place and test response plans to manage incidents where data privacy might be compromised. We embed our data privacy principles in agreements with third parties.</p> <p>We have assurance programmes to monitor compliance and conduct training and awareness programmes.</p>
Paid subscriptions	<p>Our Scientific, Technical & Medical ('STM') primary research content, like that of most of our competitors, is sold largely on a paid subscription basis. There is continued debate in government, academic and library communities, which are the principal customers for our STM content, regarding to what extent such content should be funded instead through fees charged to authors or authors' funders and/or made freely available in some form after a period following publication. Some of these methods, if widely adopted, could adversely affect our revenue from paid subscriptions.</p>	<p>We engage extensively with stakeholders in the STM community to better understand their needs and deliver value to them. We are open to serving the STM community under any payment model that can sustainably provide researchers with the critical information tools that they need. In particular, the number of articles we publish on an author pays, open access basis, and the associated revenues, are growing rapidly. We focus on the integrity and quality of research through the editorial and peer review process; we invest in efficient editorial and distribution platforms and in innovation in platforms and tools to make content and data more accessible and actionable; and we develop our research systems to provide capabilities to manage different payment models. We ensure vigilance on plagiarism and the long-term preservation of research findings.</p>

STRATEGIC RISKS

Risk	Description and impact	Mitigation
Customer demand for our products	<p>Our businesses are dependent on the continued demand by our customers for our products and services and the value placed on them. Failure to deliver enhanced value to our customers could impact demand for our products and services and consequently adversely affect our revenue or the long-term returns from our investment in electronic product and platform initiatives.</p>	<p>We are focused on the needs and economics of our customers. We leverage agile development methods and robust customer discovery processes and invest in new and enhanced technologies, to provide content and innovative solutions that help our customers achieve better outcomes and enhance productivity.</p>
Market Disruption	<p>Our businesses operate in highly competitive and dynamic markets, and the means of delivering our products and services, and the products and services themselves, continue to change in response to rapid technological innovations, legislative and regulatory changes, the entrance of new competitors and other factors. Failure to anticipate and quickly adapt to these changes could impact the competitiveness of our products and services and consequently adversely affect our revenue.</p>	<p>We gain insights into our markets, evolving customer needs, the potential application of new technologies and business models, and the actions of competitors and disruptors. These insights inform our market strategies and operational priorities. We continuously invest significant resources in our products and services, and the infrastructure to support them.</p>
Acquisitions	<p>We supplement our organic development with selected acquisitions. If we are unable to generate the anticipated benefits such as revenue growth and/or cost savings associated with these acquisitions this could adversely affect return on invested capital and financial condition or lead to an impairment of goodwill.</p>	<p>Acquisitions are made within the framework of our overall strategy, which emphasises organic development. We have a well formulated process for reviewing and executing acquisitions and for managing the post-acquisition integration. This process is underpinned with clear strategic, financial and ethical criteria. We closely monitor the integration and performance of acquisitions.</p>

OPERATIONAL RISKS

Risk	Description and impact	Mitigation
Technology and business resilience	<p>Our businesses are dependent on electronic platforms and networks, primarily the internet, for delivery of our products and services. These could be adversely affected if our electronic delivery platforms, networks or supporting infrastructure experience a significant failure, interruption or security breach.</p>	We have established procedures for the protection of our businesses and technology assets. These include the development and testing of business continuity plans, including IT disaster recovery plans and back-up delivery systems, to reduce business disruption in the event of major technology or infrastructure failure, terrorism or adverse weather incidents.
Cyber security	<p>Our businesses maintain online databases and platforms delivering our products and services, which we rely on, and provide data to third parties, including customers and service providers. These databases and information are a target for compromise and face a risk of unauthorised access and use by unauthorised parties.</p> <p>Our cyber security measures, and the measures used by our third-party service providers, may not detect or prevent all attempts to compromise our systems, which may jeopardise the security of the data we maintain or may disrupt our systems. Failures of our cyber security measures could result in unauthorised access to our systems, misappropriation of our or our users' data, deletion or modification of stored information or other interruption to our business operations. As techniques used to obtain unauthorised access to or to sabotage systems change frequently and may not be known until launched against us or our third-party service providers, we may be unable to anticipate or implement adequate measures to protect against these attacks and our service providers and customers may likewise be unable to do so.</p> <p>Compromises of our or our third-party service providers' systems, or failure to comply with applicable legislation or regulatory or contractual requirements could adversely affect our financial performance, damage our reputation and expose us to risk of loss, fines and penalties, litigation and increased regulation.</p>	<p>We have established security programmes with the aim of ensuring that data is protected, our business infrastructures continue to operate and that we comply with relevant legislative, regulatory and contractual requirements.</p> <p>We have governance mechanisms in place to design and monitor common policies and standards across our businesses.</p> <p>We invest in appropriate technological and physical controls which are applied across the enterprise in a risk-based security programme which operates at the infrastructure, application and user levels. These controls include, but are not limited to, infrastructure vulnerability management, application scanning and penetration testing, network segmentation, encryption and logging and monitoring. We provide regular training and communication initiatives to establish and maintain awareness of risks at all levels of our businesses. We have appropriate incident response plans to respond to threats and attacks. We maintain appropriate information security policies and contractual requirements for our businesses and run programmes monitoring the application of our data security policies by third-party service providers. We use independent internal and third-party auditors to test, evaluate, and help enhance our procedures and controls.</p>
Supply chain dependencies	<p>Our organisational and operational structures depend on outsourced and offshored functions, including use of cloud service providers. Poor performance, failure or breach of third parties to whom we have outsourced activities, could adversely affect our business performance, reputation and financial condition.</p>	We select our vendors with care and establish contractual service levels that we closely monitor, including through key performance indicators and targeted supplier audits and security assessments. We have developed business continuity plans to reduce disruption in the event of a major failure by a vendor.
Talent	<p>The implementation and execution of our strategies and business plans depend on our ability to recruit, motivate and retain skilled employees and management. We compete globally and across business sectors for talented management and skilled individuals, particularly those with technology and data analytics capabilities. An inability to recruit, motivate or retain such people could adversely affect our business performance. Failure to recruit and develop talent regardless of gender, race, national origin or other characteristics could adversely affect our reputation and business performance.</p>	We have well established management development and talent review programmes. We monitor capability needs and remuneration schemes are tailored to attract and motivate the best talent available at an appropriate level of cost. We actively seek feedback from employees, which feeds into plans to enhance employee engagement and motivation. Our Inclusion and Diversity Policy fosters a diverse workforce and environment that respects all individuals and their contributions.

FINANCIAL RISKS

Risk	Description and impact	Mitigation
Pensions	We operate a number of pension schemes around the world, including local versions of the defined benefit type in the UK and the United States. The US scheme is closed to future accruals. The UK scheme has been closed to new hires since 2010. The members who continue to accrue benefits now represent a small portion of the overall UK based workforce. The assets and obligations associated with those pension schemes are sensitive to changes in the market values of the scheme's investments and the market-related assumptions used to value scheme liabilities. Adverse changes to asset values, discount rates, longevity assumptions or inflation could increase funding requirements.	We have professional management of our pension schemes and we focus on maintaining appropriate asset allocation and plan designs. We review our funding requirements on a regular basis with the assistance of independent actuaries and ensure that the funding plans are appropriate.
Tax	Our businesses operate globally, and our profits are subject to taxation in many different jurisdictions and at differing tax rates. The Organisation for Economic Co-operation and Development ('OECD') is continuing to explore changes to the way in which profits are allocated for tax purposes between jurisdictions and other reforms. As a result of the OECD's work and other initiatives, tax laws that currently apply to our businesses may be amended by the relevant authorities or interpreted differently by them, and these changes could adversely affect our reported results.	We maintain an open dialogue with tax authorities and are vigilant in ensuring that we comply with current tax legislation. We have clear and consistent tax policies and tax matters are dealt with by a professional tax function, supported by external advisers. As outlined in the Chief Financial Officer's report on page 52 we engage with tax authorities and international organisations. We continue to monitor further developments arising from the OECD process and consider potential impacts of proposals under various scenarios. The principles we adopt in our approach to tax matters can be found on our website at www.relx.com/go/taxprinciples .
Treasury	The RELX consolidated financial statements are expressed in pounds sterling and are subject to movements in exchange rates on the translation of the financial information of businesses whose operational currencies are other than sterling. The United States is our most important market and, accordingly, significant fluctuations in the US dollar exchange rate could significantly affect our reported results. We also earn revenues and incur costs in a range of other currencies, including the euro and the yen, and significant fluctuations in these exchange rates could also significantly impact our reported results. Macroeconomic, political and market conditions may adversely affect the availability and terms of short and long-term funding, volatility of interest rates, the credit quality of our counterparties, currency exchange rates and inflation. The majority of our outstanding debt instruments are, and any of our future debt instruments may be, publicly rated by independent rating agencies. Our borrowing costs and access to capital may be adversely affected if the credit ratings assigned to our debt are downgraded.	Our approach to capital structure and funding are described in the Chief Financial Officer's report on pages 52 to 57. The approach to the management of treasury risks is described in note 18 to the consolidated financial statements.

REPUTATIONAL RISKS

Risk	Description and impact	Mitigation
Ethics	As a global provider of professional information solutions to the STM, risk & business analytics, legal and exhibitions markets we, our employees and major suppliers are expected to adhere to high standards of integrity and ethical conduct, including those related to anti-bribery and anti-corruption, sanctions, competition and principled business conduct. A breach of generally accepted ethical business standards or applicable laws could adversely affect our business performance, reputation and financial condition.	Our Code of Ethics and Business Conduct is provided to every employee and is supported by training and communication. It encompasses such topics as competing fairly, prohibiting corrupt business practices, fair employment practices and encouraging open and principled behaviour. We have well-established processes for monitoring, reporting and investigating instances of unethical conduct. Our major suppliers are required to adhere to our Supplier Code of Conduct.

The Strategic Report, as set out on pages 2 to 61 has been approved by the Board of RELX PLC.

By order of the Board

Henry Udow

Company Secretary

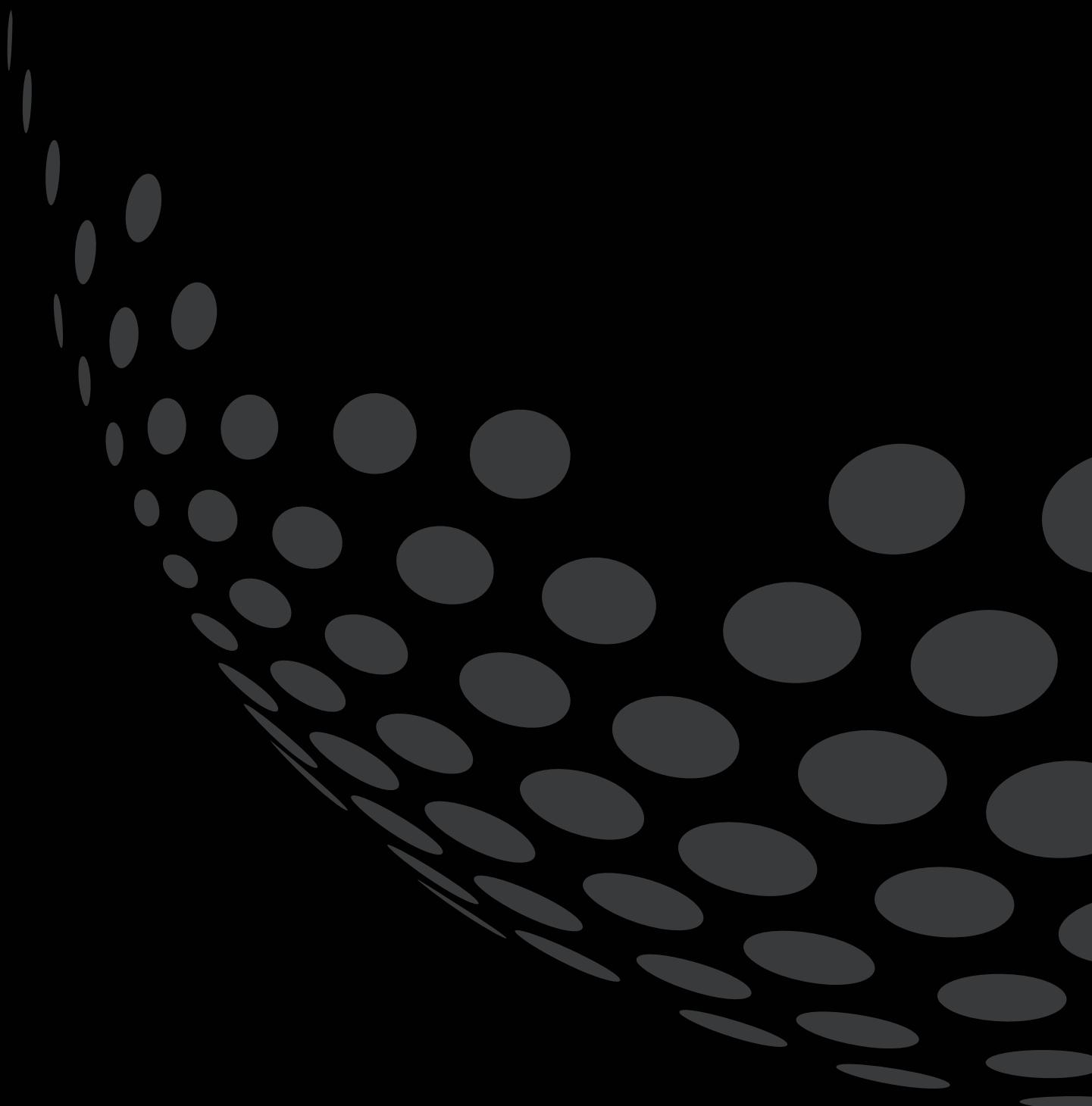
12 February 2020

Registered Office

1-3 Strand

London

WC2N 5JR



Governance

In this section

- 64 Board Directors
- 66 RELX Senior Executives
- 68 Chair's introduction to corporate governance
- 70 Corporate Governance Review
- 85 Report of the Nominations Committee
- 88 Directors' Remuneration Report
- 112 Report of the Audit Committee
- 115 Directors' Report

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Board Directors

Executive Directors



Erik Engstrom (56)
Chief Executive Officer

Appointed: Chief Executive Officer of RELX since November 2009. Joined as Chief Executive Officer of Elsevier in 2004.
Other appointments: Non-Executive Director of Smith & Nephew plc and Bonnier Group.
Past appointments: Prior to joining was a partner at General Atlantic Partners. Before that was President and Chief Operating Officer of Random House Inc and President and Chief Executive Officer of Bantam Doubleday Dell, North America. Began his career as a consultant with McKinsey. Served as a Non-Executive Director of Eniro AB and Svenska Cellulosa Aktiebolaget SCA.
Education: Holds a BSc from Stockholm School of Economics, an MSc from the Royal Institute of Technology in Stockholm, and gained an MBA from Harvard Business School as a Fulbright Scholar.
Nationality: Swedish



Nick Luff (52)
Chief Financial Officer

Appointed: September 2014
Other appointments: Non-Executive Director of Rolls-Royce Holdings plc.
Past appointments: Prior to joining the Group was Group Finance Director of Centrica plc from 2007. Before that was Chief Financial Officer at The Peninsular & Oriental Steam Navigation Company (P&O) and its affiliated companies, having previously held a number of senior finance roles at P&O. Began his career as an accountant with KPMG. Formerly a Non-Executive Director of QinetiQ Group plc and Lloyds Banking Group plc.
Education: Has a degree in Mathematics from Oxford University and is a qualified UK Chartered Accountant.
Nationality: British

Non-Executive Directors



Sir Anthony Habgood (73)
Chair

Appointed: June 2009
Other appointments: Chair of Preqln Holding Limited and Deputy Chair of RG Carter Holdings Limited.
Past appointments: Previously was Chair of the Court of the Bank of England, Whitbread plc, Bunzl plc, Mölnlycke Health Care Limited and Norwich Research Partners LLP and served as Chief Executive of Bunzl plc, Chief Executive of Tootal Group plc and a Director of The Boston Consulting Group. Formerly Non-Executive Director of Geest plc, Marks and Spencer plc, National Westminster Bank plc, Powergen plc, SVG Capital plc, and Norfolk and Norwich University Hospitals Trust.
Education: Holds an MA in Economics from Cambridge University, an MS in Industrial Administration from Carnegie Mellon University and an Honorary Doctorate of Civil Law from the University of East Anglia. He is a visiting Fellow at Oxford University.
Nationality: British



Adrian Hennah (62)
Non-Executive Director
Chair of the Audit Committee

Appointed: April 2011
Other appointments: Chief Financial Officer of Reckitt Benckiser Group plc.
Past appointments: Chief Financial Officer of Smith & Nephew plc from 2006 to 2012. Before that was Chief Financial Officer of Invensys plc, having previously held various senior finance and management positions with GlaxoSmithKline for 18 years. Formerly, a Non-Executive Director of Indivior PLC.
Nationality: British



Wolfhart Hauser (70)
Non-Executive Director
Senior Independent Director
Chair of the Remuneration Committee

Appointed: April 2013
Other appointments: Non-Executive Director of Associated British Foods plc.
Past appointments: Chair of FirstGroup plc until July 2019. Chief Executive Officer of Intertek Group plc from 2005 until 2015. Prior to that he was Chief Executive Officer of TÜV Sud AG between 1998 and 2002 and Chief Executive Officer of TÜV Product Service GmbH for ten years. Formerly a Non-Executive Director of Logica plc.
Education: Holds a master's degree in Medicine from Ludwig-Maximilian-University Munich and a Medical Doctorate from Technical University Munich.
Nationality: German



Charlotte Hogg (49)
Non-Executive Director

Appointed: December 2019
Other appointments: Executive Vice President and Chief Executive Officer for the European Region of Visa Inc. Executive Director of Visa Europe Limited. Non-Executive Director of UK Finance and NowTeach.
Past appointments: Chief Operating Officer at the Bank of England. Before that was Head of Retail Banking for Santander UK, Managing Director UK and Ireland for Experian plc, and held senior roles at Morgan Stanley in New York and London.
Nationality: British and American



Marike van Lier Lels (60)
Non-Executive Director
Workforce Engagement Director

N C

Appointed: July 2015
Other appointments: Member of the Supervisory Boards of NS (Dutch Railways), Dura Vermeer, Post NL and Innovation Quarter.
Past appointments: Member of the Supervisory Boards of TKH Group NV, Royal Imtech NV, Maersk BV, KPN NV, USG People NV and Eneco Holding NV, and Executive Vice President and Chief Operating Officer of the Schiphol Group. Prior to joining Schiphol Group, was a member of the Executive Board of Deutsche Post Euro Express and held various senior positions with Nedlloyd. Member of various Dutch governmental advisory boards.
Nationality: Dutch



Linda Sanford (67)
Non-Executive Director

R C

Appointed: December 2012
Other appointments: An independent Director of Consolidated Edison, Inc, Pitney Bowes, Inc and Interpublic Group of Companies, Inc. Serves on the board of trustees of the New York Hall of Science.
Past appointments: Senior Vice President, Enterprise Transformation, IBM Corporation until 2014, having joined the company in 1975. A consultant to The Carlyle Group from 2015 to July 2018. Formerly a Non-Executive Director of ITT Corporation, served on the boards of directors of The Business Council of New York State and the Partnership for New York City, and on the boards of trustees of the State University of New York, St John's University and Rensselaer Polytechnic Institute.
Nationality: American



Suzanne Wood (59)
Non-Executive Director

A C

Appointed: September 2017
Other appointments: Senior Vice President and Chief Financial Officer of Vulcan Materials Company.
Past appointments: Served as Group Finance Director of Ashtead Group plc from 2012 to 2018. Chief Financial Officer of Ashtead Group's largest subsidiary, Sunbelt Rentals Inc, from 2003 until 2012. Previously, she also served as Chief Financial Officer of two US publicly listed companies, Oakwood Homes Corporation and Tultex Corporation.
Nationality: American



Robert MacLeod (55)
Non-Executive Director

R N C

Appointed: April 2016
Other appointments: Appointed as Chief Executive of Johnson Matthey plc in June 2014 after five years as Group Finance Director.
Past appointments: Prior to joining Johnson Matthey, spent five years as Group Finance Director of WS Atkins plc, having joined as Group Financial Controller in 2003. From 1993 to 2002, held a variety of senior finance and M&A roles with Enterprise Oil plc in the UK and US. Formerly a Non-Executive Director of Aggreko plc.
Nationality: British



Andrew Sukawayat (64)
Non-Executive Director

A C

Appointed: April 2019
Other appointments: Chairman of Inmarsat, Director of HG Capital LLP and Corten Advisors UK LLP.
Past appointments: He was formerly a Non-Executive Director and the Senior Independent Director of Sky plc between 2013 and 2018. Previously he was Chairman of Ziggo NV, Xyratex Group Ltd, and Telenet Group holdings NV, and deputy Chairman of O2 plc. He also served as a Non-Executive Director of Telefónica Europe and Powerwave Technologies Inc, and additionally as Chief Executive of Inmarsat plc, Sprint Corp and NTL Group Ltd.
Nationality: American

Board Committee membership key

- A Audit Committee
- R Remuneration Committee
- N Nominations Committee
- C Corporate Governance Committee
- Committee Chair

RELX Senior Executives



Mark Kelsey
Chief Executive Officer
Risk & Business Analytics

Joined in 1983. Appointed to current position in 2012.

Has held a number of senior positions across the Group over the past 30 years. Previously Chief Operating Officer and then Chief Executive Officer of Reed Business Information. Studied at Liverpool University and received his MBA from Bradford University.

Kumsal Bayazit
Chief Executive Officer
Scientific, Technical & Medical and Chair, RELX Technology Forum

Joined in 2004. Appointed to current position in 2019.

Previously President, Exhibitions Europe, Chief Strategy Officer, RELX, and Executive Vice President of Global Strategy and Business Development for LexisNexis. Prior to that worked with Bain & Company in New York, Los Angeles, Johannesburg and Sydney. Holds an MBA from Harvard Business School and is a Graduate of the University of California at Berkeley.

Mike Walsh
Chief Executive Officer
Legal

Joined in 2003. Appointed to current position in 2011.

Previously CEO of LexisNexis US Legal Markets and Director of Strategic Business Development Home Depot. Prior to that was a practising attorney at Weil, Gotshal and Manges in Washington DC and served as a consultant with The Boston Consulting Group. Holds a Juris Doctor degree from Harvard Law School and is a graduate of Yale University.

Hugh M Jones IV
Chief Executive Officer
Exhibitions

Joined in 2011. Appointed to current position in 2020.

Previously Group Managing Director, Accuity, ICIS, Cirium, and EG within Risk & Business Analytics. Prior to that was Chief Executive Officer, Accuity. Holds an MBA from the Ross School of Business at the University of Michigan and is a graduate of Yale University.



Gunjan Aggarwal
Chief Human Resources Officer

Joined in 2017. Appointed to current position at that time.

Previously head of Human Resources for Ericsson's global media business in California and for Ericsson North America. Prior Human Resources positions in Asia, Europe and North America at Unilever and Novartis. Holds an MBA from Xavier School of Management, Jamshedpur, India, and is a graduate from JMI Institute of Technology.

Henry Udow
Chief Legal Officer and Company Secretary

Joined in 2011. Appointed to current position at that time.

Previously Chief Legal Officer and Company Secretary of Cadbury plc having spent 23 years working with the company. Prior to that worked at Shearman & Sterling in New York and London. Holds a Juris Doctor degree from the University of Michigan Law School and a bachelor's degree from the University of Rochester.

Jelena Sevo
Chief Strategy Officer

Joined in 2011. Appointed to current position in 2019.

Previously Director of Tax Markets for LexisNexis UK. Prior to that, various senior management roles in LexisNexis and Elsevier. Previously a consultant at Bain & Co and Booz Allen Hamilton. Holds an MBA from Harvard Business School, a master's degree in law from Georgetown University and a degree in law from the University of Belgrade.

Youngsuk "YS" Chi
Director of RELX Corporate Affairs and Chair, Elsevier

Joined in 2005. Appointed to current position in 2011.

Previously was President and Chief Operating Officer of Random House, founding Chairman of Random House Asia and Chief Operating Officer for Ingram Book Group. Holds an MBA from Columbia University and is a graduate of Princeton University.

Chair's introduction to corporate governance

High standards of corporate governance underpin long-term, sustainable value creation.

In 2019, we continued to evolve our corporate governance reporting in response to the requirements of the updated UK Corporate Governance Code.

Our governance framework

The Board recognises the importance of maintaining high standards of corporate governance, which underpin RELX's ability to deliver long-term value and sustainable success for our members, provides confidence to our many and varied stakeholders that the governance of the Group is appropriate for its size and profile as a UK listed company, and supports our culture of acting with integrity in all we do. In 2019, we continued to evolve our corporate governance reporting to respond to changing requirements in the UK, driven principally by the new UK Corporate Governance Code (Code) which applied to RELX from the start of the year, as well as other legislative requirements which now apply to large UK companies.

Stakeholder engagement

A central theme of the new requirements has been an increased emphasis on the relationships between a company and a wide range of its stakeholders, its reporting of these and how the Board has discharged its duty to promote the success of the Company having regard, particularly, to certain matters set out in Section 172 of the Companies Act 2006 (the Act).

Constructive, transparent and open engagement with our stakeholders is imperative in ensuring that the Board's discussions and decision-making are informed, considered and balanced. The Board has historically recognised and acknowledged that stakeholder relationships, such as those with our customers, employees, suppliers and the communities in which we operate, are an important consideration at all levels of business interaction and conduct across an organisation of our size and diversity. However, we have taken the opportunity to assess and, where necessary, supplement our corporate governance arrangements to ensure that consideration of our stakeholders remains appropriate as the Group continues to grow and develop its business.

The Board appointed Marike van Lier Lels as Workforce Engagement Director with effect from 1 January 2019. The breadth of Marike's engagement with our workforce has been wide, and she has provided periodic updates to the Board on engagement activities and outcomes, which the Board has considered in its discussions. Further information relating to the programme of activity undertaken by Marike as Workforce Engagement Director can be found on page 76.

UK Corporate Governance Code compliance

As a premium listed company, RELX is required to describe how it has complied with the principles of the Code during the year. Details of how we have done so are set out in this report and those of the Board Committees which follow. RELX is also required to report on whether it has chosen to comply with each of the provisions of the Code, or alternatively explain why it has chosen not to do so.

For 2019, the Board deemed it to be in the interests of the Group's stakeholders to comply with each of the provisions of the Code, with the exception of provision 19 (length of tenure of the Chair) and provision 38 (alignment of executive director pension contribution rates with those available to the workforce). For an explanation regarding executive directors' pension benefits, please see page 70.

Having been appointed Chair in June 2009, I have served for over ten years. As the Group explained in its 2018 Annual Report and Accounts, the Board felt it appropriate and in the long-term interests of the Group's stakeholders that I remain in the role to ensure continuity of Board leadership, following the corporate simplification which completed in September 2018 with RELX PLC becoming the sole parent company of the Group. As corporate governance processes implemented upon completion of the corporate simplification have now been fully embedded, I have decided that this is the year to retire from the Board. The succession process is being led by the Senior Independent Director, Wolhart Hauser, and overseen by the Nominations Committee.

Culture

As part of its leadership role, the Board is responsible for developing a corporate culture across RELX which promotes integrity, transparency and an understanding of RELX's responsibilities to its stakeholders and the communities in which it operates. In addition, the Board recognises the importance of its role in setting and monitoring the Group's culture, and embedding supporting policies, processes and training throughout the Group. The Code of Ethics and Business Conduct (Code of Ethics), clearly sets out the standards expected of employees, as well as third parties who represent us, and is available on the Company's website at www.relx.com. During the year, the Board spent considerable time receiving regular updates from the Chief Human Resources Officer, Workforce Engagement Director and Chief Compliance Officer on the alignment between the Group's culture and values, and how these support its strategy and performance.

Inclusion and diversity

The Board understands the importance of inclusion and diversity. Since our 2018 Annual Report, the Company has updated its Board Diversity Policy, which is applicable to the RELX PLC Board. The policy recognises the benefits that inclusion and diversity can bring to the effectiveness of Board discussions through incorporating different perspectives and ideas. The Board believes that appointments to it should be made on merit, with the benefits of diversity being considered as part of succession planning and Board composition review. Therefore, with respect to inclusion and diversity, no formal targets have been set by the Board in respect of its membership.

The Board also approved an updated Inclusion and Diversity Policy, now applicable across the Group. It seeks to ensure that RELX meets corporate responsibility expectations and is a place where all employees feel valued, and that inclusion and diversity is built into the Group's appointment and promotion processes.

The Board also welcomes the Hampton-Alexander Review, which proposes to increase Board and senior leadership gender diversity.

This, along with the wider aspects of inclusion and diversity, is considered by the Nominations Committee when reviewing the balance and composition of the Board and the structuring of talent development initiatives across the Group.

Board changes

A number of changes have continued the progressive evolution of the Board in 2019. Following the conclusion of the 2019 Annual General Meeting, Ben van der Veer and Carol Mills stepped down from the Board. I would like to thank them both for their wise counsel, support and contribution during their period of service. Andrew Sukawaty joined the Board, which is already benefiting from his considerable international experience in the technology sector, his significant and recent listed company experience, and his understanding of the US business and governance environment. In December, the Board also appointed Charlotte Hogg as a Non-Executive Director. She brings a wealth of strategic and operational experience, and her exposure to big data technology companies is particularly pertinent to our business.

Adrian Hennah will not seek re-election at our 2020 Annual General Meeting, as he will by that time have served for nine years as a valued member of the Board and its Committees. I would like to take this opportunity to thank Adrian for his considerable contribution to the Board and he leaves RELX with our very best wishes for the future.

Board effectiveness

As Chair, I am responsible for ensuring that the effectiveness of the Board, its Committees and each individual Director is evaluated annually. For 2019, an internal evaluation process was carried out. The outcome of the evaluation confirmed that the Board and Committees continue to operate effectively, and that all of our Directors continue to demonstrate commitment to their role. Further information relating to the Board evaluation can be found on page 81 of this report.

Sir Anthony Habgood

Chair

12 February 2020

Corporate Governance Review

Overview

The Board remains committed to high standards of corporate governance. During the year, its principal focus in this area was on ensuring the implementation of processes and completion of actions which allowed the Company to address the requirements of the 2018 UK Corporate Governance Code (the Code), which applied to it from 1 January 2019.

As a result, the Board's annual programme was updated, particularly with regard to its oversight of the Group's engagement with its key stakeholders, consideration of their views, assessment of RELX's culture and its alignment with our purpose, values and strategy, and review of the Group's workforce policies.

It has been supported throughout the year by its Committees, which have also taken on new responsibilities under the Code. A summary of how each Committee has approached these can be found in the reports on pages 85 to 114. An explanation of how the Company has applied each principle of the Code related to remuneration is set out in the Directors' Remuneration Report on pages 88 to 111.

This Review also contains an explanation of how the Directors of the Company have discharged their duty under the Companies Act 2006 (the Act) to promote the success of the Company having regard, particularly, to certain matters set out in Section 172 of the Act. The Board's Section 172 Statement can be found on pages 74 to 78 and is incorporated into the Strategic Report by reference.

The Board has been mindful that it must fulfil this duty to promote the success of the Company when assessing the principles and provisions of the Code, and in deciding how RELX should follow and apply these.

Following the corporate simplification which took place in 2018, the shares of RELX PLC are traded through its primary listing on the London Stock Exchange and its secondary listing on Euronext Amsterdam, whilst its securities are also traded on the New York Stock Exchange under its American Depository Share programme. The Board has therefore implemented standards of corporate governance and disclosure policies applicable to a UK incorporated Company, with listings in London, Amsterdam and New York.

The Company and its Directors are required by the Code to make certain statements in relation to provisions contained within it. The locations of those statements are as follows:

- Pages 5, 12 to 33, 58 to 61 and 71 to 72 for a description of how opportunities and risks to the future success of the business have been considered and addressed, the sustainability of RELX's business model and how its governance contributes towards the delivery of its strategy

Corporate governance compliance statements

The 2018 UK Corporate Governance Code (the Code) applied to the Company during the year.

The Company, which has its primary listing on the main market of the London Stock Exchange, has complied with the provisions of the Code throughout the year ended 31 December 2019, with the exception of provision 19 (length of tenure of the Chair) and provision 38 (alignment of executive director pension contribution rates with those available to the workforce). For an explanation regarding the tenure of our Chair, please see pages 68 and 87.

The value of pension benefits for current Executive Directors has decreased over the last several years, prior to the Code coming into force. As part of the proposed new remuneration policy, the Committee is proposing a revised pension policy for newly appointed Executive Directors which is aligned to the general workforce. Existing Executive Directors will transition from their current arrangements to the level of pension benefits provided under the Company's regular defined contribution plans (currently capped at 11% in the UK) by the end of 2022, in line with the recommendations of the Investment Association.

The pension benefits received by the Executive Directors in 2019 have been in line with the terms of our shareholder approved Directors' Remuneration Policy. Notwithstanding provision 38 of the UK Corporate Governance Code, the Board viewed it as appropriate that there be a phased transition of existing pension benefits for Executive Directors to 2022.

A description of how the Company has applied the main principles of the Code is set out on pages 71 to 114.

A copy of the Code can be found on the FRC website at  www.frc.org.uk

- Page 73 for an explanation of the Board's activities in assessing and monitoring RELX's culture
- Page 45 for an explanation of RELX's approach to investing in and rewarding its workforce
- Pages 74 to 78 for a description of how the interests of RELX's key stakeholders and the matters set out in Section 172 of the Act have been considered in Board discussions and decision-making
- Page 58 for confirmation that the Directors have carried out a robust assessment of the emerging and principal risks facing RELX, including a description of its principal risks, what procedures are in place to identify emerging risks, and an explanation of how these are being managed or mitigated
- Page 83 for confirmation that the Annual Report and Accounts is fair, balanced and understandable and provides the information necessary for shareholders to assess RELX's position and performance, business model and strategy
- Page 84 for an explanation of how the Directors have assessed the prospects of RELX, taking into account its current position and its emerging and principal risks
- Page 83 for the statement on the status of RELX as a going concern

Application of UK Corporate Governance Code Principles

Our governance framework

RELX has in place a corporate governance framework of processes, leadership bodies and supporting documentation to ensure that it is appropriately led, directed and controlled. It brings clarity to those who work for RELX, both in respect of what they are expected to deliver through the setting of strategic and financial objectives, and the values, standards and principles that they must act in accordance with in the course of delivering those objectives.

This framework also helps our organisation to run efficiently by giving clear instructions on decision-making processes and authorities, allowing effective use of our resources whilst facilitating appropriate levels of oversight and involvement for the Board and its Committees. It exists to support our businesses as they grow and develop. It therefore reflects a number of considerations. These include the appropriate implementation of systems and processes which define the rights, responsibilities and accountabilities of individuals throughout the Group, compliance with statutory and regulatory requirements that apply to RELX, the protection of our reputation and meeting our own expectations to act with integrity in all we do. It also seeks to allow our four business area organisations to operate with the speed, agility and flexibility required to address the needs of their customers in a timely and responsive manner.

As set out on pages 71 to 72, each part of the framework plays a significant part in delivering the Group's strategy.

Our purpose, strategy, values and culture

Purpose

RELX is a global provider of information-based analytics and decision tools for professional and business customers. Our primary corporate purpose is to add value for our professional customers, enabling them to make better decisions, get better results and be more productive. Specifically, we are focused on helping our customers further science and health, prevent fraud, promote the rule of law and justice and bring together business communities to learn about markets, source products and complete transactions. In pursuing this purpose, we are mindful of a wide range of stakeholders, including, but not limited to, employees, customers, suppliers and business partners, and the communities in which we operate, as well as providing a return for shareholders that permits us to attract capital and further invest in the future.

Strategy

Our number one strategic priority is the organic development of increasingly sophisticated information-based analytics and decision tools that deliver enhanced value to professional business customers across the industries that we serve. We aim to achieve leading positions in long-term global growth markets and leverage our skills, assets and resources across RELX, both to build solutions for our customers and to pursue cost efficiencies. We are systematically migrating all of our information solutions across RELX towards higher value-add decision tools, adding broader data sets, embedding more sophisticated analytics and leveraging more powerful technology, primarily through organic development. We are transforming our core business, building out new products and expanding into higher growth adjacencies and geographies.

We are supplementing this organic development with selective acquisitions of targeted data sets and analytics, and assets in high-growth markets that support our organic growth strategies and are natural additions to our existing business. Our products often account for less than 1% of our customers' total cost base, but we can have a significant and positive impact on the economics of the remaining 99%. Our objective is to continue to enhance the value that we deliver to our customers and over time to keep the growth of our own total cost base below our rate of revenue growth on an underlying basis.

Values

We operate in an open, honest and principled way as outlined in our Code of Ethics and Business Conduct and require our suppliers to meet the same standards. We believe in doing the 'RIGHT' thing: Respecting each other, Incorporating ethics into all our actions, Growing our business with integrity, Holding ourselves and each other accountable, and taking the Time to ask questions and report concerns.

Culture

As an information-based analytics and decision tool provider, our corporate culture is fact based, data-driven and analytical. We are transparent and non-political in our decision-making. We prioritise corporate responsibility and value acting with integrity, benefiting from inclusiveness and diversity and being passionate about remaining focused on customer outcomes. Our culture encourages community engagement and environmental responsibility.

Board leadership

In line with the Board's responsibility for overall strategic direction, strategy related issues are discussed at Board meetings. These regular discussions are supported by a dedicated annual strategy review process, which holistically assesses RELX's strategic position and its key strategic options.

The Board routinely discusses potential opportunities for growth, including through its review of the Group's products and markets during its strategy review. In addition, the Board frequently receives presentations from senior management leaders and RELX product specialists, during deep dives into the Group's individual business units or other areas which are regarded as being of strategic importance.

The Board plays a central role within our governance framework, which allows it to discharge its statutory duty under section 172 of the Act to promote the long-term sustainable success of RELX. Through the schedule of matters reserved for its decision making, the Board provides the Group with leadership, approves the annual budget ensuring that necessary resources are in place for the Company to meet its objectives, and sets and approves RELX's strategy. It also sets supporting financial and non-financial targets, and the purpose, strategy, values and culture of the Group, as described in this report.

Also reserved for the Board's decision-making are other matters which are deemed material to either the delivery of strategy, or RELX's future financial performance. These include the approval of material acquisitions, major capital expenditure and investment, the Group's financial statements and its dividend policy. The Board also approves RELX's Operating and Governance Principles document, which serves as a first reference point for management, and explains the relationship between risk, internal policies and control procedures as they apply across the Group. Our control procedures follow the three lines of defence model as set out on page 82.

Our Committees support the Board in delivering the Group's strategy. The work of the Remuneration Committee ensures that our executive and senior management teams are appropriately incentivised to deliver RELX's strategic objectives, and also that the Group can retain its best talent to deliver these. Our Nominations Committee oversees that there is a healthy and diverse pipeline of talent in place for those positions deemed critical to strategy delivery. It also reviews the composition of the Board to ensure that it has the right balance of skills to set an effective strategy, provide appropriate levels of constructive challenge and oversight of management in implementing its delivery, and review performance against agreed objectives.

The Audit Committee, through reports from management, internal audit and the external auditor, provides independent assurance that business processes which underpin the delivery of our strategy operate as intended, are fit for purpose, and generate reliable management information. This ensures that decisions made by the Board in respect of strategy are taken on the basis of correct information and assumptions. The Audit Committee also reviews the process by which risks to the delivery of strategy are continuously monitored, assessed and mitigated.

The Board also has a major role in setting RELX's values through its approval of the Code of Ethics, and ensuring that these support and are aligned with delivery of the approved strategy. It considers the Company's key stakeholders in its decision-making, as set out on pages 74 to 78, and ensures that the Group's workforce policies and practices support its long-term sustainable success. It also reviews, provides direction on and approves annually our extensive Corporate Responsibility programme, RE Cares. Further detail on our RE Cares programme, and the way in which it allows us to contribute to wider society, including through our Unique Contributions, is set out on pages 46 and 47.

Board induction and development

The Chair and the Company Secretary are responsible for ensuring that an effective induction programme takes place for all new Directors. Following appointment and as required, all Directors receive a full, formal and tailored induction, which is designed to meet individual requirements based on knowledge and experience. It includes meetings with members of the Group's Executive Directors and Senior Management teams, and visits to the offices of the Group's main business areas in order to understand how they operate. It also includes the provision of a comprehensive briefing pack which contains information on the Group's businesses, as well as other information to assist the Directors in performing their duties.

External appointments

The Nominations Committee assesses the external commitments of each Board member to ensure that they have the time to properly fulfil the responsibilities to RELX which come with that position. When receiving recommendations from the Nominations Committee for the appointment of any new Non-Executive Director, the Board always takes into account other demands on a potential Director's time. Following a review by the Nominations Committee, the Board has noted the changes in external appointments of the Non-Executive Directors during the year and does not perceive these to have any impact on their independence or responsibilities to the Company.

Non-Executive Director appointment letter

As a general rule, letters of appointment for Non-Executive Directors provide that, subject to annual re-election by shareholders, individuals will serve for an initial period of three years, and are typically expected to be available to serve for a second three-year period. If invited to do so, they may also serve for a third period of three years. The Non-Executive Director letter of appointment sets out the expected time commitment required by the Company from Non-Executive Directors. The notice period applicable to the Non-Executive Directors is one month.

Conflicts of interest

The Company's Articles of Association allow the Board to review and authorise situations where a Director has an interest that conflicts, or may possibly conflict, with those of the Group, and further to impose any conditions on that authorisation. The Board has in place formal procedures for managing and authorising actual or potential conflicts of interest.

Board Committees

The governance framework also enables the Board to delegate a number of other responsibilities to its four principal Committees, allowing it time to focus on key matters. The responsibilities are set out within the Terms of Reference for each Committee, which can be found on our website at www.relx.com. The membership and activities of the Committees are described on pages 85 to 114.

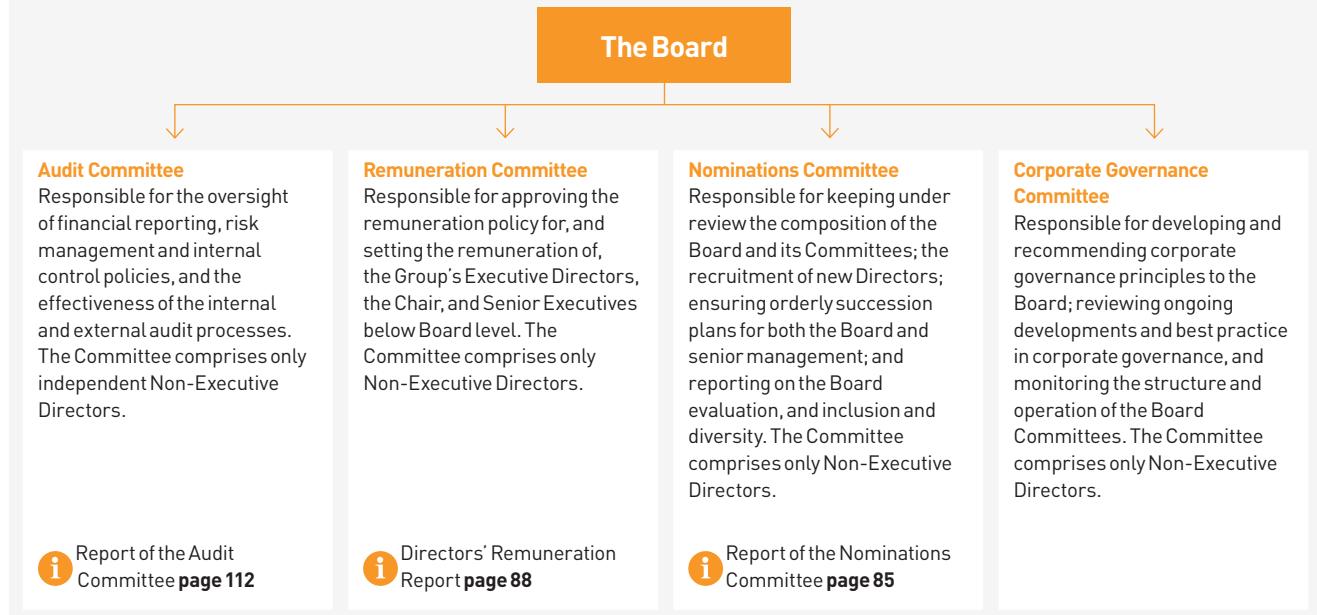
Delegated Authorities

There are additionally a number of approved delegated authorities in place from the Board to the Chief Executive Officer and other senior executives which relate principally to the day-to-day management of the business. The Executive Leadership team supports the Chief Executive Officer in the performance of his duties. Further delegated authorities and rules applicable to each Business Area are overlayed and approved at that level.

Board Committees

The structure of the Board's four main Committees and a summary of their key responsibilities are set out below. Each Committee has its own Chair who reports back to the Board on its activities. Details on how these Committees have addressed their responsibilities are set out on pages 85 to 114. All of the Committees have written Terms of Reference, which are available on our website, www.relx.com.

Board Committees are principally supported by the Chief Executive Officer, Chief Financial Officer, Chief Legal Officer & Company Secretary, and the Chief Human Resources Officer, although senior managers within the Group are invited to attend meetings where appropriate. The Board's annual programme and the agendas for the Committees are prepared by their respective Chairs with support from the Company Secretary.



The 2018 UK Corporate Governance Code

We have explained the Board's programme of activities for 2019 in more detail on pages 74 and 75. This programme was refreshed to ensure that it considered and addressed the requirements of the Code.

Our culture

During the year, the Board reviewed and considered the Group's culture, and was able to satisfy itself that it supported and was aligned with its purpose, strategy and values. In order to assist its assessment, the Board received a presentation from the Chief Human Resources Officer, which highlighted the role of the Code of Ethics in contributing to the culture of the Group, and summarised the metrics that RELX uses to monitor culture, including voluntary employee turnover and demographics by gender, tenure, age and wider diversity characteristics. It also confirmed that pay equity programmes were monitored to ensure that they aligned with RELX's core pay philosophy. The Board reviewed and discussed the results of the most recent Group-wide employee opinion survey, and received feedback from the Group's Workforce Engagement Director on employees' views and perspectives regarding how the Group operates, including its activities and culture. Further detail on the Workforce Engagement Programme and its outcomes can be found on page 76.

The Board also received a presentation from the Chief Compliance Officer on workforce concerns submitted during the year in confidence. This provided the Board with oversight of the number and type of breaches of our values and required standards of conduct, as set out by the Board in the Code of Ethics.

Workforce Policies

During the year, the Board placed a significant focus on its review of RELX's approach to inclusion and diversity. Following a review of this area by both the Nominations Committee and the Board, updated inclusion and diversity policies, separately applicable to each of the Board and the rest of the Group, were approved. The Board also reviewed Workforce Policies relating to Reward, Flexible Working and Recruitment to ensure that these supported, encouraged and incentivised the workforce to adhere to and operate in accordance with the Group's values. In 2020, as part of its annual programme, the Board will review Workforce Policies relating to promotion, retention, performance management and training & development. An explanation of the Company's approach to investing in and rewarding its workforce can be found within the Corporate Responsibility Report on page 45.

Directors' duties and Section 172 Statement

The Directors of RELX PLC – and those of all UK companies – must act in accordance with their duties under the Companies Act 2006 (the Act). These include a fundamental duty to promote the success of the Company for the benefit of its members as a whole. This duty has been central to the Board's decision-making processes and outcomes over many years. The information which follows on pages 74 to 78 describes how, in performing their duties during the year, the Directors have had regard to the matters set out in Section 172(1) (a) to (f) of the Act, and constitutes the Board's Section 172 Statement for 2019. This section is incorporated by reference into the RELX 2019 Strategic Report.

Long-term decision-making (s.172)

The Board delegates day-to-day management and decision-making to its senior management team, but it maintains oversight of the Company's performance, and reserves to itself specific matters for approval, including significant new business initiatives. Then, by receiving regular updates on business programmes and objectives, the Board monitors that management is acting in accordance with agreed strategy. Processes are in place to ensure that the Board receives all relevant information to enable it to make well-judged decisions in support of the Company's long-term success.

In 2019, the Board:

- Received presentations on the business areas and, through ongoing discussion with the business leaders and the Chief Strategy Officer, determined strategic priorities for a three year period, and the development of robust supporting operating plans. A two day Strategy Review was held in September 2019 to debate and determine a three-year strategy plan for the Group for 2020-2022
- Conducted an annual review of its invested capital and capital structure. This embraced financial performance, acquisitions history and prospects, net debt, target returns, credit ratings and forecasts, and financial market conditions. The Board also received regular updates on RELX's capital position throughout the year and was able to ensure that appropriate and cost-effective financial instruments were put in place, as part of its Corporate Finance Strategy, to meet the long-term funding requirements of the Group
- Considered and approved a number of acquisition and disposal proposals. The Board only approves such a transaction if it is satisfied, after full consideration, that it meets the Section 172(1) requirement that it is most likely to promote the success of the Company for the benefit of its members as a whole, and it considers the value forecasted to be added to the Group by an acquisition, over a defined future period. This judgement is recorded. The Board also conducts an annual acquisition review process in which historical acquisitions are reviewed and the financial performance and strategic rationale for them revisited

- Approved comprehensive Treasury and Tax Policies and principles to support Company success and minimise risk over the long-term. When taken together with the setting of annual budgets and capital allocation, and its oversight of business performance against targets, this work enabled the Board to confirm the Company's outlook for the year ahead, the going concern statement and its longer-term viability
- Reviewed Board and Senior Management succession, and the Remuneration Policy and plans for its Executive Directors and business leaders, to ensure that both short and longer-term incentives are aligned with Company and stakeholder interests, and Company values and culture. Internal talent reviews and career progression plans were shared with the Board, as were Workforce Engagement and inclusion and diversity policies and practices. All of these activities are intended to contribute to the development of a motivated and aligned workforce, the prospect of orderly succession and successful management and leadership capabilities for the future
- Agreed the Group's principal risks, considered emerging risks and received regular risk management and internal control reviews throughout the year, including specific consideration of information and cyber security risk

Reputation for high standards of business conduct (s.172)

The Board is responsible for developing a corporate culture across RELX which promotes integrity and transparency. It has established comprehensive systems of corporate governance, and approves policies and procedures which promote corporate responsibility and ethical behaviour. Central to these policies is the Group's Code of Ethics. This was updated in 2018, applies to all Directors and employees, and is embedded into the Group's operations.

In 2019, the Board:

- Received and endorsed a comprehensive report from the Global Head of Corporate Responsibility outlining activities throughout RELX designed to progress our unique contributions to society, strengthen governance and compliance, advance customer relationships, ensure an ethical supply chain and reach environmental targets. The Board also approved the Group's annual Corporate Responsibility Report
- Approved the Company's Modern Slavery Act Statement describing the steps it had taken to ensure that slavery and human trafficking were not taking place in the context of business carried out in 2019
- Approved, as part of the Annual Report and Accounts 2018 process, statements describing how the Company had applied the principles of the UK Corporate Governance Code during 2018, and indicating its full compliance with the provisions of the 2016 UK Corporate Governance Code
- Put in place actions to address the requirements of the 2018 UK Corporate Governance Code for 2019

- Considered and approved, as appropriate, actual and potential Director Conflicts of Interest
- Received a presentation from the Chief Compliance Officer on the process in place through which RELX employees can confidentially (and anonymously should they so choose) submit concerns to the Company. These include, but are not limited to, breaches of the Code of Ethics. It additionally reviewed the process for the investigation of reports received by the Company. Through the work of the Audit Committee, the Board also had oversight of the RELX compliance programme, which provides both an internal control structure, and also supports and provides education to our workforce through policies, guidance and training

Acting fairly as between members of the Company (s.172)

The Board aims to understand the views of its shareholders and always to act in their best interests.

In 2019, the Board:

- Approved a range of activities designed to enhance value for all shareholders. These included a recapitalisation of the Company, overwhelmingly approved at the 2019 Annual General Meeting, to create long-term distributable reserves for future dividend payments; an ongoing share buyback programme; and a progressive dividend policy
- Received Investor Relations updates at every meeting and direct feedback from investors during specific consultation exercises and on publication of trading results and updates. The Annual General Meeting in 2019 provided an opportunity to understand the priorities and concerns of individual shareholders

Other key activities

The Board met regularly throughout the year and, in 2019, held seven scheduled meetings. The Board's programme ensures that all relevant matters are considered at scheduled meetings.

In addition to the activities set out on pages 74 and 75, the Board also considered:

- Reports from the Chief Executive Officer and Chief Financial Officer on the Group's actual and forecasted operational and financial performance
- Annual and Interim financial results
- Appointments and re-appointments to the Board and appointments to Board Committees
- Cyber Security
- Update on litigation matters
- Reports from the Committee Chairs on the key activities of the Board's Committees

Section 172(1) of the Act – Duty to promote the success of the company

A director of a company must act in the way they consider, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to factors (a) to (f):

- (a) The likely consequences of any decision in the long term;
- (b) The interests of the company's employees;
- (c) The need to foster the company's business relationships with suppliers, customers and others;
- (d) The impact of the company's operations on the community and environment;
- (e) The desirability of the company maintaining a reputation for high standards of business conduct; and
- (f) The need to act fairly as between members of the company.

Stakeholder engagement

The Board recognises that relationships with RELX's key stakeholders, including its investors, employees, customers, suppliers and the communities in which we operate, are important in allowing the Company to achieve its business aims. Engagement takes place with our stakeholders at all levels across RELX, and the size, diversity of our business and global nature of the Group means that it can take many different forms. Much of it takes place at an operational level, and this is especially true in respect of our customers and suppliers, with whom we deal in the ordinary course of business on a day-to-day basis. In addition to the activities set out on pages 76 to 78, in 2019 to help the organisation and the Board understand the issues that our stakeholders believe we should be focused on, we asked an external third party to test our ranking of 14 issues that we consider to be material with our stakeholders. The results of this engagement, which are seen by the Board and indicate that RELX is focusing on the right issues, are set out on page 8 of our 2019 Corporate Responsibility Report.

Stakeholder: Investors

Why effective engagement is important:	This helps investors to understand our strategy, performance and governance arrangements, and to make informed and effective investment decisions concerning RELX. It also makes clear our prioritisation of the long-term in our decision-making and focus on delivery of consistent financial performance.
How the Board ensures effective engagement with investors, understands their views and considered these in its discussions and decision-making in 2019:	<p>RELX's material communications to investors, such as its trading results and updates, other regulatory announcements, Annual Report and Accounts and Notice of Annual General Meeting must be reviewed and approved by the Board under our corporate governance framework. The Board also receives regular reports on investor engagement activities and outcomes from each of the Chief Executive Officer, Chief Financial Officer, Head of Investor Relations and Director of Corporate Responsibility. In 2019, these updates provided the Board with information arising from or relating to: the completion of investor roadshows; ad hoc interaction with institutional shareholders on significant issues; and ongoing dialogue with investors through our dedicated Investor Relations, Corporate Responsibility and Treasury teams, concerning our recent and proposed activities. The Board also received a full update from the Chair of the Remuneration Committee on the results of a consultation exercise with major investors concerning the proposed 2020 Directors' Remuneration Policy, and had direct interaction with shareholders at the 2019 Annual General Meeting, at which it received their thoughts and views on Company performance.</p> <p>During the year, the views of our investors informed Board discussions and decision-making in respect of its: approval of the quantum of the Company's share buy back programme, dividend declarations and dividend policy; recommendation to shareholders to increase the distributable reserves of the Company through a capital reduction; approval of the RELX three-year strategy plan, priority order for the use of cash generated by the Group, and annual budgets and targets; and approval of the Group's risk appetite. It also assisted the Board in recommending the proposed 2020 Directors' Remuneration Policy be put to shareholders for approval at the Company's 2020 AGM, and in respect of its approval of the Group's 2019 annual and interim results announcements and reports.</p>

Stakeholder: Employees

Why effective engagement is important:	Our people are essential to our success, future growth, and our aim to build leading positions in long-term global growth markets. We continue to invest substantial time and effort to employ, train, develop and retain employees who are passionate about our markets and have up-to-date knowledge and world class expertise in our key functional areas. Hearing their views on what we do well, and what we can do better, is an important driver for improvement and retaining our best talent.
How the Board ensures effective engagement with employees, understands their views and considered these in its discussions and decision-making in 2019:	<p>In accordance with the Code, the Board appointed Marike van Lier Lels as Workforce Engagement Director, with effect from 1 January 2019. In this role, and supported by the Chief Human Resources Officer, she has overseen the RELX Workforce Engagement Programme for 2019. During the year, she met with European, US and Asia-Pacific workforce representatives, and reported to the Board on engagement processes, outcomes and findings. A wide range of topics were discussed, which included employee views and perspectives on areas including pay and benefits, career development, training, inclusion and diversity, working environment, flexible working, corporate responsibility and the effectiveness and frequency of employee surveys. The Directors' Remuneration Policy, in so far as it applies to the Executive Directors and how it aligns with broader workforce policies, was also discussed. As a result of the findings, the Board provided direction on providing employees with greater transparency on career development, and its review of flexible working policies and their implementation in 2020. Marike will continue the programme of engagement in 2020, which will be broadened to include her meeting with HR Business Leaders, Heads of Talent and Heads of Recruitment. Additionally in 2019, the Board also reviewed net promoter score survey results for individual business areas, and met and received presentations from Group employees in London, Atlanta and Amsterdam. As a regular item on its agendas, the Board received internal Group-wide communications to employees, and received an update from the Chief Compliance Officer on reports submitted by RELX employees, in confidence, on potential breaches of RELX approved policies or procedures.</p> <p>The Board considered the information provided to it to assist in its discussions and decision-making in the following areas: its assessment and monitoring of RELX's culture, and its alignment with our strategy, values and purpose; its discussion and approval of updated RELX Inclusion and Diversity Policies, applicable to each of the Board and the rest of the Group; its review and approval of RELX Workforce Policies in the areas of reward, recruitment and flexible working; and its approval of the proposed Workforce Engagement programme for 2020.</p>

Stakeholder: Customers

Why effective engagement is important:	Our goal is to help customers make better decisions, get better results and be more productive. We can only do this by leveraging a deep understanding of their needs and views to create innovative solutions which combine content and data with analytics and technology in global platforms.
How the Board ensures effective engagement with customers, understands their views and considered these in its discussions and decision-making in 2019:	<p>RELX's engagement with its customers takes place mainly at an operational level within our business areas through face-to-face meetings, customer training and workshops, ongoing dialogue through dedicated sales and operations teams, customer relationship managers, and in respect of material customer issues, through our business area senior management teams. The Board received presentations throughout the year from these individuals, including a wide range of customer-facing employees and RELX product matter experts. These assisted the Board in maintaining and developing its understanding of current customer and market trends, issues and likely future needs, and how these could be addressed, during the two strategy discussion days held during the year, and several deep dive business reviews included in its 2019 annual agenda cycle.</p> <p>In addition, the Board reviewed customer survey data to further inform its discussions and decision-making when reviewing, discussing and approving the RELX three-year strategy plan from 2020-2022 and the supporting 2020 budget, focused on migrating all of our information solutions across the Group towards higher value-add decision tools, adding broader data sets, embracing more sophisticated analytics and leveraging more powerful technology, primarily through organic development. Customer-related views, behaviours and profiles provided to the Board during the year as a result of its oversight of engagement in this area also assisted it when considering the approval of selective acquisitions of targeted data sets, analytics and assets in high-growth markets that support our organic growth strategies, and which are natural additions to our existing businesses. These included its approval of the acquisition of Mack Brooks Exhibitions by our Reed Exhibitions business, which expands its portfolio by more than 30 business-to-business events in 14 countries. Additionally, during the year, the Board approved the acquisition of ID Analytics, a provider of credit and fraud risk solutions for US\$375m, which complements our existing fraud prevention services within Risk & Business Analytics. Combined with our existing strengths of verifying and authenticating physical and digital identities, our customers will benefit from an even more comprehensive approach to detecting and preventing fraud and managing risk.</p>

Stakeholder: Suppliers

Why effective engagement is important:	We aim to be fair and ethical in dealings with our suppliers, pay them on agreed terms and be a collaborative and responsive partner.
How the Board ensures effective engagement with suppliers, understands their views and considered these in its discussions and decision-making in 2019:	The Board received a full update from the Global Head of Purchasing on the RELX Socially Responsible Supplier Programme (RSRSP), supporting risk management and audit processes, and associated targets. It was also provided with detail on feedback from surveys completed by our suppliers on how RELX supports them in meeting their obligation to comply with our defined standards and principles as set out in our Supplier Code of Conduct, the ongoing roll-out of our supplier diversity programme, and on supplier forums and meetings held to enhance our supplier interactions and support the development of innovation and efficiencies in our relationships. This information assisted the Board in its review of RSRSP targets for 2020. The Board received an update from the Director of Corporate Responsibility on further Group engagement with suppliers, as part of its review and approval of the annual RELX Modern Slavery Act Statement.

Stakeholder: Community

Why effective engagement is important:	Contributing to our local and global communities is a responsibility and an opportunity. Our employees feel passionately about supporting scientific research throughout the scientific community and advancing the rule of law throughout the global community. Our commitments help us to be an employer of choice.
How the Board ensures effective engagement with the community, understands its views and considered these in its discussions and decision-making in 2019:	The Company's engagement with the community is completed primarily through our annual RE Cares programme, by which our businesses pursue Corporate Responsibility activities that maximise RELX's positive impact on society through its Unique Contributions, which include fostering communities. The Board receives an update on the RE Cares programme, and our engagement with the communities in which we operate, from the Director of Corporate Responsibility. This included detail on our UN Sustainable Development Goals (SDG) Resource Centre, participation in UN SDG Action Platforms, and engagement processes through which RELX individuals serve on the boards of UN Global Compact networks in the UK and the Netherlands. The Board was also provided with an overview of the materials provided on the corporate responsibility section of our website, and received updates on our involvement and participation in corporate responsibility forums, initiatives and workshops through our dedicated team and network of 240 RE Cares Champions across our businesses, who ensure the vibrancy of our engagement with the community.

Attendance at meetings of the Board and Board Committees

The table below shows the attendance of Directors at meetings of the Board and its Committees during the year. Attendance is expressed as the number of meetings attended out of the number eligible to be attended.

Director	Committee appointments	Board ⁽¹⁾	Audit	Remuneration	Nominations	Corporate Governance
Anthony Habgood (Chair)	R N C	7/7	-	3/3	4/4	6/6
Erik Engstrom	-	7/7	-	-	-	-
Nick Luff	-	7/7	-	-	-	-
Wolfhart Hauser	R N C	7/7	-	3/3	4/4	6/6
Adrian Hennah	A N C	7/7	4/4	-	4/4	6/6
Marike van Lier Lels ⁽²⁾	A N C	6/7	1/2	-	3/4	5/6
Robert MacLeod ⁽³⁾	R N C	7/7	-	3/3	1/1	6/6
Carol Mills ⁽⁴⁾	A C	2/2	1/1	-	-	2/2
Linda Sanford	R C	7/7	-	3/3	-	6/6
Ben van der Veer ⁽⁴⁾	C	2/2	-	-	-	2/2
Andrew Sukawaty ⁽⁵⁾	A C	5/5	3/3	-	-	4/4
Suzanne Wood	A C	7/7	4/4	-	-	6/6
Charlotte Hogg ⁽⁶⁾	C	-	-	-	-	-

Board Committee membership key

- A Audit
- R Remuneration
- N Nominations
- C Corporate Governance
- Committee Chair

(1) In addition to the seven scheduled meetings, serving Directors also attended two full-day strategy and business review meetings.

(2) Ms van Lier Lels stepped down as a member of the Audit Committee on 6 June 2019, to focus on her responsibilities as Workforce Engagement Director. She was unable to attend the February Board and Committee meetings due to unforeseen personal circumstances.

(3) Robert MacLeod was appointed to the Nominations Committee on 25 September 2019.

(4) Ms Mills and Mr van der Veer each stepped down as a member of the Board on 25 April 2019. Ms Mills also stepped down as a member of the Audit Committee from that time.

(5) Andrew Sukawaty was appointed as a member of the Board and Corporate Governance Committee on 25 April 2019, and as a member of the Audit Committee with effect from 6 June 2019.

(6) Charlotte Hogg was appointed to the Board with effect from 16 December 2019. Therefore, she did not attend any Board or Committee meetings during the year.

Division of Responsibilities

Key roles of the Directors

Chair

- Provides leadership of the Board, and is responsible for its overall effectiveness in directing the Company
- Ensures that all Directors are sufficiently apprised of matters to make informed judgements, through the provision of accurate, timely and clear information
- Promotes high standards of corporate governance, demonstrates objective judgement and promotes a Board culture of openness and debate
- Sets the agenda and chairs meetings of the Board
- Chairs the Nominations and Corporate Governance Committees
- Facilitates constructive Board relations and the effective contribution of all of the Directors
- Ensures effective dialogue with shareholders
- Ensures the performance of the Board, its Committees and individual Directors is assessed annually
- Ensures effective induction and development of Directors

Chief Executive Officer

- Day-to-day management of the Group, within the delegated authority limits set by the Board
- Develops the Group's strategy for consideration and approval by the Board
- Ensures that the decisions of the Board are implemented
- Informs and advises the Chair and Nominations Committee on executive succession planning
- Leads communication with shareholders
- Promotes and conducts the affairs of the Company with the highest standards of integrity, probity and corporate governance

Chief Financial Officer

- Day-to-day management of the Group's financial affairs
- Responsible for the Group's financial planning, reporting and analysis
- Ensures that a robust system of internal control and risk management is in place
- Maintains high-quality reporting of financial and environmental performance internally and externally
- Supports the Chief Executive Officer in developing and implementing strategy

Senior Independent Director

- Leads the Board's annual assessment of the performance of the Chair
- Available to meet with shareholders on matters where usual channels are deemed inappropriate
- Deputises for the Chair, as necessary
- Serves as a sounding board for the Chair and acts as an intermediary between the other Directors, when necessary

Non-Executive Directors

- Bring an external perspective and constructively challenge and provide advice to the Executive Directors
- Effectively contribute to the development of strategy
- Scrutinise the performance of management in meeting agreed goals and monitor the delivery of the Group's strategy
- Serve as members of Board Committees and chair the Audit and Remuneration Committees

Chair and Chief Executive Officer

There is a clear separation of the roles of the Chair, who leads the Board, and the Chief Executive Officer, who is responsible for the day-to-day management of the Group, which are set out in writing and included above. The table above also illustrates the key responsibilities of the other Directors. This division of responsibilities, in addition to the Matters Reserved for the Board, Terms of Reference for each Board Committee and delegated authorities in place from the Board to the Chief Executive Officer and other senior executives which relate to the day-to-day management of the business, ensures that there are appropriate controls in place to prevent any individual from having unfettered powers of decision.

Composition, succession and evaluation

Board appointment procedure

The Company has in place a rigorous procedure for the appointment of new Directors to the Board. This involves the preparation of a search specification by the Nominations Committee and the engagement of an external search firm to identify and propose candidates based on that specification. Any candidates will be interviewed by a number of Board members, including the Chair and the Chief Executive Officer, and additionally the Chief Legal Officer and Company Secretary. The candidates are considered in detail by the Nominations Committee, and a recommendation made to the Board regarding any Director appointment. The Board then has a further opportunity to discuss, and if deemed fit, approve the appointment. The Board may appoint Directors (subject to a maximum upper limit) to fill a vacancy at any time, although any Director so appointed shall only hold office until the following Annual General Meeting of the Company, at which his or her re-election shall be voted upon by shareholders. Directors are then required to seek re-election by shareholders at each Annual General Meeting of the Company. The Notice of Meeting for the 2020 Annual General Meeting will set out information on the Directors standing for election or re-election, including their biographies, skills and key contributions, as required by the Code.

Board composition

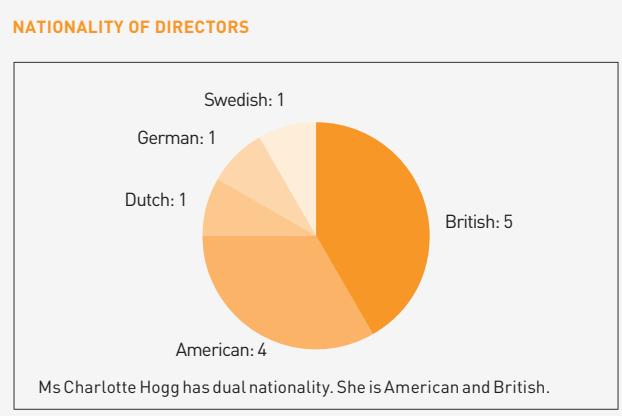
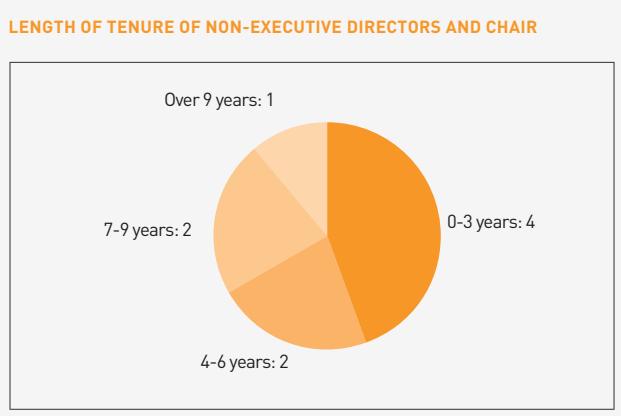
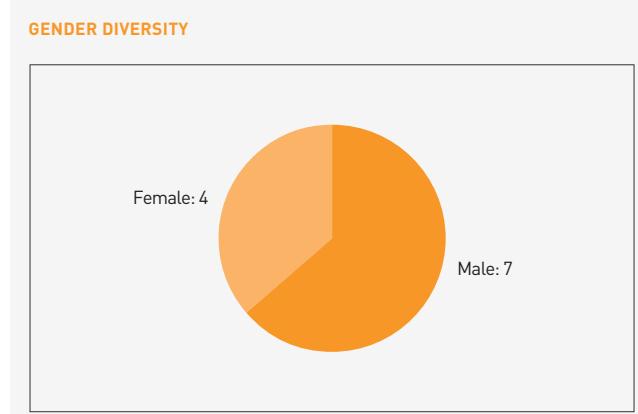
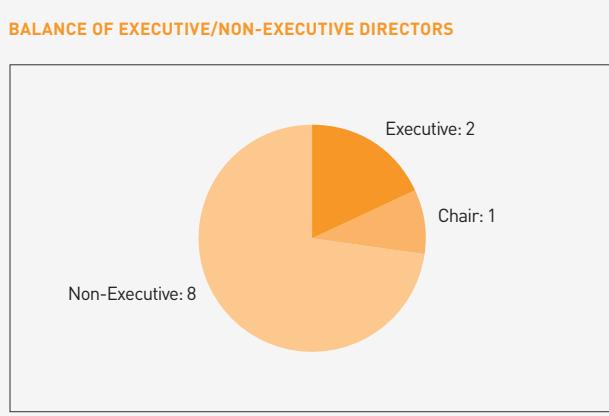
As at the date of this Annual Report, the Board was made up of the Chair, two Executive Directors and eight other Non-Executive Directors, who bring a wide range of skills, experience, industry expertise and professional knowledge to their roles. A summary of the diversity of the gender, length of tenure and nationality of the Board are shown below. The Nominations Committee considers these as important factors when reviewing the composition of the Board and its Committees, which it does on an ongoing basis. It has concluded that the current composition of the Board remains appropriate, and allows it to discharge its duties to the Company and govern the Group effectively.

Board and Committee changes in 2019

Having served on the Board for nine years, Ben van der Veer stepped down as a Non-Executive Director at the conclusion of the Company's Annual General Meeting in April 2019. Carol Mills also stepped down at that time. Two Non-Executive Directors were appointed during the year. Andrew Sukawaty joined the Board as a Non-Executive Director in April. He currently serves on the Audit and Corporate Governance Committees. Additionally, Charlotte Hogg joined the Board from December. She currently serves on the Corporate Governance Committee.

Board Committee membership throughout 2019 is set out in the table on page 78.

Balance of our Board as at 31 December 2019



Board skills and expertise

The Board collectively has a diverse range of skills, including in the following areas:

- Corporate Governance for listed companies
- Corporate Strategy and Organisation
- Operational experience in the Group's product markets
- Executive Board member and leadership experience in large international listed companies
- Corporate Responsibility, Human resources management and executive remuneration
- Financial Expertise

For further information on the skills of each individual director, please see pages 8 to 10 of the Notice of Meeting for our 2020 Annual General Meeting.

Board information and support

All Directors have complete and timely access to the information required to discharge their responsibilities fully and effectively. They have access to the services of the Company Secretary, who is responsible for the accurate and timely flow of information to the Board, advising the Board on all corporate governance matters, and ensuring that all Board procedures are followed correctly.

The Directors also have access to other members of the Group's management, staff and external advisers, and may take independent professional advice in the furtherance of their duties, at the Company's expense. Each of the Directors is expected to attend all meetings of the Board and Committees of which they are a member.

Where a Director is unable to attend a Board or Committee meeting, they are provided with the papers relating to that meeting and are able to discuss issues arising with the respective Chair and other Board and Committee members. They are also provided with a copy of the meeting minutes.

Board evaluation

The Directors consider the evaluation of the Board, its Committees and members to be an important aspect of corporate governance. The Board undertakes an annual evaluation of its own effectiveness and performance, and that of its Committees and individual Directors. In 2019, an internal evaluation was completed, supported by the Company Secretary. Using questionnaires completed by all Directors, key areas were explored including: Board composition; Board succession planning; Board and Group diversity; the performance of the Board and Committees and their effectiveness in achieving objectives and fulfilling their terms of reference; talent management and executive leadership succession; setting the Group's culture; risk management, corporate governance and compliance; quality of information provided by management; and stakeholder engagement including the Board's understanding and visibility of the views of the Group's stakeholders, and incorporation of them into the Board's decision-making process.

The Chair conducted interviews with each of the Directors.

The review of the performance of the Chair was led by the Senior Independent Director. The Chair was not present during the discussion among the Non-Executive Directors relating to his performance. The conclusions of the full evaluation were initially reviewed by the Nominations Committee, with a particular focus on Board composition, succession and diversity. The Board then received an update from the Nominations Committee which it had a further opportunity to discuss and, where appropriate, provide direction on.

Conclusions of the 2019 evaluation

The evaluation confirmed that, overall, the Directors believe that the Board and each of its Committees continue to function effectively in achieving objectives and fulfilling their responsibilities, and that each Director continues to contribute effectively. Directors believe that the Board has the right blend of experience, skills and diversity in the context of the challenges currently facing the Group. The evaluation also confirmed that the Board believes it has adequately addressed the new requirements of the Code, especially with regards to its involvement in the setting and maintenance of the Group's culture, its understanding and visibility of the views of the Group's key stakeholders, and its incorporation of those views into the Board's decision-making process. The Board noted that the feedback received and communicated from its Workforce Engagement Director had increased this visibility. It recognised that the Group needs to keep assessing its responsibilities to the Group's key stakeholders, and that whilst it consistently considered their views, further visibility of the views of the Group's suppliers should be incorporated into the Board's agenda for 2020.

All Directors commended the Chair and his effective leadership of the Board, noting amongst other things that he facilitates: (i) the effective contribution of each Non-Executive Director, and (ii) the development of constructive relationships and communications within the Board. The Board also highlighted the importance of the leadership provided by the Chair, both to the Board to provide it with a strong culture, and alongside the Chief Executive Officer, to the wider organisation over the previous ten-year period, including during the period of corporate governance change following the corporate simplification in September 2018.

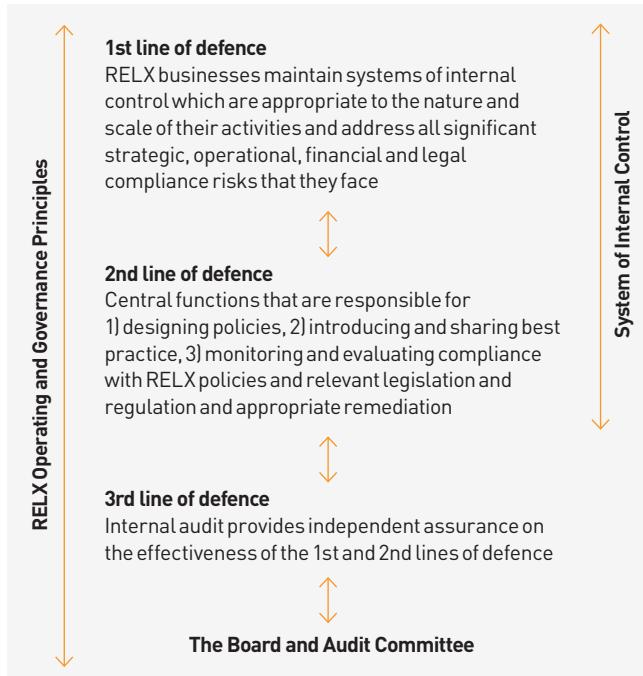
The Nominations Committee determined and recommended to the Board that its composition remained appropriate, and that the evaluation would not in itself result in any membership changes outside of the normal controlled and structured evolution of the Board over time.

Audit, Risk and Internal Control

Internal control and risk management

RELX has established internal controls and risk management practices that are embedded into the operations of the businesses, based on the Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organisations of the Treadway Commission. Details of the principal and emerging risks facing the Group and how these are mitigated are set out on pages 58 to 61.

Additionally, in order to provide reasonable assurance against material inaccuracies or loss, and on the effectiveness of the systems of internal control and risk management, RELX has adopted the three lines of defence assurance model as set out below.



Note: In addition to RELX's internal controls, RELX is also audited externally. The report of the external auditor has been included from pages 120 to 127.

The Board has adopted a schedule of matters which are required to be brought to it for decision. The Board is responsible for the system of risk management and internal control of RELX and has implemented an ongoing process for identifying, assessing, monitoring and managing the principal and emerging risks faced by its businesses. This process was in place throughout the year ended 31 December 2019, and up to the date of approval of the Annual Report and Financial Statements 2019. The Board monitors these systems of internal control and risk management and annually carries out a review of their effectiveness.

RELX has an established framework of procedures and internal control, with which the management of each business is required to comply. RELX operates authorisation and approval processes throughout all of its operations. Access controls exist where processes have been automated to ensure the security of data. Management information systems have been developed to identify risks and to enable assessment of the effectiveness of the systems of internal control.

RELX has a Code of Ethics and Business Conduct that provides a guide for achieving its business goals and requires officers and employees to behave in an open, honest, ethical and principled manner. The Code of Ethics also outlines confidential procedures enabling employees to report any concerns about compliance, or about the Group's financial reporting practice. The Code of Ethics is available on our website at www.relx.com.

Each business area has identified and evaluated its principal and emerging risks, the controls in place to manage those risks and the levels of residual risk accepted. Risk management and control

procedures are embedded into the operations of the business and include the monitoring of progress in areas for improvement that come to management and Board attention.

Principal and emerging risks facing RELX businesses are regularly reported to and assessed by the Board and Audit Committee. With the close involvement of business management and central functions, the risk management and control procedures ensure that RELX is managing its business risks effectively and in a coordinated manner across the businesses with clarity on the respective responsibilities and interdependencies. Litigation, and other legal and regulatory matters, are managed by legal directors in the businesses.

The risk assessment included consideration of emerging risks and risk appetite. RELX defines emerging risks as new or changing risks which are highly uncertain in terms of defining impact or likelihood and are more usually external to RELX. In line with the Code, the risk assessment identifies and considers the likelihood and impact of emerging risks on our business models, future performance, solvency, liquidity or reputation. The assessment also considers the need for mitigation of emerging risks. Risk appetite (defined as RELX's willingness to take on risk) is based on an assessment of the level of residual risk, taking account of inherent risk and mitigation efforts. The assessment is rated, in relation to RELX's objectives for the current level of residual risk, in three broad categories: reduce, accept and willing to extend. The level of residual risk which RELX is prepared to accept will vary, with a high level of mitigation effort over operational, financial and compliance risks. The residual risk level for external and strategic risks may be extended if doing so is in line with RELX's strategic objectives, values and stakeholder interests and if shareholder returns could be increased.

The Audit Committee also receives regular reports from both internal and external auditors on internal control and risk management matters. In addition, each business area is required, at the end of the financial year, to review the effectiveness of internal controls and risk management and report its findings on a detailed basis to the management of RELX. These reports are summarised and, as part of the annual review of effectiveness, submitted to the Audit Committee. The Chair of the Audit Committee reports to the Board on any significant internal control matters arising.

Annual review

As part of the year-end procedures, the Audit Committee and Board reviewed the effectiveness of the systems of internal control and risk management during the 2019 financial year. The objective of these systems of internal control and risk management is to manage, rather than eliminate, the risk of failure to achieve business objectives. Accordingly, they can only provide reasonable, but not absolute, assurance against material mis-statement or loss. The Board has confirmed, subject to the above, that as regards financial reporting risks, the respective risk management and control systems provide reasonable assurance against material inaccuracies or loss and have functioned properly throughout the year. In accordance with the Code, the Board has also considered the Group's long-term viability, following a robust and thorough assessment of its principal and emerging risks. The resulting Viability Statement is set out on page 84.

Responsibilities in respect of financial statements

The Directors are required to prepare financial statements as at the end of each financial period, in accordance with applicable laws and regulations, which give a true and fair view of the state of affairs, and of the profit or loss, of the Company and its subsidiaries, joint ventures and associates. They are responsible for maintaining proper accounting records, for safeguarding assets and for taking reasonable steps to prevent and detect fraud and other irregularities.

The Directors are also responsible for selecting suitable accounting policies and applying them on a consistent basis, and making judgements and estimates that are prudent and reasonable. Applicable accounting standards have been followed and the RELX consolidated financial statements, which are the responsibility of the Directors of the Company, are prepared using accounting policies which comply with International Financial Reporting Standards as issued by the International Accounting Standards Board and as adopted by the European Union. Having taken into account all of the matters considered by the Board and brought to the attention of the Board, the Directors are satisfied that the Annual Report and Financial Statements, taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

Going Concern

The Directors, having made appropriate enquiries, consider that adequate resources exist for the Group to continue in operational existence for the foreseeable future and that, therefore, it is appropriate to adopt the going concern basis in preparing the 2019 financial statements. In reaching these conclusions, the Directors have had due regard to the Group's financial position as at 31 December 2019, the strong free cash flow of the Group, the Group's ability to access capital markets and the principal risks facing the Group. A commentary on the Group's cash flows, financial position and liquidity for the year ended 31 December 2019 is set out in the Chief Financial Officer's report on pages 54 to 57. This shows that after taking account of available cash resources and committed bank facilities that back up short-term borrowings, all of the Group's borrowings that mature in the next twelve months can be covered. The Group's policies on liquidity, capital management and management of risks relating to interest rate, foreign exchange and credit exposures are set out on pages 157 to 162. The principal risks and emerging risks facing the Group are set out on pages 58 to 61.

US certificates

As required by Section 302 of the US Sarbanes-Oxley Act 2002 and by related rules issued by the US Securities and Exchange Commission (the Commission), the Chief Executive Officer and Chief Financial Officer of the Company certify in the Annual Report 2019 on Form 20-F to be filed with the Commission that they are responsible for establishing and maintaining disclosure controls and procedures and that they have:

- designed such disclosure controls and procedures to ensure that material information relating to the Group is made known to them
- evaluated the effectiveness of the Group's disclosure controls and procedures
- based on their evaluation, disclosed to the Audit Committee and the external auditors all significant deficiencies in the design or operation of disclosure controls and procedures and any frauds, whether or not material, that involve management or other employees who have a significant role in the Group's internal controls
- presented in the Annual Report 2019 on Form 20-F their conclusions about the effectiveness of the disclosure controls and procedures

A Disclosure Committee, comprising the Company Secretary and other senior managers of the Group, provides assurance to the Chief Executive Officer and Chief Financial Officer regarding their Section 302 certifications.

Section 404 of the US Sarbanes-Oxley Act 2002 requires the Chief Executive Officer and Chief Financial Officer of the Company to certify in the Annual Report 2019 on Form 20-F that they are responsible for maintaining adequate internal control structures and procedures for financial reporting and to conduct an assessment of their effectiveness. The conclusions of the assessment of internal control structures and financial reporting procedures, which are unqualified, are presented in the Annual Report 2019 on Form 20-F.

Annual General Meeting

All holders of RELX PLC ordinary shares may attend the Company's Annual General Meeting (AGM) in April 2020. The AGM provides an opportunity for the Board to communicate with individual shareholders, and for shareholders to provide their views on the performance and progress of the Group. The Chairman, the Chief Executive Officer, the Chief Financial Officer, the Chairs of the Board Committees, other Directors and a representative of the external auditors are available to answer questions from shareholders. The Chief Executive also presents a review of the key business developments during the year. The Company offers electronic voting facilities in relation to proxy voting at shareholder meetings. Details of proxy voting by shareholders, including votes withheld, are given at the AGM and then posted on our website following the AGM.

Viability statement

Viability statement

The Code requires Directors to assess the prospects of the Group over a period significantly longer than twelve months and to state whether they have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment.

Assessing the Group's prospects

The Group develops information-based analytics and decision tools for professional and business customers in the Scientific, Technical & Medical, Risk and Business Analytics, Legal and Exhibitions sectors. The Group has leading positions in long-term growth markets, deep customer understanding and has developed innovative solutions that often account for about 1% of our customers' cost base but can have a significant and positive impact on the economics of the remaining 99%. Having effectively transitioned the business from print to digital, the Group is systematically migrating its information solutions toward higher value-add decision tools, adding broader data sets, embedding more sophisticated analytics and leveraging more powerful technology. We believe this evolution is improving our business profile and positions the Group for future business success.

The Group's prospects are assessed through the annual strategy planning process. This process includes a review of assumptions made and assesses each business area's longer-term plan. The resulting three-year strategy plan forms the basis for Group and divisional targets and in-year budgets. Objectives are set with consideration given to the economic and regulatory environment, and to customer trends, as well as incorporating risks and opportunities. The most recent three-year strategy business plan was agreed by the Directors in September 2019.

In assessing the Group's prospects, our current position and principal risks are considered as follows:

Current position and business model

- Diversified business in terms of sectors, markets, customers, geographies and products and services so that we are not dependent on any one business, customer, region or product
- High percentage of subscription and recurring revenue streams
- Leading positions in long-term global growth markets
- Low working capital and capital investment requirements leading to high levels of cash generation
- Clear strategy focused on organic growth supplemented by selective acquisitions in higher growth areas
- Continued development of increasingly sophisticated information-based analytics and decision tools
- Expansion into higher growth adjacencies and geographies primarily through organic investment augmented with selective acquisitions

Further details on our strategy and 2019 progress are on pages 4 and 5.

Principal risks related to our business model

- Challenges to the intellectual property rights of content embedded in our products and services
- Disruption or loss of data sources that our businesses rely on due to regulation or other reasons
- Changes to the paid subscription model for our primary research business within Scientific, Technical and Medical
- Technological failure of our electronic platforms and networks

- Failure of our cyber security measures resulting in unauthorised access to our systems and breach of data privacy

Detailed descriptions of all principal and emerging risks and mitigations are on pages 58–61

Assessing the Group's viability

The three-year strategy plan for our businesses includes management's assessment of the anticipated operational risks affecting the business and assumes that current economic conditions broadly persist, financing will be available on similar terms to those negotiated recently and interest rates will follow market expectations. Management then considers the viability of the business should unexpected events, linked to the principal and emerging risks, occur. To first make the assessment, the financial impact of each principal risk on revenue and cashflow is estimated. Owing to the diversified nature of the Group, no individual risk was estimated to have an impact necessary for a breach in the Group's \$3.0bn committed bank facility, broadly estimated at one third of total Group cashflow assuming no mitigating actions.

The assessment then considers various stress-test scenarios under which multiple risks occur simultaneously accompanied by an inability to access the debt capital markets to refinance scheduled liabilities as they become due, together with an increase in interest rates faster than currently expected. The resulting analysis, which assumes share buybacks and acquisition activity are suspended but dividends continue uninterrupted, then considers the impact on available headroom and whether any scenario results in breaching the covenant in the committed bank facility.

The worst-case stress case modelled a combination of the following risks: (a) the inability to use certain third-party data resources; (b) an adverse impact on revenue from a shift away from the paid subscription model; and (c) having our systems disrupted by a cyber security event. The analysis concluded that with the simultaneous occurrence of these three risks, no access to the debt capital markets and a rising interest rate environment, the Group would still have sufficient funds to trade, settle its liabilities as they come due and remain compliant with the covenant in its committed bank facility, whilst still paying dividends.

In addition to scenario modelling, the Directors bi-annually review the Group's principal risks, assess the likelihood and impact of each risk together with the effectiveness of mitigating controls, and consider emerging risks. The Directors also receive regular updates from management on treasury, tax, acquisitions and divestments, and significant risk areas including information security, technology and legal and regulatory matters. Finally, separate from the annual strategy plan, the Directors periodically receive updates from business area management on their operations, prospects and risks. Whilst these reviews and discussions naturally focus more closely on the quantifiable risks facing the business within the three-year planning period, they also cover longer-term risks.

As a result of stress-testing the three-year strategy plan, supported by regular reviews of risk during the year, the Directors confirm that they have a reasonable expectation that the Group will be able to continue its operations and meet its liabilities as they fall due over the next three years and are not aware of any longer-term operational or strategic risks that would result in a different outcome from the three-year review.

Report of the Nominations Committee

This report has been prepared by the Nominations Committee and has been approved by the Board.

Membership

The Committee comprises only Non-Executive Directors. The members of the Committee who served during the year were:

- Sir Anthony Habgood (Chair of the Committee)
- Wolfhart Hauser
- Adrian Hennah
- Marike van Lier Lels
- Robert Macleod (from 25 September 2019)

Responsibilities

The principal purpose of the Committee is to provide assistance to the Board by identifying individuals qualified to become Directors and recommending to the Board the appointment of such individuals.

The role and responsibilities of the Committee are set out in written Terms of Reference and are available on the company's website at  www.relx.com. These include:

- to keep under review the size and composition of the Board
- to ensure that plans are in place for orderly Board and Senior Management succession and to oversee a diverse pipeline for such succession
- to agree the specification for the recruitment of new Directors
- to procure the recruitment of new Directors
- to recommend to the Board the appointment of candidates as RELX PLC Directors
- to recommend Directors to serve on the Committees of the Board and to recommend members to serve as the Chair of those Committees
- to make recommendations to the Board in relation to the re-appointment of any Non-Executive Director at the conclusion of his/her specified term of office and the election or re-election of Directors by shareholders
- to review and make recommendations to the Board on the authorisation of Directors' conflicts of interest, including any terms to be imposed in relation to a Director's conflict of interest

Activities of the Committee

During the year, the Committee met four times and its main areas of focus were:

- the continued appointment of Sir Anthony Habgood as Chair, considering amongst other things, the Code provision related to the length of tenure for that role
- the re-appointments of Wolfhart Hauser and Robert MacLeod at the conclusion of their specified terms of office
- the impact on Board composition and balance, and Board Committee membership, of the retirements of Ben van der Veer and Carol Mills as Non-Executive Directors
- the appointment of Charlotte Hogg as an independent Non-Executive Director
- a review of the composition of the Audit and Nominations Committees resulting in the following changes: appointments of Andrew Sukawaty as a member of the Audit Committee and Robert MacLeod as a member of the Nominations Committee; and Marike van Lier Lels stepping down as a member of the Audit Committee in order to allow her sufficient time to focus on her responsibilities as Workforce Engagement Director
- a review of RELX's approach to inclusion and diversity, both at Board level and across the Group, including progress made against objectives, and of the updated Inclusion and Diversity Policy
- succession planning for Board and Senior Management roles
- ongoing review of Directors' actual and potential conflicts of interest and the recommendation to the Board of the suitability of Directors' external non-executive director appointments
- a review of the Committee's Terms of Reference which now reflect the increased remit of the Committee under the Code
- the continued independence of Adrian Hennah as a Non-Executive Director in advance of nine years of service in April 2020, and its possible impact on Board and Committee membership

Role of the Nominations Committee

The Nominations Committee is responsible for ensuring that the Board, its Committees and RELX's senior management have the correct balance of skills, knowledge and experience, to effectively lead the Group both now, and over the longer term. This is achieved through effective succession planning and talent development, and an understanding of the changing competencies required to support the Company's strategy, purpose, culture and values.

Board Changes

When reviewing Board composition, the Committee considers (amongst other things) overall length of service and the need for membership to be regularly refreshed. The Company has in place a formal, rigorous and transparent procedure for the appointment of new Directors. In advance of the retirement of Carol Mills from the Board with effect from the 2019 Annual General Meeting, the Committee started a search process. This involved the preparation of a specification and the engagement of the independent global search firm, Russell Reynolds Associates (which has no other connection to RELX), to identify and propose Non-Executive Director candidates based on that specification. During the process, all short-listed candidates were interviewed by a number of Board members, including the Chair and Chief Executive, and additionally the Chief Legal Officer and Company Secretary. The candidates were then considered in detail by the Committee, and a recommendation made to the Board regarding the appointment, which it then had a further chance to discuss and approve. Following the completion of this process, Andrew Sukawaty was appointed as an independent Non-Executive Director with effect from 25 April 2019. The Board is already benefiting from his considerable international experience in the technology sector, his significant and recent listed company experience with Inmarsat plc and Sky plc, and his understanding of the US business and governance environment. In addition, Charlotte Hogg was appointed as an independent Non-Executive Director with effect from 16 December 2019. She brings with her relevant strategic and operational experience gained from previous roles, a deep understanding of the financial services sector and exposure to working with big data technologies. These two appointments continued the progressive evolution of the RELX PLC Board. The experience and sector knowledge brought by the new Directors will ensure that new and diverse perspectives are brought to Board discussions, as well as the independence of thought and vision that new appointments to the Board generally bring.

Independence of the Non-Executive Directors

During 2019, the Committee considered the tenure and independence of existing Non-Executive Directors, and whether a Director's length of service had in any way impacted his or her ability to remain independent in character and judgement in performing his or her duties. The Board considers all of the Non-Executive Directors (other than the Chair whose independence was not assessed, but who was independent on appointment) to be independent of management and free from any business or other relationship which could materially interfere with their ability to exercise independent judgement.

The Committee agreed with Adrian Hennah that he would retire from the Board following the conclusion of the Company's 2020 Annual General Meeting, having served for nine years. During 2019, the Committee had carried out a robust assessment with regards to his ongoing independence and determined that: (i) he continued to make thoughtful and valuable contributions to the Board, (ii) he continued to constructively challenge management and other members of the Board as appropriate, and (iii) that none of the other factors weighing against his independence was present in terms of Adrian's relationship with the Company, its directors or shareholders. The Board therefore deemed that he remained independent and would likely do so past the completion of nine years of service as a Non-Executive Director.

Board succession planning

In accordance with its Terms of Reference, the remit of the Committee widened to include monitoring and reviewing succession planning for both Board and Senior Management positions within the Group. Succession planning for the Board was discussed in every Committee meeting in 2019, emphasising its importance and the Committee's focus on this area. It received a detailed presentation from the Chief Executive Officer on succession plans for Senior Management, including broad views on potential timings and implications for diversity in those positions. It satisfied itself that appropriate succession planning arrangements were in place for the orderly succession to both Board and Senior Management positions, supported by a diverse pipeline for such succession. Committee members have regular contact with succession candidates for Senior Management positions. The Board is also updated annually on succession planning and, during the year, it received a detailed presentation from the Chief Human Resources Officer on the first three tiers of management below the Chief Executive Officer.

Since the last Annual Report, the Committee has recommended the adoption of an updated Board Diversity Policy, which the Board subsequently approved. Its primary objectives are: to ensure that the Board's operating environment and procedure for new appointments respects individuals and their contributions regardless of any member's gender, ethnic origin, disability, age, sexual orientation or any other individual characteristic; and to ensure that there is at all times a diverse pipeline for succession at Board level. The policy stresses that the Board's composition should be designed to advance the Group's strategy for the benefit of all its stakeholders, and that the benefits of all aspects of diversity should be considered including, but not limited to, gender and ethnicity. The policy requires that when searches for an appointment to the Board are conducted by the Company or by external search firms, they will identify and present a gender-balanced list of diverse and qualified potential candidates. The Board Diversity Policy was applied and considered by the

Committee during the process of appointing Charlotte Hogg as a Non-Executive Director during the year. The wider results of the application of the policy can be found within the 'Balance of our Board' section set out on page 80.

Group succession planning

In order to assist in providing a diverse pipeline for succession across the rest of the Group, during the year the Committee undertook a review of the Group's approach to inclusion and diversity, its objectives and linkage to Company strategy, their implementation and the gender balance of those in Senior Management and their direct reports. Following the review, the Group Inclusion and Diversity Policy was updated to underpin and support the requirements in the Code that succession plans across the Group are based on merit and objective criteria, and promote diversity of gender, social and ethnic backgrounds, and cognitive and personal strengths. The primary objective of the Group Inclusion and Diversity Policy is to make RELX a place to work where our employees feel valued regardless of their gender, national origin, ethnicity, religion, sexual orientation or identity, age or disability status. It underpins our Group strategy, by ensuring the engagement of people from a wide range of backgrounds and experiences, to generate innovative ideas, products and solutions that drive significant value for our customers. Inclusion and diversity across our workforce is important to our future.

Our approach to inclusion and diversity is supported by the Group's activities in this area during the year. We have 70 ERGs (Employee Resource Groups) across the Group, each focusing on areas such as Gender Balance, Pride, Race, Culture and Ethnicity, Disability and Young Professionals. We have an inclusion and diversity governance framework whereby the ERGs interact with business leaders and HR leaders in the organisation with the objective of providing input into diversity and inclusion planning. RELX hosted its first Global ERG conference attended by 80 ERG leaders and representatives across all RELX businesses. The objective of this conference was to create meaningful connections among the ERG groups and encourage sharing of best practices, innovation and future ways of working to enhance further a culture of inclusion in the Group.

As at 12 February 2020, the Group's Senior Management team and its direct reports is comprised of 67% male and 33% female.

Chair Succession

Sir Anthony Habgood has decided that this is the year to retire from the RELX Board. The succession process is being led by the Senior Independent Director, Wolfhart Hauser, and overseen by the Nominations Committee. Sir Anthony joined RELX as Chair in June 2009, and both the Committee and the Board are deeply grateful to him for his leadership over a period of significant development and growth for the Company. During his tenure, the Group has systematically transitioned from print to electronic and face-to-face formats, and has been migrating its information solutions towards higher value-add decision tools, adding broader data sets, embedding more sophisticated analytics and leveraging more powerful technology. The Company has experienced strong and consistent financial performance alongside strong shareholder returns during his tenure. Under his leadership, the Company has continued to build on its strong ESG performance. RELX has been ranked second in 2019 in the S&P Global 1200 for ESG performance (by CSR HUB), and sixth in the new Responsibility 100 index of FTSE 100 companies measured against the United Nations sustainable development goals.

Whilst the Company has been non-compliant with provision 19 of the Code with respect to the Chair's tenure during the year, the Board believes that this approach has been in the best interest of the Company's stakeholders. As explained on page 84 of our 2018 Annual Report and Accounts, the Board felt that with RELX PLC becoming the sole parent of the Group, following the corporate simplification which completed in 2018, continuity of Board leadership under the current Chair was important for a period whilst the new single parent governance structure and processes were embedded.

Directors' Remuneration Report

The Directors' Remuneration Report (the Report) has been prepared by the Remuneration Committee (the Committee) in accordance with the UK Corporate Governance Code, the UK Listing Rules and Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008, as amended (the UK Regulations).

The Report was approved by the Board.

Introduction

The current remuneration policy was approved by shareholders at the 2017 Annual General Meetings (AGM) for three years and can be found at www.relx.com/go/remunerationpolicy or on pages 84 to 90 of the 2016 Annual Reports and Financial Statements. As a result, an updated remuneration policy is being proposed to shareholders for approval (by way of a binding vote) at the 2020 AGM, with the first awards under the new policy to be granted in the first quarter of 2021. The updated remuneration policy, which is proposed to apply for three years from the conclusion of the 2020 AGM, is set out on pages 90 to 96.

The implementation of the current remuneration policy during 2019 is described on pages 99 to 111 (the Annual Remuneration Report). Shareholders will be invited to vote (by way of a non-binding advisory vote) on the 2019 Annual Remuneration Report at the 2020 AGM.

Our report therefore has two parts, the first part starts immediately below and relates to the new proposed remuneration policy and the second part starts on page 97 and describes the implementation of the current remuneration policy in 2019.

Proposed new remuneration policy

The Committee reviewed the Directors' current remuneration policy during 2019. In doing so, it took into account the Company's desire to retain and attract top executive talent, promote the continued strong strategic and financial performance of the business and maintain executive alignment with long-term shareholder interests. The Committee considered feedback received from shareholders since the adoption of the current policy in 2017, as well as developments in UK corporate governance and trends in market practice. The Committee also reviewed the pay practices of the FTSE 30, reflective of the Company's position around the middle of this group and considered the fact that, as a global data analytics and technology-driven business with half of its revenue derived from the US market, the Group primarily competes for talent with global information and technology companies.

In 2019, the Committee undertook a review of workforce remuneration and related policies and the alignment of incentives and rewards with culture. Further detail is set out on page 98. The Committee took this into account when considering the proposed new remuneration policy for Executive Directors. The Committee was also mindful to ensure that the proposed new remuneration policy is transparent, easy to understand, consistent with the Company's purpose, values and strategy and provides an appropriate link to long-term performance.

Earlier this year, we consulted with shareholders (representing a total of c60% of our issued share capital) and shareholder representative bodies. I would like to express my gratitude for the feedback received, which confirmed our proposal to maintain the same overall incentive structure as previously and helped to shape the changes to the current policy which we have decided to propose. We had a high level of engagement and are pleased to report that virtually all investors who provided feedback indicated support for the proposed approach.

Aspects of the current policy which we are proposing to keep the same

Incentive structure: In our last remuneration policy review, we simplified our incentive structure by reducing the number of plans we operated to one Annual Incentive Plan (AIP) (with a share deferral element) and one Long Term Incentive Plan (LTIP). The Committee is comfortable with this simplified incentive structure and is therefore proposing to continue with it under the new policy.

Performance measures: The Committee proposes to use the same combination of financial performance measures for the incentive plans as these have supported consistent, predictable and strong financial performance by the business and significant value creation for shareholders over the last eight years. Our business strategy continues to be to grow the core business through organic investment and the build-out of new products, with bolt-on acquisitions where we are the natural owner, as well as portfolio rationalisation through selective divestments. The EPS, ROIC and TSR performance metrics for the LTIP align with, and support, our strategy by focussing on sustained earnings growth, return on invested capital and shareholder returns.

Discretion and recovery provisions: The Committee has discretion to vary the level of payout under the AIP and LTIP, taking into account RELX's overall business performance including environmental, social and governance matters and value created for shareholders over the period and other relevant factors. AIP and LTIP are also subject to malus and claw-back provisions in case of materially misstated financial or other data, serious misconduct and breach of post-termination restrictive covenants.

Proposed changes to the remuneration policy

Overall quantum: As a result of our plans to reduce the value of the pension benefits for Executive Directors, the overall compensation opportunity for Executive Directors will go down during the new policy period. It is proposed to maintain the overall quantum of the other components of pay at the same levels as under the current policy, therefore no changes are proposed to the policy on base salary and benefits or to the maximum awards under the AIP and the LTIP. The Committee believes that the overall level of remuneration is appropriate given comparisons to the FTSE 30 and taking into account the US market in which we compete for talent. The full range of performance outcomes applicable to each of the CEO and CFO have been set out in the performance scenario charts.

Pension alignment with the workforce: The Committee reviewed the existing pension policy for Executive Directors in light of the arrangements for the wider workforce and, as a result, is proposing a new pension policy which provides that newly appointed Executive Directors will receive pension benefits that are of no higher value than the level of pension benefits provided under the Company's regular defined contribution pension plans (currently capped at 11% of base salary in the UK). This is designed to ensure alignment of the maximum values of pension benefits for Executive Directors and the wider workforce. The existing Executive Directors will transition from their current arrangements over the period 2020 to 2022 and will be subject to this new appointment Executive Director pension policy and hence be aligned with the wider workforce after 31 December 2022.

In the case of the CEO, who is a member of a legacy UK defined benefit pension scheme, during this transition period he will pay significantly increasing Total Plan Fees (which include contributions and a participation fee) amounting to 25% of pensionable earnings in 2020, 30% of pensionable earnings in 2021 and 35% of pensionable earnings in 2022, and will then cease to accrue further benefits under this scheme at the end of 2022. The CFO currently receives a company contribution paid as cash in lieu of pension. This contribution is reduced to 20% of base salary for 2020 and will further decrease to 18% for 2021 and to 16% for 2022. After 31 December 2022, the existing Executive Directors will both be subject to the new appointment Executive Director pension policy (currently capped at 11% of base salary in the UK).

Annual Incentive Plan (AIP): It is proposed to formalise our current practice by increasing the minimum weighting of financial measures from 70% to 85% in our policy. Any non-financial measures will be focused on sustainability metrics thereby increasing their weighting compared with current practice.

The Committee also proposes to lower the AIP payout at target performance from 150% to 135% of base salary. The maximum remains at 200% of base salary. Given the Company's financial profile, value drivers and business model, the Committee does not believe it is appropriate to provide executives the opportunity to double their AIP payout from the target payout levels, and proposes to cap the AIP opportunity at approximately 50% above target payout. The Committee believes it sets stretching but achievable targets and while executives should be eligible to receive payouts above target for outperformance, the emphasis should be on long-term performance.

Consistent with our emphasis on long-term performance, the AIP currently operates on the basis of a one-third deferral into shares which are released after three years. The Committee is proposing to increase the deferral amount to 50% of the AIP earned, with effect from the 2021 AIP.

Shareholding requirements: In order to further strengthen the alignment of Executive Directors' interests to those of shareholders, the shareholding requirement for the CEO will be increased from 400% of salary to 450% of salary. The CFO's shareholding requirement will remain at 300% of salary.

It is proposed to adjust the current policy on post-termination shareholding requirements to make Executive Directors subject to their full shareholding requirement for two years after leaving the Company.

In line with evolving and accepted market practice, it is proposed that earned AIP deferred shares which are within their three-year deferral period will only count towards the shareholding requirement on a notional net of tax basis.

In summary, we believe that our remuneration policy has contributed to RELX's strong and consistent financial performance and significant value creation for shareholders over the past eight years, and that the proposed changes to pension, AIP and shareholding requirements reflect evolving shareholder preferences and current UK corporate governance principles.

Wolfhart Hauser

Chair, Remuneration Committee

Remuneration Policy Report

Set out in this section is the Company's proposed new remuneration policy for Directors, which, subject to approval by shareholders, will apply for three years from the conclusion of the RELX PLC AGM to be held on 23 April 2020. The key changes from the previous remuneration policy (which was first published on pages 84 to 90 of the 2016 Annual Reports and Financial Statements and was approved by shareholders at the April 2017 Annual General Meetings) and the rationale for the changes are explained in the Committee Chair's introduction on pages 88 and 89.

Remuneration policy table – Executive Directors

All footnotes to the policy table can be found on page 93.

ANNUAL BASE SALARY

Purpose and link to strategy

To recruit and retain the best executive talent globally to execute our strategic objectives at appropriate cost.

Operation

Salaries for Executive Directors are set and reviewed annually by the Remuneration Committee (the Committee) with changes typically taking effect on 1 January. In exceptional circumstances, the Committee may review salaries more frequently.

When reviewing salaries, the Committee considers the executive's role and sustained value to the Company in terms of skill, experience and overall contribution and the Company's guidelines for salaries for all employees for the year. Periodically, competitiveness with companies which are comparable in respect of industry, size, international scope and complexity is also considered in order to ensure the Company's ability to attract and retain executives.

For the last eight years, Executive Directors' salary increases have been 2.5% per annum.

Performance framework

N/A

Maximum value

Salary increases will continue to be aligned with the range of increases for the wider employee population and subject to annual all-employee guidelines. However, as for all employees, the Committee has discretion to exceed this to take account of individual circumstances such as change in responsibility, increases in scale or complexity of the business, inflation or alignment to market level.

Recovery of sums paid

No provision.

RETIREMENT BENEFITS

Purpose and link to strategy

Retirement plans are part of remuneration packages designed to recruit and retain the best executive talent at appropriate cost.

Operation

Policy for new appointments

Executive Directors appointed after the effective date of this policy will receive pension benefits up to the value equivalent to the maximum level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time (currently capped at 11% of base salary in the UK). The defined contribution pension plans are designed to be competitive and sustainable long-term. Any amount payable may be paid wholly or partly as cash in lieu and may be subject to tax and social security deductions in various jurisdictions.

Transition arrangements for existing Executive Directors

The existing directors will transition from their current arrangements to the above new appointment policy by the end of 2022.

The CFO currently receives a company contribution paid as cash in lieu of pension. The CFO's company contribution decreased by five percentage points to 20% of base salary from January 2020 and further decreases to 18% from January 2021, to 16% from January 2022 and from the end of 2022, he will be subject to the above new appointment policy (currently capped at 11% of base salary in the UK).

The CEO is a member of a UK legacy defined benefit pension scheme, accruing 1/30th of final year pensionable earnings for each year (pro-rated for part years) of service, with a normal retirement age of 60. In line with all UK defined benefit scheme members, the CEO's contributions to the plan and fees he pays to participate in the plan (together the 'Total Plan Fees') have been increasing annually since 2011. However, the CEO now pays a higher percentage of pensionable earnings as Total Plan Fees in each calendar year than other legacy members. In 2019, his Total Plan Fees were 20% of pensionable earnings, up from 12.5% in 2018. His total Plan Fees are 25% in 2020 and increase to 30% in 2021 and to 35% in 2022. A cap applies of 2% per annum on the increase in the CEO's pensionable earnings (in place since 2017). Like all other members of the legacy defined benefit pension scheme, the CEO is allowed to switch to the defined contribution plan at any time. At the end of 2022, the CEO will cease to accrue any further benefits under the legacy defined benefit pension scheme. After 31 December 2022, he will be subject to the above new appointment policy (currently capped at 11% of base salary in the UK).

Performance framework

N/A

RETIREMENT BENEFITS CONTINUED**Maximum value****Policy**

For Executive Directors hired or promoted to the Board after the effective date of this policy, the maximum value is equivalent to the maximum level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time (currently capped at 11% of base salary in the UK).

Transition arrangements for existing Executive Directors

For the current CFO, until 31 December 2022, the maximum values applicable are in accordance with the annual reductions in the company contribution as detailed above under 'Operation'. After 31 December 2022, he will be subject to the pension policy and maximum value described above for new appointments.

For the current CEO, the maximum value under the legacy defined benefit scheme is an accrual of 1/30th of final year pensionable earnings for every year of service until 31 December 2022, minus his applicable annual Total Plan Fees paid whilst accruing the benefit. As noted above under 'Operation', the CEO is subject to increases in the Total Plan Fees which he pays annually as part of his ongoing membership of this scheme until 31 December 2022, after which he will be subject to the pension policy and maximum value described above for new appointments.

Recovery of sums paid

No provision.

OTHER BENEFITS**Purpose and link to strategy**

To provide competitive benefits at appropriate cost.

Operation

Other benefits, subject to periodic review, may include private medical and dental cover, life assurance, tax return preparation costs, car benefits, directors' and officers' liability insurance, relocation benefits and expatriate allowances and other benefits available to employees generally, including, where appropriate, the tax on such benefits.

Performance framework

N/A

Maximum value

The maximum for ongoing benefits for Executive Directors will not normally exceed 10% of salary (excluding any one-off items, such as immigration support or relocation benefits, and any tax related charge on benefits which is met by the Company). However, the Committee may provide reasonable benefits beyond this amount in exceptional situations, such as a change in the individual's circumstances caused by the Company, or if there is a significant increase in the cost of providing the agreed benefit.

ANNUAL INCENTIVE PLAN (AIP)**Purpose and link to strategy**

The annual incentive provides focus on the delivery of annual financial targets and the achievement of annual objectives and milestones which are chosen to align with the Company's strategy and create a platform for sustainable future performance. The compulsory deferral of 50% of any annual incentive earned into RELX shares for three years promotes longer-term alignment of Executive Directors' interests with shareholders' interests, including an element of post-termination shareholding.

Why performance measures are chosen and how targets are set

Performance measures include a balanced set of financial measures which are appropriately weighted and which support current strategy and incentivise the Executive Directors to achieve the desired outcomes without undue risk of focusing on any one financial measure. The financial targets are designed to be challenging and are set with reference to the previous year's performance and internal and external forecasts for the following year.

Performance measures may also include non-financial measures, for example linked to sustainability.

Operation

The Committee reviews and sets the financial targets and, if applicable, non-financial targets, annually, taking into account internal forecasts and strategic plans. Following year end, the Committee compares actual performance with the financial targets and assesses the achievement of any non-financial targets. The targets and outcomes are fully disclosed in the Remuneration Report published after year end.

50% of any annual incentive earned is paid in cash to the Executive Director and the remaining 50% is deferred into RELX shares, which are released to the Executive Director after three years. Dividend equivalents accrued during the deferral period are payable in respect of the shares. On a change in control, the default position is that deferred shares are released to the Executive Director. Alternatively, the Committee may determine that deferred shares will instead be exchanged for equivalent share awards in the acquiring company.

AIP CONTINUED**Performance framework**

The AIP includes financial measures with a weighting of at least 85% and may also include non-financial measures with a weighting of up to 15%. Each measure is assessed separately.

- The minimum payout is zero.
- Each measure is assessed independently and payout for each measure at threshold is 10% of the maximum opportunity for that measure. If the financial measures have a weighting of 100% and threshold is reached for each of the financial measures, the overall payout for the financial measures is 13.5% of salary. If the financial measures have a weighting of 85% and threshold is reached for each of the financial measures, the overall payout for the financial measures is 11.5% of salary.
- Payout for target performance is 135% of salary.

Following an assessment of financial achievement, and scoring of any non-financial measures, the Committee agrees the overall level of earned incentive for each Executive Director.

Committee discretion applies.^{1,2,3}

Maximum value

The maximum potential annual incentive is 200% of annual base salary. This includes the deferred share element but excludes dividend equivalents payable in respect of the deferred shares.

Recovery of sums paid

Claw-back applies.⁴

LONG TERM INCENTIVE PLAN (LTIP)**Purpose and link to strategy**

The Long-Term Incentive Plan (LTIP) is designed to provide a long-term incentive for Executive Directors to achieve the key performance measures that support the Company's strategy, and to align their interests with shareholders.

Why performance measures are chosen and how targets are set

Our strategic focus is on continuing to transform the core business through organic investment and the build-out of new products into adjacent markets and geographies, supplemented by selective portfolio acquisitions and divestments. The performance measures in the LTIP are chosen to support this strategy by focusing on sustained earnings growth, return on invested capital and shareholder return.

Targets are set with regard to previous results and internal and external forecasts for the performance period and the strategic plan for the business. They are designed to provide exceptional reward for exceptional performance, whilst allowing a reasonable expectation that reward at the lower end of the scale is attainable, subject to robust performance.

Operation

Annual awards of performance shares, with vesting subject to:

- performance measured over three financial years
- continued employment (subject to the provisions set out in the Policy on payments for loss of office section)
- meeting shareholding requirements (450% of salary for the CEO and 300% of salary for the CFO)

Executive Directors are to retain their net (after tax) vested shares for a holding period of two years after vesting.

Dividend equivalents accrued during the performance period are payable in respect of the performance shares that vest.

On a change of control, the default position is that awards vest on a pro-rated basis, subject to an assessment of performance against targets at that time. Alternatively, the Committee may determine that the awards will not vest and will instead be exchanged for equivalent awards in the acquiring company.

Performance framework

The performance measures are EPS, ROIC and relative TSR, weighted 40%:40%:20% respectively and assessed independently, such that a payout can be received under any one of the measures (or, for TSR, in respect of one of the three comparator groups).

- The minimum payout is zero.
- Each measure is assessed independently and payout for each measure at threshold is 25% of the maximum opportunity for that measure. If only one measure vests at threshold, and it has a weighting of 40%, then the overall payout would be 10% of the maximum award. If only one measure with a weighting of 20% vests at threshold, the overall payout would be 5% of the maximum award.
- Payout in line with expectations is 50% of the maximum award.

Dividend equivalents are not taken into account in the above payout levels.

Committee discretion applies.^{1,2,3}

Maximum value

The maximum grant in any year is up to 450% of base salary for the CEO and up to 375% of base salary for other Executive Directors (not including dividend equivalents).

Recovery of sums paid

Claw-back applies.⁴

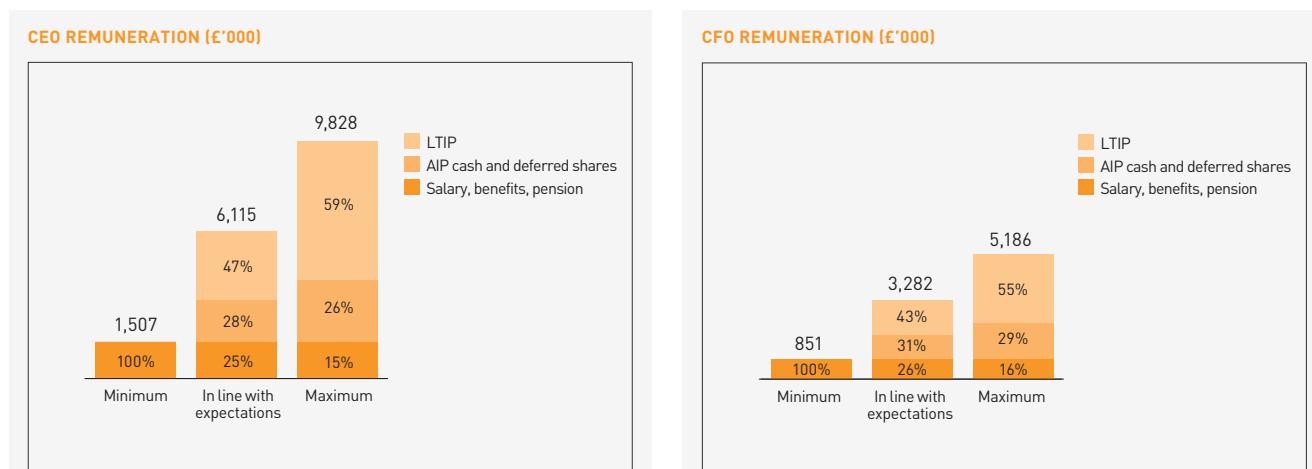
Notes to the Remuneration policy table

- (1) **Discretion in respect of AIP and LTIP payout levels:** In determining the level of payout under the AIP and vesting under the LTIP, the Committee takes into account RELX's overall business performance and value created for shareholders over the period in review and other relevant factors. It has discretion to adjust the vesting and payout levels (subject always to the maximum individual limits) if it believes this would result in a fairer outcome. This discretion will only be used in exceptional circumstances and the Committee will explain in the next Remuneration Report the extent to which it has been exercised and the reasons for doing so.
- (2) **Discretion to vary performance measures under the AIP and the LTIP:** The Committee may vary the financial measures applying to a current annual incentive year and performance measures for LTIP awards already granted if a change in circumstances leads it to believe that the arrangement is no longer a fair measure of performance. Any new measures will not be materially less, or more, challenging than the original ones.
- (3) **Discretion on termination of employment under the AIP and the LTIP:** The Committee's discretion on termination of employment is described under the 'Policy on payments for loss of office' section on page 95.
- (4) **Malus and claw-back under the AIP and the LTIP:** Under the AIP and the LTIP, the Committee has discretion to apply malus and claw-back (i) if the payout (including the AIP deferred shares element) was calculated on the basis of materially misstated financial or other data, in which case it can withhold a payout and can seek to recover the difference in value between the incorrect payout and the amount that would have been paid had the correct data been used or (ii) if there has been serious misconduct on the part of the individual, in which case the Committee may withhold an AIP payout, lapse unvested LTIP awards and may require repayment of AIP and LTIP gains arising during a specified period. Under the LTIP, the Committee also has discretion to apply malus and claw-back if a participant breaches post-termination restrictive covenants, in which case unvested awards would lapse and the Committee may require repayment of gains arising during the period beginning six months before termination and ending on the date the post-termination restrictive covenants are stated to expire.
- (5) **Explanation of differences between the Company's policy on Executive Directors' remuneration and the policy for other employees:**

Incentives: A larger percentage of Executive Directors' remuneration is performance related than that of other employees. All managers participate in an annual incentive plan, but participation levels, measures and targets vary according to their role, seniority and local business priorities. Approximately 100 senior executives currently participate in the LTIP and about 1,000 participate in the Executive Share Option Scheme (ESOS). Grant levels under the plans vary according to role and seniority. In considering the remuneration policy for Executive Directors, under which the Executive Directors only participate in the AIP and the LTIP, the Committee considered the incentive plan participation for the wider senior management population. **Other benefits:** The range and level of retirement and other benefits provided to employees may vary according to local market practice, role and seniority. This is to ensure that we provide competitive packages which are appropriate to specific roles. However, as noted above in the pension section of the policy table, the proposed policy on Executive Directors' pension arrangements results in alignment of the maximum values of pension benefits for newly appointed Executive Directors and the wider workforce following shareholder approval of the remuneration policy and for existing Executive Directors by the end of 2022.
- (6) **Changes to pay components:** The changes which were made since the previous remuneration policy, together with the rationale for the changes, are described in the Committee Chair's introduction on pages 88 and 89.

Remuneration outcomes in different performance scenarios

The Committee considers the level of remuneration that may be paid in the context of the performance delivered and value added for shareholders. The charts below are an illustration of how the CEO's and CFO's regular annual remuneration could vary under different performance scenarios. The salary, benefits and pension levels are the same in all three scenarios in each chart. Salary is based on 2020 salary. Benefits is based on the 2019 Single Total Figure table. Pension, annual incentive and LTIP are all based on full implementation of all aspects of the policy table's award levels and percentages (including 11% pension), applied to the 2020 salary. Annual incentive amounts include the portion which is subject to compulsory deferral into RELX shares for three years. The performance assumptions which have been used are as follows: Minimum means no AIP payout and no LTIP vesting. In line with expectations means AIP payout at 135% of salary (of which a portion is deferred into shares) and LTIP vesting at 50% of the award. Maximum means AIP payout at 200% of salary (of which a portion is deferred into shares) and LTIP vesting at 100% of the award. The three bars in each chart assume no share price movement. As required by the UK Regulations, assuming maximum performance achievement (as described above) and 50% share price growth over the performance period, the CEO's maximum remuneration would increase to £12.7m and the CFO's maximum remuneration to £6.6m. Any dividend equivalents payable in respect of the AIP deferred shares and the LTIP are not included.



Approach to recruitment remuneration – Executive Directors

When agreeing the components of a remuneration package on the appointment of a new Executive Director, or an internal promotion to the Board, the Committee would seek to align the package with the remuneration policy stated in the policy table.

The Committee's general principle on recruitment is to offer a competitive remuneration package to attract high-calibre candidates from a global talent pool. Basic salary would be set at an appropriate level for the candidate, taking into account all relevant factors. As a data analytics and technology-driven business, with half of its revenue in the US, the Company primarily competes for talent with global information and technology companies.

The various components and the Company's approach are as follows:

Standard package on recruitment*

To offer remuneration in line with the policy table (including the limits), taking into account the principles set out above.

Compensation for forfeited entitlements

The Committee may make awards and payments on hiring an external candidate to compensate him or her for entitlements forfeited on leaving the previous employer. If such a decision is made, the Committee will attempt to reflect previous entitlements as closely as possible using a variety of tools, including cash and share based awards. Malus and claw-back provisions will apply where appropriate. If necessary to facilitate the grant of awards, the Committee may rely on the one person exemption from shareholder approval in the UK Listing Rules.

Relocation allowances and expenses

The type and size of relocation allowances and expenses will be determined by the specific circumstances of the new recruit.

* The standard package comprises annual base salary, retirement benefits, other benefits, AIP and LTIP.

Shareholding requirement

The Executive Directors are subject to shareholding requirements. These are a minimum of 450% of annual base salary for the CEO and 300% of annual base salary for other Executive Directors. On joining or promotion to the Board, Executive Directors are given a period of time, typically up to five years, to build up to their requirement. On termination of employment, Executive Directors are to maintain their full shareholding requirement (or, if lower, their actual level of shareholding at the time of leaving) for two years after leaving employment.

Shares which count for shareholding purposes are shares beneficially owned by the Executive Director, their spouse, civil partner or dependent child and AIP deferred shares which are within their three-year deferral period, on a notional net of tax basis.

Policy on payments for loss of office

In line with the Company's policy, the service contracts of the existing Executive Directors contain 12-month notice periods.

The circumstances in which an Executive Director's employment is terminated will affect the Committee's determination of any payment for loss of office, but it expects to apply the principles outlined in the table on the next page. The Committee reserves the right to depart from these principles where appropriate in light of any taxation requirements to which the Company or the Executive Director is subject (including, without limitation, section 409A of the US Internal Revenue Code), or other legal obligations.

Policy on payments for loss of office (continued)

GENERAL ¹	INCENTIVES
Mutually agreed termination/termination by the Company other than for cause²	
(includes retirement with customary notice)	
The Executive Director would be entitled to salary, benefits and other contractual payments in the normal way up to the termination date and would be paid for any accrued but untaken holiday.	<i>Annual incentive:</i> Any unpaid annual incentive for the previous year and a pro-rata payment in respect of the part of the financial year up to the termination date would generally be payable (subject to the deferral provisions), with the amount being determined by reference to the original performance criteria. However, the Committee has discretion to decide otherwise depending on the reason for termination and other specific circumstances.
<i>Salary:</i> Payment of up to 12 months' salary to reflect the notice period or payment in lieu of notice.	The Company would not pay any annual incentive in respect of any part of the financial year following the termination date (e.g. for any unworked period of notice). AIP deferred shares would be released to the Executive Directors in full at the end of the deferral period. The annual incentive claw-back provisions would apply.
<i>Other benefits:</i> Where possible, benefits would be continued for up to the duration of any unworked period of notice (not exceeding the maximum stated in the policy table) or the Executive Director would receive a cash payment (not exceeding the cost to the Company of providing those benefits).	<i>LTIP:</i> The default position is that unvested LTIP awards would be pro-rated to reflect time employed and would vest subject to performance measured at the end of the relevant performance period and subject to the Executive Director continuing to meet his full shareholding requirement for two years after the termination date. The Committee has discretion to allow unvested LTIP awards to vest earlier and to adjust the application of time pro-rating and performance conditions, subject to the plan rules. The requirement to retain net (after tax) vested LTIP shares for a holding period of two years after vesting ceases to apply on termination of employment.
<i>Pension:</i> Deferred or immediate pension in accordance with scheme rules, with a credit in respect of, or payment for up to, the full period of any unworked period of notice. There is provision under the defined benefit pension scheme for members leaving Company service by reason of permanent incapacity to make an application to the scheme trustee for early payment of their pension.	
<i>Other:</i> The Company may pay compensation in respect of any statutory employment rights and may make other appropriate and customary payments.	
The Company would have due regard to principles of mitigation of loss. Reductions would be applied to reflect any portion of the notice period that is worked and/or spent on gardening leave.	
On injury, disability, ill-health or death, the Committee reserves the right to vary the treatment outlined in this section.	
Employee instigated resignation	
The Executive Director would not receive any payments for loss of office. The Executive Director would be entitled to salary, benefits and other contractual payments in the normal way up to the termination date and would be paid for any accrued but untaken holiday.	<i>Annual incentive:</i> The Executive Director would be entitled to receive an annual incentive for a completed previous year (subject to the deferral provisions), but not a pro-rated annual incentive in respect of a part year up to the termination date, unless the Committee decides otherwise in the specific circumstances. Any AIP deferred shares would be released to the Executive Director in full at the end of the deferral period. Annual incentive claw-back provisions would apply.
<i>Pension:</i> A deferred or immediate pension would be payable in accordance with the scheme rules.	<i>LTIP:</i> All outstanding LTIP awards would lapse on the date of notice.
Dismissal for cause	
The Executive Director would be entitled to salary, benefits and other contractual payments in the normal way up to the termination date and would be paid for any accrued but untaken holiday but would not receive any payments for loss of office.	<i>Annual incentive:</i> The Executive Director would not receive any unpaid annual incentive. Any AIP deferred shares lapse on the date of dismissal.
<i>Pension:</i> A deferred or immediate pension would be payable in accordance with the scheme rules.	<i>LTIP:</i> All outstanding LTIP awards would lapse on the date of dismissal.

- (1) In addition to what is set out in this section, on termination for any reason, Erik Engstrom will be entitled to payment of amounts held in his 'Retirement Account'. Before he joined the Company's UK defined benefit scheme, he was not a member of any company pension scheme and RELX made annual contributions of 19.5% of base salary to a deferred compensation plan. Contributions to this Retirement Account ceased when he became a member of the UK defined benefit arrangement.
- (2) In cases where the approved leaver treatment applies, the AIP and LTIP have a default position as well as giving the Committee discretion to adjust the default treatment within certain parameters. The Committee would only expect to exercise such discretion where the Committee believes the personal circumstances of the Executive Director so require.

Remuneration policy table – Non-Executive Directors

FEES

Purpose and link to strategy

To enable RELX to recruit Non-Executive Directors with the right balance of personal skills and experience to make a major contribution to the Board and Committees of a global business which is listed in London, Amsterdam and New York.

Operation

RELX Chair: Receives an aggregate annual fee with no additional fees, for example, Committee Chair fees. The Committee determines the Chair's fee on the advice of the Senior Independent Director.

Other Non-Executive Directors: Receive an annual fee with additional fees payable as appropriate for specific roles and duties. These additional fees include fees for the Senior Independent Director and Committee Chairs, for membership of Board Committees, as well as a workforce engagement fee and international travel fees. In future, other fees may be payable, for example attendance fees. The Board determines the level of fees, subject to applicable law.

Fees may be reviewed annually, although in practice they have changed on a less frequent basis. When reviewing fees, consideration is given to the time commitment required, the complexity of the role and the calibre of the individual. Periodically, comparative market data is also reviewed, the primary source for which is the practice of FTSE 30 companies, with reference also to the Euronext Amsterdam (AEX) index and US-listed companies.

Maximum value

The aggregate annual fee limit for fees paid to the Chair and the Non-Executive Directors is £2m. Additional fees for membership of or chairing Board Committees and assuming additional responsibilities such as acting as Senior Independent Director, are not subject to this maximum limit.

OTHER BENEFITS

Purpose and link to strategy

To provide competitive benefits at appropriate cost.

Operation

Other benefits for Non-Executive Directors are reviewed periodically and may include private medical cover, tax return preparation costs, secretarial benefits, car benefits, travel and related subsistence costs, including, where appropriate, the tax on such benefits.

Maximum value

There is no prescribed maximum amount.

Approach to recruitment remuneration –

Non-Executive Directors

Following recruitment, a new Non-Executive Director will be entitled to fees and other benefits in accordance with the Company's remuneration policy. No additional remuneration is paid on recruitment. However, any reasonable expenses incurred during the recruitment process will be reimbursed.

Policy on payments for loss of office – Non-Executive Directors

In addition to unpaid accrued fees, the Non-Executive Directors are entitled to receive one month's fees for loss of office if their appointment is terminated before the end of its term.

Service contracts and letters of appointment

There are no further obligations in the Directors' service contracts and letters of appointment which are not otherwise disclosed in this Report which could give rise to a remuneration payment or loss of office payment. All Directors' service contracts and letters of appointment are available for inspection at the Company's registered office. The Executive Directors' service contracts do not have a fixed expiry date.

Consideration of employment conditions elsewhere in the Company

When the Committee reviews the Executive Directors' salaries annually, it takes into account the Company's guidelines for salaries for all employees in the Company's major operating locations for the forthcoming year. The Committee also considers market practice in the FTSE 30 as well as pay practices of other global information and technology companies when determining the quantum and structure of Directors' pay.

Since 2019, the Committee annually reviews various aspects of workforce remuneration and related policies in order to deepen its understanding of pay structures throughout the organisation.

Also since 2019, our designated non-executive director responsible for workforce engagement meets with employees representing our global employee population in order to understand a wide-range of employee views on a variety of topics. The feedback is reported back to the Board at least once per year and forms part of the Board's discussions and decision making. As part of this process, the non-executive director responsible for workforce engagement explains how executive remuneration aligns with wider pay policy.

Consideration of shareholder views

Our practice is to consult shareholders and consider their views when formulating, or changing, our policy. The Committee consulted extensively with shareholders (representing c60% of the Company's issued share capital) and shareholder representative bodies on the proposed new remuneration policy. We were grateful for the constructive feedback, which was taken into account in our final proposals.

Previous remuneration policy and prior commitments

Any payments which are still to be made under arrangements made and awards granted under previous remuneration policies (which are included in the 2013 and 2016 Annual Reports and Financial Statements) will be made consistent with the applicable policy. The provisions of the previous policies which relate to arrangements and awards granted under those previous policies will therefore continue to apply until all payments in relation to those arrangements and awards have been made. The Committee also reserves the right to make any remuneration or loss of office payments if the terms were agreed prior to the approval of the 2013 or 2016 policy or prior to an individual being appointed as a Director.

Minor amendments

The Committee may make minor amendments for regulatory, tax or administrative purpose.

Foreword to the Annual Remuneration Report

The Annual Remuneration Report reflects the 2019 annual incentives earned and the vesting outcomes for multi-year incentives granted under the remuneration policy applicable to the 2017–2019 cycle of the multi-year plans.

As you will have read in the Annual Report, the Company's strategic priority is the organic development of increasingly sophisticated information-based analytics and decision tools that deliver enhanced value to customers. During 2019, RELX continued to successfully execute this strategy, which is aimed at achieving more predictable revenues, a higher growth profile and improving returns. Underlying revenue growth was 4%, underlying adjusted operating profit growth was 5% and adjusted earnings per share (EPS at constant currencies) grew 7%. We also continued to build on our strong ESG performance during the year, and this was again recognised by the positive ratings given to us by a number of external agencies. In 2019 RELX was ranked second in the S&P Global 1200 for ESG performance based on CSRHub data, and sixth in the newly launched Responsibility 100 index of FTSE 100 companies measured against the United Nations 17 Sustainable Development Goals (SDGs). In 2019 RELX also retained its AAA ESG rating with MSCI for the fourth consecutive year, and in January 2020 a Sustainalytics ESG report put RELX in the top one percent of over twelve thousand companies covered.

The performance measures in the incentive plans align with and support the strategy by focussing on sustained earnings growth, return on invested capital and shareholder returns. The performance measures are based on adjusted figures as they provide relevant information in assessing the Company's performance, position and cash flows and we believe they track the core operational performance of RELX and how it contributes to shareholder value creation. The Annual Report includes a reconciliation of adjusted measures to IFRS measures. The Committee also considers environmental, social and governance performance when determining variable pay outcomes.

2019 Outcomes

The strong financial performance of the business is reflected in the 2019 annual incentive achievement for Executive Directors of slightly ahead of the target level. Two-thirds of the amount earned will be paid in cash to the Executive Directors in March 2020 and the remaining one-third is deferred into RELX shares which will be released in Q1 2023.

The continued strong long-term performance of the Company is reflected in the vesting of the 2017–2019 cycles of the multi-year plans. The 2017–2019 cycle of the Long-Term Incentive Plan (LTIP) vested at 71%. The discontinued Bonus Investment Plan (BIP) and the Executive Share Option Scheme (ESOS), which is the last cycle of these plans, vested at 89% and 88% respectively. These outcomes reflect strong returns and earnings growth achieved by the business and how the challenging targets set by the Committee have been perceived by the market. In determining the level of payout under the annual incentive and the multi-year incentives, the Committee took into account RELX's overall business performance and value created for shareholders over the period in review and other relevant factors and concluded that the reward outcomes were proportionate in light of the Company's performance and had operated as intended in terms of quantum. As a result, the Committee did not exercise any discretion to adjust the 2019 reward outcomes.

The Committee is also satisfied that the overall remuneration for Executive Directors is appropriate and fair based on comparisons to the FTSE 30, reflective of the Company's position in the middle of this group and taking into account that the Company primarily competes for talent with global information and technology companies. The Committee also considered senior executive pay levels and wider workforce remuneration across RELX, as well as CEO to UK employee pay ratios.

Updated Corporate Governance Code

Following publication by the Financial Reporting Council (FRC) of the updated Corporate Governance Code in July 2018, the Committee reviewed a number of areas and implemented several changes during 2019. The Committee also monitored investor guidance and evolving best practice. A summary of areas reviewed and changes made is set out below:

- The Committee's remit was expanded to include setting pay for senior management, i.e. the CEO's direct reports.
- The Committee's Terms of Reference were updated to reflect the new requirement that an appointee should have served on a remuneration committee for at least 12 months before appointment as chair of the Committee.
- The Committee reviewed its policy on post-termination shareholding requirements for Executive directors, and has proposed an update as part of the new Directors' remuneration policy being put to shareholders for approval in April 2020. Further information is set out on page 94.
- The value of pension benefits for current Executive Directors has decreased over the last several years, prior to the new UK Corporate Governance Code coming into force. As part of the proposed new remuneration policy, the Committee is proposing a revised pension policy for newly appointed Executive Directors which is aligned to the general workforce. Transition arrangements for existing Executive Directors have been put in place so that the value of their pension benefits will be aligned with the regular defined contribution plans (currently capped at 11% in the UK) by the end of 2022. Further information is set out on page 104.
- In addition to disclosing the target amount for each of the 2019 AIP financial measures, we have provided the actual threshold and maximum amounts in the 2019 AIP table to further improve the clarity and simplicity of our disclosures.

Broader employee reward

The Committee has previously reviewed certain aspects of wider-workforce remuneration (such as annual salary increase guidelines globally and executive share plan participation). In 2019 the Committee undertook a more wide-ranging review to increase its understanding of broader employee reward so that it can consider this to an even greater extent when making decisions about Executive Directors' pay.

The Committee reviewed the RELX global reward philosophy, which aims to support the Company's ability to attract, motivate and retain high performing employees. The Company's reward principles are underpinned by external equity, internal equity and pay for performance and we aim to pay around the median of the relevant local operating market for base salary and benefits with opportunity towards the upper quartile for sustained superior performance. The Committee also considered and reviewed the following aspects of workforce remuneration and related policies:

- key statistics on the composition of the RELX workforce such as location, gender, age and length of service;
- pay philosophy and the evolution of our pay practices, including pay equity processes;
- details of the pension plan arrangements in our top five countries by number of employees;
- a summary of our main benefits policies globally;
- participation data on annual incentives (sales and non-sales), including gender splits;
- participation data related to the executive share plans and local 'all-employee' share plans;
- Employee Opinion Survey responses on reward related questions.

The Committee took into account its review of workforce remuneration when designing the proposed new remuneration policy for Executive Directors. The Committee will continue to review workforce remuneration as a regular agenda item each year.

The Committee also considered the alignment of incentives and rewards with culture and is satisfied that the incentive schemes drive the desired behaviours to support the Company's purpose, values and strategy.

Our designated non-executive director responsible for workforce engagement, Marike van Lier Lels, met with employee representatives from Europe, US and Asia Pacific during 2019 in order to understand a wide-range of employee views. She reported back to the Board and the feedback and insights gathered formed part of the Board's discussions and decision making. Further information on the workforce engagement process is provided in the Governance section on page 76. As part of this process, Ms van Lier Lels explained how executive remuneration aligned with wider pay policy.

As required under the Companies (Miscellaneous Reporting) Regulations 2018, we have included in the annual remuneration report ratios of the CEO's 2019 single total figure of remuneration to the median, the 25th percentile and the 75th percentile UK employees ranked by total remuneration using prescribed methodology A (see page 109).

2020 Implementation of Remuneration Policy

In line with increases for the wider employee population, and consistent with the 2020 salary increase guidelines for UK-based employees, the Committee has approved 2020 salary increases for the Executive Directors of 2.5%. After taking into account the increasing pension Total Plan Fees, which the CEO pays as part of his ongoing membership of the legacy defined benefit pension plan, his 2020 salary after these increasing fees will decrease again in 2020 compared to 2019.

The Board conducted its biennial review of Non-Executive Directors' fees at the end of 2019 and considered, among other things, relevant market data for the FTSE 30 in making its adjustments. The fees for 2020 are set out on page 103.

The audited sections of the Report are clearly marked.

Wolfhart Hauser

Chair, Remuneration Committee

Annual Remuneration Report

Single Total Figure of Remuneration – Executive Directors (audited)

	(a)	(b)	(c)			(d)	(e)	(f)
£'000	Salary	Benefits ⁽¹⁾	Cash	Deferred Shares ⁽²⁾	Share based awards ⁽³⁾	Pension ⁽⁴⁾	Total	
Erik Engstrom	2019	1,249	86	1,276	638	4,894	539	8,681
	2018	1,218	85	1,269	635	5,388	545	9,141
Nick Luff	2019	735	15	749	375	2,449	186	4,510
	2018	717	14	753	376	2,697	196	4,754

- (1) Benefits are typically comprised of a car allowance, private medical/dental insurance and the cost of tax return preparation.
- (2) One-third of the 2018 and 2019 AIP is paid in shares deferred for three years. Dividend equivalents accrue on these shares.
- (3) The 2019 figures reflect the vesting of the 2017–2019 cycle of BIP, LTIP and ESOS. As the BIP, LTIP and ESOS vest after the approval date of this Report, the average share prices and exchange rates for the last quarter of 2019 have been used to arrive at an estimated figure in respect of these awards, in line with the methodology prescribed by the Regulations.

The estimated figures for 2018 disclosed in last year's Report have been restated to reflect the actual amount vested and the actual share prices and exchange rates, which increased the 2018 disclosed figure by £726k for the CEO and by £356k for the CFO. The vesting percentages were determined on 22 February 2019 and were in line with those disclosed on pages 90 and 91 of the 2018 Remuneration Report.

For Erik Engstrom, the amount that directly reflects share price appreciation is £2.2m for 2018 and £1.5m for 2019 (of which £0.6m relates to the LTIP, £0.3m relates to the BIP and £0.7m relates to the ESOS). For Nick Luff, these numbers are £1.1m for 2018 and £0.7m for 2019 (of which £0.3m relates to the LTIP, £0.2m relates to the BIP and £0.3m relates to the ESOS). The figures add up to different amounts than the totals due to rounding. The slight differences to the numbers in the table are also solely due to rounding. The awards are due to vest in February 2020 and the 2019 figures will be restated in next year's report to reflect actual values at vesting.

No discretion was applied by the Remuneration Committee in determining the vesting outcome percentages.

- (4) The pension figure for Erik Engstrom reflects his current membership of the UK legacy defined benefit pension scheme and has been calculated in accordance with the prescribed methodology set out in the Regulations. This figure does not represent a contribution by the Company. In 2019, the Company contributed £53,297 to the funded portion of his defined benefit pension plan. The remainder of his accrued pension is an unfunded liability of the Company.

In 2019, the CEO contributed a total of £246,353 (20% of his pensionable earnings) by way of Total Plan Fees, up from £151,306 (12.5% of pensionable earnings) in 2018. The pension figures for 2019 and 2018 in the table are reduced by these Total Plan Fees. For details of Mr Engstrom's accrued pension as at 31 December 2019, and further information on his pension reduction in 2020 and the coming years, see page 104.

Nick Luff receives a cash allowance in lieu of pension which reduced from 27% of salary to 25% of salary effective 1 March 2019. For details on the reduction of the CFO's allowance in 2020 and the coming years, see page 104.

The total remuneration for Directors is set out in note 26 to the consolidated financial statements on page 168.

2019 Annual Incentive

Set out below is a summary of performance against each financial measure and non-financial KPO and the resulting annual incentive payout for 2019:

Performance measure	Relative weighting % at target	Financial targets ⁽¹⁾				Achievement % vs target	Payout % vs target	Erik Engstrom	Nick Luff
		Threshold	Target	Maximum	Achievement			Weighted Payout % of target	Weighted Payout % of target
Revenue	35%	£7,429	£7,904	£8,299	£7,874	99.6%	94.0%	32.9%	32.9%
Adjusted net profit after tax	35%	£1,692	£1,800	£1,890	£1,808	100.5%	105.0%	36.8%	36.8%
Cash flow	15%	£2,204	£2,344	£2,462	£2,403	102.5%	125.0%	18.8%	18.8%
Non-financial Key Performance Objectives (KPOs)	15%	A detailed description of the non-financial KPOs and achievement against those KPOs for each Executive Director is set out below.						13.75%	13.5%
Total	100%							102.2%	101.9%
Total AIP payout as % of salary									
Cash	100%							102.2%	101.9%
Deferred Shares	50%							51.1%	51.0%
Total	150%							153.2%	152.9%

Some figures add up to different amounts than the totals due to rounding.

The Cash AIP (£1,275,714 for the CEO and £749,388 for the CFO) will be paid in Q1 2020 and the Deferred Shares (with a current value of £637,857 in the case of the CEO and £374,694 in the case of the CFO) will be released in Q1 2023. The release of Deferred Shares is not subject to any further performance conditions, but is subject to malus and claw-back.

(1) (On an equivalent basis (at actual exchange rates and after the net impact of acquisitions and disposals completed during the year).

Non-financial measures (KPOs) – Erik Engstrom

Non-financial measures (KPO)	Relative weighting % at target	Achievement vs KPO	Payout % of target
Risk Mitigation	3%	<p>This KPO was almost fully achieved.</p> <ul style="list-style-type: none"> ▪ Cyber security training provided to 100% of employees; enhanced social engineering testing (e.g. phishing simulations) of all staff combined with a mandatory re-training program; role-based security briefings held for three higher-risk groups. Target almost fully met. ▪ An end-to-end major security incident table-top simulation (including testing of low level operational elements) completed within one business area and results summarised to all other business areas and incorporated into the Incident Response Plan; crisis response/media training completed for two business areas. Target met. ▪ Further reinforce culture of integrity with RELX 'Do The Right Thing' principles developed with compliance leads across the business areas and incorporated into RELX Ethical Leader communications and online training. Target met. 	2.75%
Customers	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ New Editorial Policy training rolled out for staff. Target met. ▪ Expanded online content on Corporate Responsibility for customer facing employees. Migrated to a new intranet and refreshed all related content including a new resource on talking to our customers about the SDGs. Target met. ▪ Accessibility Advisory Board developed. Accessibility Board created representing all business areas focused on standardising accessibility training, compliance models, automated testing and enterprise-wide communications. Target almost fully met. 	2.75%
People	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ Additional inclusion initiatives launched; a dashboard to measure inclusion progress rolled out across the Group. Target met. ▪ Progress made against our UN Equal Pay International Coalition commitments with the completion of a job architecture project and its integration into new human resources information system and the implementation of an action plan following pay equity audits. Target met. ▪ Mental Health metrics developed utilising absence, percentage of annual leave taken and exit interview data. Expanded Well-being Champions Network. Target almost fully met. 	2.75%

Non-financial measures (KPOs) – Erik Engstrom

Non-financial measure (KPO)	Relative weighting % at target	Achievement vs KPO	Payout % of target
Process	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ Number of suppliers signed up to the RELX Supplier Code of Conduct increased by 3.9% from last year. Target met. ▪ Continued use of audits to ensure continuous improvement in supplier performance and compliance; number of supplier audits completed increased over prior year. Target met. ▪ Continued to advance the US Supplier Diversity & Inclusion programme – spend with veteran, women and minority-owned businesses increased, with overall spend with diverse suppliers increased compared to previous year at 11.9%. Target almost fully met. 	2.5%
Environment	3%	<p>This KPO was fully achieved</p> <ul style="list-style-type: none"> ▪ Renewable electricity purchased as a percentage of global consumption increased to 96%. Reduced Scope 1 and Scope 2 CO2 emissions by 52% below the 2010 baseline ahead of the 2020 target of 40%. Target exceeded. ▪ Reduced our energy and fuel consumption by 41% below the 2010 baseline, ahead of our 2020 target of 30%. Target exceeded. ▪ Reduced waste generated at reporting locations by 66% below the 2010 baseline, ahead of our 2020 target of 40%. Target exceeded. 	3%
Total	15%		13.75%

Non-financial measures (KPOs) – Nick Luff

Non-financial measure (KPO)	Relative weighting % at target	Achievement vs KPO	Payout % of target
Risk Mitigation	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ Cyber security training provided to 100% of employees; enhanced social engineering testing (e.g. phishing simulations) of all staff combined with a mandatory re-training program; role-based security briefings held for three higher-risk groups. Target almost fully met. ▪ An end-to-end major security incident table-top simulation (including testing of low level operational elements) completed within one business area and results summarised to all other business areas and incorporated into the Incident Response Plan; crisis response/media training completed for two business areas. Target met. ▪ Further reinforce culture of integrity with RELX 'Do The Right Thing' principles developed with compliance leads across the business areas and incorporated into RELX Ethical Leader communications and online training. Target met. 	2.75%
Corporate Structure	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ Optimised the Group's distributable reserves position, with shareholder approval, following the corporate structure simplification last year. Target met. ▪ Further reduced the number of legal entities in the Group's corporate structure. Target almost fully met. ▪ Internal funding arrangements realigned within the simplified corporate structure. Target met. 	2.5%
Finance Function	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ Further improvements made to the effectiveness and efficiency of the finance function. Target almost fully met. ▪ Increased use of robotic process automation in the finance function. Target almost fully met. ▪ Actively promoted inclusion and diversity in the finance function with Talent Boards launched in the UK and the US. Target met. 	2.5%
Financing / Benefits	3%	<p>This KPO was almost fully achieved</p> <ul style="list-style-type: none"> ▪ External bond financing resulting in a reduction in interest costs. Target met. ▪ UK pension triennial modification plan completed and resulting follow up actions implemented. Target almost fully met. ▪ Reviewed and standardised US employee benefits. Target met. 	2.75%
Environment	3%	<p>This KPO was fully achieved</p> <ul style="list-style-type: none"> ▪ Renewable electricity purchased as a percentage of global consumption increased to 96%. Reduced Scope 1 and Scope 2 CO2 emissions by 52% below the 2010 baseline ahead of the 2020 target of 40%. Target exceeded. ▪ Reduced our energy and fuel consumption by 41% below the 2010 baseline, ahead of our 2020 target of 30%. Target exceeded. ▪ Reduced waste generated at reporting locations by 66% below the 2010 baseline, ahead of our 2020 target of 40%. Target exceeded. 	3%
Total	15%		13.5%

Multi-year incentives (granted under the Remuneration Policy in effect prior to the approval by shareholders of the current Remuneration Policy at the Annual General Meetings in April 2017)

Multi-year incentives with a performance period ended 31 December 2019 were the 2017–2019 cycles of BIP, LTIP and ESOS granted to Executive Directors. Following the simplification of the remuneration plans approved by shareholders at the Annual General Meetings in 2017, these are the final cycles of the BIP and, for Executive Directors, the ESOS.

The Committee assessed the performance measures for these awards and made an overall assessment of underlying business performance and other relevant factors. The vesting outcome resulting from this review is summarised below.

LTIP: 2017–2019 cycle performance outcome

Performance measure	Weighting	Performance range and vesting levels set at grant ⁽¹⁾	Achievement against the performance range	Resulting vesting percentage
TSR over the three-year performance period ⁽²⁾	1/3 rd	below median median upper quartile	0% 30% 100%	Between median and upper quartile of sterling and euro comparator groups just above median of US dollar group
Average growth in adjusted EPS over the three-year performance period ⁽³⁾	1/3 rd	below 5% p.a. 5% p.a. 6% p.a. 7% p.a. 8% p.a. 9% p.a. 10% p.a. 11% p.a. and above	0% 33% 52.5% 65% 75% 85% 92.5% 100%	6.8% p.a. 62.5%
ROIC in the third year of the performance period ⁽³⁾	1/3 rd	below 12.5% 12.5% 12.75% 13.0% 13.25% 13.5% 13.75% 14.0% and above	0% 33% 52.5% 65% 75% 85% 92.5% 100%	13.7% ⁽⁴⁾ 91%
Total vesting percentage:				71.0%

(1) Calculated on a straight-line basis for performance between the points.

(2) In respect of the euro TSR comparator group, RELX NV shares were, subsequent to the merger of RELX NV into RELX PLC, replaced with Euronext Amsterdam listed RELX PLC shares priced in euros and, in respect of the US dollar TSR comparator group, RELX NV ADRs were, subsequent to the merger, replaced with RELX PLC ADRs.

(3) Growth in adjusted EPS at constant currencies and ROIC are calculated as set out in the Chief Financial Officer's report on pages 52 to 57 and note 10 to the consolidated financial statements on page 148, with adjustments made to remove the effect on ROIC of changes in exchange rates, pension deficits and accounting standards over the three-year performance period.

(4) For 2019, ROIC on pages 55 and 56 of the Chief Financial Officer's report of 13.6% equates to ROIC of 13.7% under the plan methodology after adjustments for changes in exchange rates, pension deficits and accounting standards and impact of acquisition related integration costs.

BIP: 2017–2019 cycle performance outcome (final cycle of the discontinued BIP)

Performance measure	Weighting	Performance range and vesting levels set at grant ⁽¹⁾	Achievement against the performance range	Resulting vesting percentage
Average growth in adjusted EPS over the three-year performance period ⁽²⁾	50%	below 4% p.a. 4% p.a. 6.5% p.a. 9% p.a. or above	0% 50% 75% 100%	6.8% p.a. 78%
ROIC in the third year of the performance period ⁽²⁾	50%	below 12.5% 12.5% 13.0% 13.5% or above	0% 50% 75% 100%	13.7% ⁽³⁾ 100%
Total vesting percentage:				89.0%

(1) Calculated on a straight-line basis for performance between the points.

(2) Growth in adjusted EPS at constant currencies and ROIC are calculated as set out in the Chief Financial Officer's report on pages 52 to 57 and note 10 to the consolidated financial statements on page 148, with adjustments made to remove the effect on ROIC of changes in exchange rates, pension deficits and accounting standards over the three-year performance period.

(3) For 2019, ROIC on pages 55 and 56 of the Chief Financial Officer's report of 13.6% equates to ROIC of 13.7% under the plan methodology after adjustments for changes in exchange rates, pension deficits and accounting standards and impact of acquisition related integration costs.

ESOS: 2017–2019 cycle performance outcome (final cycle of ESOS, now discontinued for the Executive Directors)

Performance measure	Weighting	Performance range and vesting levels set at grant ⁽¹⁾	Achievement against the performance range	Resulting vesting percentage
Average growth in adjusted EPS over the three-year performance period ⁽²⁾	100%	below 4% p.a.	0%	6.8% p.a.
		4% p.a.	33%	
		6% p.a.	80%	
		8% p.a. or above	100%	

(1) Calculated on a straight-line basis for performance between the stated average adjusted EPS growth percentages.

(2) Growth in adjusted EPS at constant currencies is calculated as set out in the Chief Financial Officer's report on pages 52 to 57 and note 10 to the consolidated financial statements on page 148.

Single Total Figure of Remuneration – Non-Executive Directors (audited)

	Total fee		Benefits ⁽¹⁾		Total	
	2019	2018	2019	2018	2019	2018
Anthony Habgood	£650,000	£650,000	£1,665	£2,360	£651,665	£652,360
Wolhart Hauser	£159,500	£159,500		£780	£159,500	£160,280
Adrian Hennah	£129,500	£118,990		£780	£129,500	£119,770
Charlotte Hogg ⁽²⁾	£3,269	N/A		N/A	£3,269	N/A
Marike van Lier Lels ⁽³⁾	£124,583	€ 126,651	£840	€ 949	£125,423	€ 127,600
Robert MacLeod	£109,667	£107,000		£780	£109,667	£107,780
Carol Mills ⁽⁴⁾	£41,984	£125,000	£840	£1,620	£42,824	£126,620
Linda Sanford	£120,500	£125,000	£840	£1,620	£121,340	£126,620
Andrew Sukawaty ⁽⁵⁾	£76,699	N/A		N/A	£76,699	N/A
Ben van der Veer ⁽³⁾⁽⁴⁾	£27,353	€ 124,696	£840	€ 949	£28,193	€ 125,645
Suzanne Wood	£120,500	£116,000	£840		£121,340	£116,000

(1) Benefits comprise the notional benefit of tax filing support provided to Non-Executive Directors for filings outside their home country resulting from their directorships with RELX. The incremental assessable benefit charge per tax return for 2019 was £840 [unchanged from 2018] for a UK tax return. Anthony Habgood's benefits comprise £1,665 (£1,580 in 2018) in respect of private medical insurance. Further, the Company meets all reasonable travel, subsistence, accommodation and other expenses, including any tax where such expenses are deemed taxable, incurred by the Non-Executive Directors and the Chair in the course of performing their duties.

(2) Appointed on 16 December 2019.

(3) The pound sterling equivalent of the total fees and benefits for Marike van Lier Lels and Ben van der Veer for 2018 [converted at the average exchange rate for 2018] were £112,920 and £111,190 respectively. For the purposes of reporting the total fees and benefits for these two Directors for 2018, the pound sterling benefit relating to the UK tax return preparation was converted into euros at the average exchange rate for 2018. From 2019, their fees are denominated in pound sterling.

(4) Retired at the 2019 AGM.

(5) Appointed on 25 April 2019.

(6) The total remuneration for Directors is set out in note 26 to the consolidated financial statements on page 168.

Non-Executive Directors' fees

The fees in the Single Total Figure table for Non-Executive Directors reflect the following fees in 2019:

	Annual fee 2020	Annual fee 2019
Chair	£650,000	£650,000
Non-Executive Directors	£90,000	£85,000
Senior Independent Director	£30,000	£30,000
<i>Chair of:</i>		
– Audit Committee	£30,000	£30,000
– Remuneration Committee	£30,000	£30,000
Workforce engagement fee	£17,500	£17,500
<i>Committee membership fee:</i>		
– Audit Committee	£17,500	£17,500
– Remuneration Committee	£17,500	£17,500
– Nominations Committee	£10,000	£10,000

In addition, an intercontinental travel fee of £4,500 was payable to any Non-Executive Director (excluding the Chair) in respect of each transatlantic journey made in order to attend a RELX Board or Committee meeting during 2019. In 2020, this fee will remain at £4,500.

Fees may be reviewed annually, although in practice they have changed on a less frequent basis. At the end of 2019, the Non-Executive Director and the Chair fees were each reviewed, taking into account comparative benchmark data, market practice and general governance trends. As a result, certain changes were approved which took effect on 1 January 2020 as set out in the table above. Before that, the last review took place at the end of 2017, as a result of which changes were approved which took effect on 1 January 2018.

Total pension entitlements (audited)

Erik Engstrom is a member of the legacy UK defined benefit pension plan. Subject to approval of the new remuneration policy being put forward for shareholder approval at the 2020 AGM, he will cease to accrue benefits under this plan at the end of 2022, at which point he will receive pension benefits of equivalent value to the level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time (currently capped at 11% of base salary in the UK). Mr Engstrom's contributions and participation fee (together, the Total Plan Fees), which are payable by him as part of his ongoing membership of the scheme, have been increasing annually since 2011. In 2019, his Total Plan Fees were 20% of his pensionable earnings (i.e. £246,353), up from 12.5% in 2018. His Total Plan Fees will increase to 25% of pensionable earnings in 2020, 30% in 2021 and 35% in 2022. Mr Engstrom is also subject to a cap of 2% on annual increases in pensionable earnings.

Nick Luff receives a cash allowance in lieu of pension, which reduced from 27% of salary to 25% of salary on 1 March 2019 and reduced to 20% of base salary on 1 January 2020 and will continue to reduce each year until the end of 2022, at which time Mr Luff will receive pension benefits of equivalent value to the level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time (currently capped at 11% of base salary in the UK).

Erik Engstrom – pension information

Age at December 2019	Normal retirement age	CEO's Total Plan Fees	Accrued annual pension at 31 December 2019	2019 single figure pensions value
56	60	£246,353	£499,568	£538,862 ⁽¹⁾

(1) The 2019 single figure pensions value is the difference between the accrued annual pension as at 31 December 2018 (adjusted for inflation) and the accrued annual pension as at 31 December 2019, multiplied by 20 in accordance with the UK Regulations and is net of the CEO's Total Plan Fees.

Scheme interests awarded during the financial year (audited)

LTIP – PERFORMANCE SHARE AWARDS

	Basis on which award is made	Face value of award at grant ⁽¹⁾	Value of awards if vest in line with expectations ⁽²⁾	Percentage of maximum that would be received if threshold performance achieved	End of performance period
Erik Engstrom	450% of salary	£5,482,809	£2,741,405	If each measure pays out at threshold, the overall payout is 25%	31 December 2021
Nick Luff	375% of salary	£2,690,533	£1,345,267		

AIP – DEFERRED SHARES

Erik Engstrom	1/3 of 2018 AIP payout	£634,639	N/A. The release of AIP Deferred Shares in Q1 2022 is not subject to any further performance conditions, but is subject to malus and claw-back.
Nick Luff	1/3 of 2018 AIP payout	£376,409	

(1) The face value of the LTIP awards and AIP Deferred Shares granted in February 2019 was calculated using the middle market quotation of a PLC ordinary share (£17.6975). This share price was used to determine the number of awards granted.

(2) Vesting in line with expectations for LTIP is as per the performance scenario chart disclosed on page 87 of the 2016 Remuneration Report, i.e. 50%.

The LTIP awards granted in 2019 are based on ROIC, EPS and TSR weighted 40%:40%:20% respectively and assessed independently. The targets and vesting scales applicable to these awards are set out on pages 97 and 98 of the 2018 Remuneration Report.

Statement of Directors' shareholdings and other share interests (audited)

Shareholding requirement

The Committee believes that a closer alignment of interests can be created between senior management and shareholders if executives build and maintain a significant personal stake in RELX. The shareholding requirements applicable to the Executive Directors are set out in the table below. Shares that count for this purpose are (i) any type of RELX security of which the Director, their spouse, civil partner or dependent child has beneficial ownership of and (ii) AIP deferred shares which are within their three-year deferral period, on a notional net (after tax) basis. There has been no change to the interests reported below between 31 December 2019 and 12 February 2020.

Meeting the shareholding requirement is both a vesting condition for LTIP awards granted and a requirement to maintain eligibility for future LTIP awards.

On 31 December 2019, the Executive Directors' shareholdings were as follows (valued using the middle market closing prices of the relevant securities):

	Shareholding requirement (% of 31 December 2019 annual base salary)	Shareholding as at 31 December 2019 (% of 31 December 2019 annual base salary) ⁽¹⁾
Erik Engstrom	400%	1,620%
Nick Luff	300%	742%

(1) Includes AIP deferred shares which are within their three-year deferral period, on a notional net (after tax) basis (19,005 for Erik Engstrom and 11,272 for Nick Luff).

Share interests (number of RELX ordinary shares held)

	1 January 2019	31 December 2019
Erik Engstrom	1,010,617	1,014,006 ⁽¹⁾
Nick Luff	265,971	270,203 ⁽¹⁾
Anthony Habgood	88,450	88,450
Wolfhart Hauser	14,633	14,633
Adrian Hennah	10,508	10,508
Charlotte Hogg (from 16 December 2019)	N/A	0 ⁽²⁾
Marike van Lier Lels	8,000	10,907
Robert MacLeod	6,950	6,950
Carol Mills (until 25 April 2019)	9,700	N/A
Linda Sanford	9,700	9,700
Andrew Sukawaty (from 25 April 2019)	N/A	10,000 ⁽³⁾
Ben van der Veer (until 25 April 2019)	10,766	N/A
Suzanne Wood	5,100	5,100

N/A denotes that the individual was not a Director at the relevant date.

(1) Number excludes AIP deferred shares which are within their three-year deferral period. If these were included on a notional net (after tax) basis, the totals at 31 December 2019 would be 1,033,011 for Erik Engstrom and 281,475 for Nick Luff.

(2) Charlotte Hogg was appointed effective 16 December 2019.

(3) Andrew Sukawaty was appointed effective 25 April 2019.

Multi-year incentive interests (audited)

The tables below and on page 107 set out vested but unexercised and unvested options, unvested share awards and AIP deferred shares held by the Executive Directors including details of awards granted, options exercised and awards vested during the year of reporting.

All outstanding unvested options and share awards are subject to performance conditions. For disclosure purposes, any PLC ADRs awarded under the multi-year incentive plans are included as ordinary shares. Between 31 December 2019 and the date of this Report, there have been no changes in the options or share awards held by the Executive Directors.

Erik Engstrom

OPTIONS		No. of options held on 1 Jan 2019	No. of options granted during 2019	Option price on date of grant	No. of options exercised during 2019	Market price per share at exercise	No. of options held on 31 Dec 2019	Unvested options vesting on	Options exercisable until
		Year of grant							
	2014	145,604		€9.245			145,604		07 Apr 24
		158,166		€10.286			158,166		07 Apr 24
	2015	114,584		€11.520			114,584		02 Apr 25
		120,886		€15.003			120,886		02 Apr 25
	2016 ⁽¹⁾	112,690		€12.550			101,421		15 Mar 26
		119,312		€15.285			107,380		15 Mar 26
	2017	96,996		€14.945			96,996	Feb 20	27 Feb 27
		102,405		€16.723			102,405	Feb 20	27 Feb 27
Total		970,643					947,442		

SHARES⁽²⁾		No. of unvested shares held on 1 Jan 2019	No. of shares awarded during 2019	Market price per share at award	No. of shares vested during 2019	Market price per share at vesting	No. of unvested shares held on 31 Dec 2019	End of performance period	Date of vesting
		Year of grant							
BIP	2016 ⁽¹⁾	94,965		€15.285	83,094	€20.400			
	2017	81,781		€16.723			81,781	Dec 2019	Feb 2020
LTIP	2016 ⁽¹⁾	112,690		€12.550	77,305	€17.698			
		119,312		€15.285	81,848	€20.400			
	2017	96,996		€14.945			96,996	Dec 2019	Feb 2020
		102,405		€16.723			102,405	Dec 2019	Feb 2020
	2018	179,318		€14.915			179,318	Dec 2020	Feb 2021
		178,482		€16.870			178,482	Dec 2020	Feb 2021
	2019	309,807		€17.698			309,807	Dec 2021	Feb 2022
Total		965,949	309,807		242,247		948,789		

(1) The performance outcomes for the 2016 ESOS options, BIP and LTIP were disclosed on pages 90 and 91 of the 2018 Remuneration Report.

(2) In addition, Mr Engstrom has 35,860 AIP deferred shares [pre-tax] awarded in 2019 with a market price at award of £17.698. The release of these AIP deferred shares in February 2022 is not subject to any further performance conditions. Including these AIP deferred shares increases the number of shares awarded during 2019 to 345,667 and the number of unvested shares held on 31 December 2019 to 984,649.

Nick Luff

OPTIONS		No. of options held on 1 Jan 2019	No. of options granted during 2019	Option price on date of grant	No. of options exercised during 2019	Market price per share at exercise	No. of options held on 31 Dec 2019	Unvested options vesting on	Options exercisable until
	Year of grant								
ESOS	2014	65,656		€9.900			65,656		02 Sep 24
		72,228		€11.378			72,228		02 Sep 24
	2015	53,979		€11.520			53,979		02 Apr 25
		56,948		€15.003			56,948		02 Apr 25
	2016 ⁽¹⁾	53,087		€12.550			47,778		15 Mar 26
		56,207		€15.285			50,586		15 Mar 26
	2017	45,694		€14.945			45,694	Feb 20	27 Feb 27
		48,242		€16.723			48,242	Feb 20	27 Feb 27
Total		452,041					441,111		
SHARES⁽²⁾		No. of unvested shares held on 1 Jan 2019	No. of shares awarded during 2019	Market price per share at award	No. of shares vested during 2019	Market price per share at vesting	No. of unvested shares held on 31 Dec 2019	End of performance period	Date of vesting
	Year of grant								
BIP	2016 ⁽¹⁾	26,543		€12.550	23,225	€17.698			
		28,103		€15.285	24,590	€20.400			
	2017	22,847		€14.945			22,847	Dec 2019	Feb 2020
		24,121		€16.723			24,121	Dec 2019	Feb 2020
LTIP	2016 ⁽¹⁾	53,087		€12.550	36,417	€17.698			
		56,207		€15.285	38,558	€20.400			
	2017	45,694		€14.945			45,694	Dec 2019	Feb 2020
		48,242		€16.723			48,242	Dec 2019	Feb 2020
	2018	87,996		€14.915			87,996	Dec 2020	Feb 2021
		87,585		€16.870			87,585	Dec 2020	Feb 2021
	2019	152,029		€17.698			152,029	Dec 2021	Feb 2022
Total		480,425	152,029		122,790		468,514		

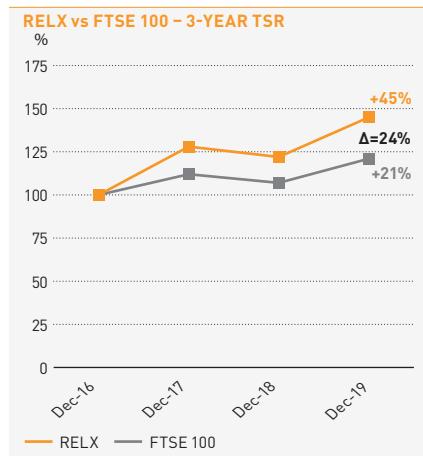
(1) The performance outcomes for the 2016 ESOS options, BIP and LTIP were disclosed on pages 90 and 91 of the 2018 Remuneration Report.

(2) In addition, Mr Luff has 21,269 AIP deferred shares (pre-tax) awarded in 2019 with a market price at award of £17.698. The release of these AIP deferred shares in February 2022 is not subject to any further performance conditions. Including these AIP deferred shares increases the number of shares awarded during 2019 to 173,298 and the number of unvested shares held on 31 December 2019 to 489,783.

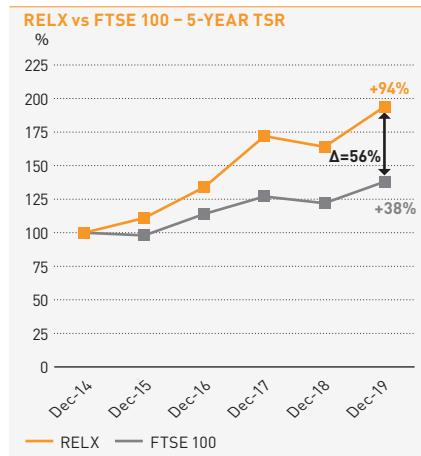
Performance graphs

The graphs below show total shareholder returns for RELX calculated on the basis of the average share price in the 30 trading days before the respective year end and assuming dividends were reinvested. RELX's performance is compared with the FTSE 100. The three-year chart covers the performance period of the 2017–2019 cycle of the LTIP.

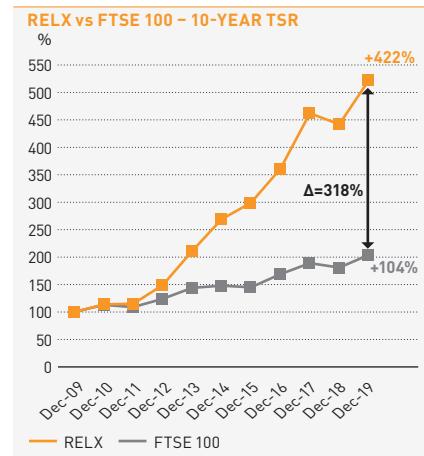
3 years



5 years



10 years



CEO historical pay table

The table below shows the historical CEO pay over a ten-year period.

£'000	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Annualised base salary	1,000	1,025	1,051	1,077	1,104	1,131	1,160	1,189	1,218	1,249
Annual incentive payout as a % of maximum	67%	66%	73%	70%	71%	70%	68%	69%	78%	77%
Multi-year incentive vesting as a % of maximum	0%	0%	70% ^[1]	96% ^[1]	90% ^[1]	97% ^[1]	97% ^[1]	92% ^[1]	81% ^[1]	81% ^[1]
CEO total	3,140	2,738	11,145 ^[2]	5,463	17,447 ^[3]	11,416 ^[4]	11,399 ^[5]	8,748 ^[6]	9,141 ^[7]	8,681 ^[8]

(1) The 2019, 2018, 2017, 2016 and 2015 percentages reflect BIP, LTIP and ESOS. The 2014 percentage reflects the final tranche of the discontinued Reed Elsevier Growth Plan (REGP), BIP and ESOS. The 2013 percentage reflects BIP and ESOS only and the 2012 percentage reflects BIP and the first tranche of the discontinued REGP.

(2) The 2012 figure reflects the vesting of the first tranche of the discontinued REGP and includes the entire amount that was performance tested over the 2010–12 period, including the 50% of shares deferred until 2015 in accordance with the plan rules including £3m attributed to share price appreciation.

(3) The 2014 figure includes the vesting of the second and final tranche of the discontinued REGP and includes £8.8m attributed to share price appreciation.

(4) The 2015 figure includes £4.4m attributed to share price appreciation.

(5) The 2016 figure includes £4.2m attributed to share price appreciation.

(6) The 2017 figure includes £1.7m attributed to share price appreciation.

(7) The 2018 figure includes £2.2m attributed to share price appreciation. The share award value has been restated for actual share prices and exchange rates applicable on the dates of vesting (see page 99 for further detail).

(8) The 2019 figure includes £1.5m attributed to share price appreciation.

Comparison of change in CEO pay with change in employee pay

The table below shows the percentage change in remuneration (salary, benefits and annual cash incentive) from 2018 to 2019 for the CEO compared with the average employee.

	% change from 2018 to 2019	
	CEO	Average employee ⁽¹⁾
Salary	2.5% ⁽²⁾	3.0%
Benefits	1.9%	3.4%
Annual cash incentive	0.5%	2.2%

(1) The average employee data has been determined based on a review of employees representing over 80% of the total employee population. The average salary increase in the UK, where the CEO is based, was 2.5%.

UK pay ratios

The UK Companies (Miscellaneous Reporting) Regulations 2018 require the disclosure of the ratio of total CEO remuneration to median (P50), 25th percentile (P25) and 75th percentile (P75) UK employee total remuneration (calculated on a full-time equivalent basis). UK employees represent less than 20% of our global employee population.

Pay ratios for total remuneration are likely to vary, potentially significantly, over time, since the CEO's total remuneration each year is driven largely by his performance-related pay outcomes and is affected by share price movements. We have therefore also shown the UK ratios for the salary component.

For the purposes of the ratios below, the CEO's total remuneration is his 2019 total single figure and salary as disclosed on page 99. The P25, P50 and P75 UK employee were selected from the UK employee population as at 1 October 2019.

Total remuneration

Year	Method	Pay Ratio			All employee £'000		
		P25	P50	P75	P25	P50	P75
2019	A	225:1	149:1	100:1	£39	£58	£86

Salary

Year	Method	Pay Ratio			All employee £'000		
		P25	P50	P75	P25	P50	P75
2019	A	35:1	25:1	18:1	£35	£51	£71

Slight differences compared with ratios calculated using data shown in the tables due to rounding.

The ratios are calculated using Option A, meaning that the median, 25th percentile and 75th percentile UK employees were determined based on total remuneration for 2019 using the single total figure valuation methodology, except for 2019 annual incentives (other than sales incentives) which are based on estimated pay-out as individual final payout levels are still to be finalised and pension was valued based on the cost to the Company of providing the benefit.

We chose Option A as we believe it is the most robust and accurate way to identify the median, 25th percentile and 75th percentile UK employee.

The Committee is satisfied that the overall picture presented by the 2019 pay ratios is consistent with the pay, reward and progression policies for the Group's UK employees.

- Salaries for all UK employees, including the Executive Directors, are set based on a wide range of factors, including market practice, scope and impact of the role and experience.
- The provision of certain benefits and the level of benefit provided vary depending on the role and level of seniority.
- Participation in annual incentive plans varies by business and reflects the culture and the nature of the business, as well as role.
- Whilst none of the comparator employees participate in the executive share plans, they do have the opportunity to receive company shares via the UK Sharesave Option Plan. A greater proportion of performance-related variable pay and share based awards applies to more senior executives, including the Executive Directors, who have a greater influence over performance outcomes.

Relative importance of spend on pay

The following table sets out the total employee costs for all employees, as well as the amounts paid in dividends and share repurchases.

	2019 £m	2018 £m	% change
Employee costs ⁽¹⁾	2,498	2,350	+6.3%
Dividends	842	796	+5.8%
Share repurchases	600	700	-14.3%

(1) Employee costs include wages and salaries, social security costs, pensions and share based and related remuneration.

Payments to past Directors and payments for loss of office (audited)

There have been no payments for loss of office in 2019.

Implementation of remuneration policy in 2020

Salary: The Committee has awarded a salary increase of 2.5% to each Executive Director, which means that, from 1 January 2020, Erik Engstrom's salary rose to £1,280,085 and Nick Luff's salary to £753,801. This is in line with the guidelines for 2020 for the general UK-based employee population. When the increase in the CEO's pension Total Plan Fees is taken into account, his salary after these deductions will decrease again in 2020 compared to 2019.

Benefits: The benefits provided to the Executive Directors are unchanged for 2020.

Annual incentive: The operation of the AIP in 2020 will be in accordance with the terms of the policy set out on pages 84 to 90 of the 2016 Annual Report. The weighting of the different metrics is amended so that revenue, adjusted net profit after tax and cash flow will each have a weight of 30% and non-financial KPOs a weight of 10%. Non-financial measures will be focused on sustainability metrics thereby increasing their weighting compared with previous years. Details of the 2020 annual financial targets and non-financial KPOs will be disclosed in the 2020 Remuneration Report.

Pension: Erik Engstrom's Total Plan Fees for the legacy defined benefit pension scheme were 20% of pensionable earnings in 2019, 25% of pensionable earnings in 2020 and will increase further to 30% in 2021 and to 35% in 2022. Mr Engstrom is also subject to a 2% cap on annual increases in pensionable earnings. Subject to receipt of shareholder approval at the 2020 AGM, from the end of 2022 Mr Engstrom will cease to accrue further benefits under this scheme and will receive pension benefits of equivalent value to the level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time.

Nick Luff's cash allowance in lieu of pension reduced from 25% of salary to 20% of salary from January 2020 and will continue to reduce each year through 2022, at which time he will receive pension benefits of equivalent value to the level of pension benefits provided under the Company's regular defined contribution pension plans as may be in effect or amended from time to time.

Share based awards: As in 2019, we will be granting LTIP awards with face values of 450% of salary to Erik Engstrom and 375% to Nick Luff in 2020. The awards are subject to a three-year performance period and the net (after tax) vested shares are to be retained for a further two-year holding period.

The following metrics, weightings, targets and vesting scales apply to LTIP awards granted in 2020.

The vesting of LTIP awards is dependent on three separate performance measures: ROIC, EPS and TSR weighted 40%:40%:20% respectively and assessed independently.

The TSR measure comprises three comparators (sterling, euro and US dollar) reflecting the fact that RELX accesses equity capital markets through three exchanges – London, Amsterdam and New York – in three currency zones. RELX's TSR performance is measured separately against each comparator group and each ranking achieved will produce a payout, if any, in respect of one-third of the TSR measure. The proportion of the TSR measure that vests will be the sum of the three payouts.

The averaging period applied for TSR measurement purposes is the three months before the start of the financial year in which the award is granted and the last three months of the third financial year of the performance period.

The companies for the TSR comparator groups for the 2020–2022 LTIP cycle were selected on the following basis (substantially unchanged from prior year):

- (a) they were in a relevant market index or were the largest listed companies on the relevant exchanges at the end of the year before the start of the performance period: the FTSE 100 for the sterling group; the Euronext100 (including the AEX) and DAX30 for the euro group; and the S&P 500 for the US dollar group;
- (b) certain companies were then excluded:
 - those with mainly domestic or single country revenues (as they do not reflect the global nature of RELX's customer base);
 - those engaged in extractive industries (as they are exposed to commodity cycles); and
 - financial services companies (as they have a different risk/reward profile).
- (c) the remaining companies were then ranked by market capitalisation and, for each comparator group, up to 50 companies with market capitalisations above and below that of RELX were taken; and
- (d) relevant listed global peers operating in businesses similar to those of RELX, but not otherwise included, were added.

Vesting percentage of each third of the TSR tranche ⁽¹⁾	TSR ranking within the relevant TSR comparator group
0%	Below median
25%	Median
100%	Upper quartile

(1) Vesting is on a straight-line basis for performance between the minimum and maximum levels.

The calculation methodology for the EPS and ROIC measures is set out in the footnotes on page 90 and in the 2013 Notices of Annual General Meetings, which can be found on RELX's website. The targets and vesting scales applicable to the EPS and ROIC tranches of the 2020 LTIP awards reflect the Company's approach to acquisitions, disposals and share buybacks and are set out below.

Vesting percentage of EPS and ROIC tranches ⁽¹⁾	Average growth in adjusted EPS over the three-year performance period	ROIC in the third year of the performance period
0%	below 5% p.a.	below 12.0%
25%	5% p.a.	12.0%
50%	6% p.a.	12.4%
65%	7% p.a.	12.8%
75%	8% p.a.	13.2%
85%	9% p.a.	13.6%
92.5%	10% p.a.	14.0%
100%	11% p.a. or above	14.4% or above

(1) Vesting is on a straight-line basis for performance between the stated average adjusted EPS growth/ROIC percentages.

Remuneration Committee advice

The Committee consists of independent Non-Executive Directors and the Chair of RELX. Details of members and their attendance are contained in the Corporate Governance Review on page 78. The Chief Legal Officer and Company Secretary attends meetings as secretary to the Committee. At the invitation of the Chair of the Committee, the CEO attends appropriate parts of the meetings. The CEO is not in attendance during discussions about his remuneration.

The Chief Human Resources Officer advised the Committee during the year.

Willis Towers Watson is the external adviser, appointed by the Committee through a competitive process. Willis Towers Watson also provided actuarial and other human resources consultancy services to some RELX companies during the year. The Committee is satisfied that the firm's advice continues to be objective and independent, and that no conflict of interest exists. The individual consultants who work with the Committee do not provide advice to the Executive Directors or act on their behalf. Willis Towers Watson is a member of the Remuneration Consultants' Group and conducts its work in line with the UK Code of Conduct for executive remuneration consulting. During 2019, Willis Towers Watson received fees of £18,250 for advice given to the Committee, charged on a time and expense basis.

Shareholder voting at 2019 Annual General Meeting

At the Annual General Meeting of RELX PLC on 25 April 2019, votes cast by proxy and at the meeting in respect of the Directors' remuneration were as follows:

Resolution	Votes For	% For	Votes Against	% Against	Total votes cast	Votes Withheld
Remuneration Report (advisory)	1,356,104,243	93.60%	92,695,095	6.40%	1,448,799,338	104,649,672

The current Remuneration Policy had been approved at the RELX PLC Annual General Meeting held on 20 April 2017 with 94.95% of votes cast and approved at the RELX NV Annual General Meeting held on 19 April 2017 with 95.7% of votes cast.

Wolfhart Hauser

Chair, Remuneration Committee
12 February 2020

Report of the Audit Committee

This report has been prepared by the Audit Committee of RELX PLC and has been approved by the Board. It provides an overview of the membership, responsibilities and activities of the Committee.

Membership

The Committee comprises at least three independent Non-Executive Directors. The members of the Committee who served during the year were:

- Adrian Hennah (Chair of the Committee)
- Marike van Lier Lels (until 6 June 2019)
- Carol Mills (until 25 April 2019)
- Suzanne Wood
- Andrew Sukawaty (from 6 June 2019)

Of the current members of the Committee, Adrian Hennah, a UK chartered accountant and Suzanne Wood, a US chartered accountant are considered to have significant, recent and relevant financial experience.

The Committee as a whole is deemed to have competence relevant to the sectors in which RELX operates.

Please see pages 64 and 65 for full profiles of Audit Committee members.

Responsibilities

The main role and responsibility of the Committee is to assist the Board in fulfilling its oversight responsibilities regarding:

- the integrity of the interim and full-year financial statements and financial reporting processes;
- risk management and internal controls, and the effectiveness of the internal auditors; and
- the performance of the external auditors and the effectiveness of the external audit process, including monitoring the independence and objectivity of Ernst & Young.

The Committee reports to the Board on its activities, identifying any matters in respect of which it considers that action or improvement is needed and making recommendations as to the steps to be taken.

The terms of reference of the Audit Committee are reviewed annually and a copy is published on the RELX website,

 www.relx.com

Financial reporting

In discharging its responsibilities in respect of the 2019 interim and full-year financial statements, the Committee reviewed the following:

AREAS OF SIGNIFICANT JUDGEMENT	PAGE REFERENCE IN ANNUAL REPORT
Specific areas of significant judgement focussed on by the Committee were:	
■ Carrying values of goodwill and intangible assets: The significant judgements in respect of asset carrying values relate to the assumptions underlying the value in use calculations including discount rates and long-term growth assumptions. The Committee received and discussed reports from the RELX Financial Controller on the methodology and the basis of the assumptions used;	151-154
■ Capitalisation of internally generated intangible assets: The capitalisation of costs related to the development of new products and business infrastructure, together with the useful economic lives applied to the resulting assets, requires the exercise of judgement. The Committee received reports from the RELX Financial Controller on the amounts capitalised and asset lives selected for major projects;	153-154
■ Uncertain tax positions: Assessing potential liabilities across numerous jurisdictions is complex and requires judgement in making tax determinations. The Committee received and discussed reports from the RELX Head of Taxation on the potential liabilities identified and judgements applied;	145
■ Pensions: The recognition of certain pension scheme liabilities is subject to judgement. The Committee received and discussed reports from the RELX Financial Controller on the methodology and the basis of the assumptions used.	140-143

The Committee was satisfied that all judgements had been appropriately made.

DISCLOSURE AND PRESENTATION	PAGE REFERENCE IN ANNUAL REPORT
As well as considering the Annual Report as a whole (see 'Fair, balanced and understandable' section below) the Committee focused on the following areas of disclosure and presentation:	
■ reviewed the critical accounting policies and compliance with applicable accounting standards, reviewed other disclosure requirements and received regular update reports on accounting and regulatory developments;	133
■ reviewed the disclosures made in relation to internal control, risk management, the going concern statement and the viability statement. The Committee received and discussed reports from the RELX Head of Audit and Risk and the RELX Treasurer on the processes undertaken and assumptions used in formulating these disclosures;	81-84
■ considered the calculation and presentation of alternative performance measures in the Annual Report and Accounts and results announcement.	51-57, 184

The Committee was satisfied that all relevant disclosures have been appropriately made.

FAIR, BALANCED AND UNDERSTANDABLE

The Committee considered whether the 2019 Annual Report is fair, balanced and understandable. In making this assessment, the Committee considered the following areas:

- The process for preparing the Annual Report, including the contributors, the internal review process and how feedback is addressed throughout the process;
- The business review narratives presented for each business area;
- The discussion of reported and underlying results throughout the report.

The Committee was satisfied that, taken as a whole, the Annual Report is fair, balanced and understandable. This conclusion has been reported to the Board.

The Committee also received detailed written and verbal reports from the external auditors on these matters. The Committee was satisfied with the explanations provided and conclusions reached.

Risk management and internal controls

With respect to their oversight of risk management and internal controls, the Committee has:

- received and discussed regular reports summarising the status of the Group's risk management activities, including identification of emerging risks and actions to mitigate risks, and the findings from internal audits and the status of actions agreed with management. Areas of focus in 2019 included: cyber security; data privacy (including compliance with existing and proposed data privacy laws such as the EU General Data Protection Regulation and California Consumer Privacy Act); the operational, financial and IT control environment; the potential consequences of the United Kingdom's withdrawal from the European Union under Article 50 of the Treaty of Lisbon (Brexit); regulatory compliance; business continuity and resilience; post acquisition integration; integrity of published non-financial data; and continued compliance with the requirements of Section 404 of the US Sarbanes-Oxley Act relating to the documentation and testing of internal controls over financial reporting;
- reviewed and approved the internal audit plan for 2020 and monitored execution of the 2019 plan, including progress in respect of recommendations made;
- reviewed the resources, terms of reference and effectiveness of the RELX risk management and internal audit functions;
- received presentations from: the RELX Chief Compliance Officer on the compliance programmes, including the operation of the RELX Code of Conduct, training programmes and whistleblowing arrangements, and the RELX Chief Legal Officer on legal issues and claims;
- received updates from the RELX Treasurer on pension arrangements and funding, treasury policies and risk management and compliance with treasury policies;
- received presentations from the RELX Head of Taxation on tax policies and related matters;
- received regular updates from the RELX Chief Financial Officer on developments within the finance function; and
- received presentations from chief financial officers of major RELX businesses.

Committee Meetings

The Committee met four times during 2019. The Audit Committee meetings are typically attended by the RELX Chief Executive Officer, the RELX Chief Financial Officer, the RELX Financial Controller, the RELX Chief Legal Officer, the RELX Head of Audit and Risk, and audit partners from the external auditors.

External audit effectiveness and independence

The Group has a well-established policy on audit effectiveness and independence of auditors that sets out amongst other things: the responsibilities of the Audit Committee in the selection of auditors to be proposed for appointment or re-appointment and for agreement on the terms of their engagement, scope and remuneration; the auditor independence requirements and the policy on the provision of non-audit services; the rotation of audit partners and staff; and the conduct of meetings between the auditors and the Audit Committee. The policy on the provision of non-audit services has been updated to reflect the Financial Reporting Council's Revised Ethical Standard 2019. The policy is available on the website,  www.relx.com

The Committee has conducted its review of the performance of the external auditors and the effectiveness of the external audit process for the year ended 31 December 2019. The review was based on a survey of key stakeholders across RELX, consideration of public reports by regulatory authorities on key Ernst & Young member firms and the quality of the auditors' reporting to and interaction with the Audit Committee.

Additionally in 2019, the Committee received and reviewed the Financial Reporting Council's audit quality review of Ernst & Young's audit of the Group's financial statements for the year ended 31 December 2018. The findings have been discussed with the auditors, and EY have made minor adjustments to their audit plan as a result.

Based on this review, the Audit Committee was satisfied with the performance of the auditors and the effectiveness of the audit process.

The external auditors have confirmed their independence and compliance with the policy on auditor independence to the Audit Committee.

Non-audit services

The auditors are precluded from engaging in non-audit services that would compromise their independence or violate any professional requirements or regulations affecting their appointment as auditors. The auditors may, however, provide non-audit services which do not conflict with their independence.

The Committee has, each quarter, reviewed and agreed the non-audit services provided in 2019, together with the associated fees which are set out in note 4 to the consolidated financial statements. The non-audit services provided were in the areas of audit-related activities, such as royalty assurance, and due diligence. The lower level of non-audit fees in 2019 compared to the prior year reflects a move away from using EY for work such as due diligence and transaction-related services. The fees remain below the 70% threshold as per the most recent FRC guidance.

From March 2020, the Revised Ethical Standard will become effective, and the non-audit services provided will be restricted to only providing non-audit services where required by laws and regulations, or where the work is closely linked to the audit work.

Tenure of auditor

Ernst & Young LLP were first appointed auditor of RELX PLC for the financial year ended 31 December 2016. The auditor is required to rotate the lead audit partners responsible for the audit engagements every five years. The year ended 31 December 2019 was the second year for the lead engagement partner Hywel Ball. The Audit Committee confirms that they were in compliance with the provisions of The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 during the financial year ended 31 December 2019.

Audit Committee effectiveness

The effectiveness of the Audit Committee was reviewed as part of the 2019 evaluation of the Board which confirmed that the Committee continues to function effectively. Details of the evaluation are set out on page 81.

Adrian Hennah

Chair of the Audit Committee
12 February 2020

Directors' Report

The Directors present their report, together with the financial statements of the Group and RELX PLC (the Company), for the year ended 31 December 2019. The Company is incorporated as a public limited company and is registered in England and Wales with registered number 77536. Its registered office is 1-3 Strand, London, WC2N 5JR.

Corporate structure

The Company's ordinary shares are traded on the London Stock Exchange and Euronext Amsterdam. It also has in place an American Depository Share programme, under which its securities are traded on the New York Stock Exchange. For the purposes of this Directors' Report, and the Corporate Governance Review from pages 70 to 84, the Company and its subsidiaries, joint ventures and associates are together known as 'RELX' or 'the Group'.

Financial statement presentation

This Directors' Report and the financial statements of the Group and Company should be read in conjunction with the other reports set out on pages 2 to 114. A review of the Group's performance during the year is set out on pages 5 to 57, the principal and emerging risks facing the Group are set out on pages 58 to 61, and the Group statement on corporate responsibility is set out on pages 38 to 49.

In addition to the reported figures, adjusted figures are presented as additional performance measures used by management to assess the performance of the business. These exclude the Group's share of amortisation of acquired intangible assets, acquisition-related costs, tax in joint ventures, disposal gains, finance income and losses and other non-operating items, related tax effects, and movements in deferred taxation assets and liabilities related to acquired intangible assets, and include the benefit of tax amortisation where available on acquired goodwill and intangible assets.

Company financial statements

The individual company financial statements of the Company are presented on page 178, and were prepared under Financial Reporting Standard 101 (FRS 101). Distributable reserves as at 31 December 2019 were £6,795m (2018: £2,689m), comprising reserves less shares held in treasury. Shareholders' funds as at 31 December 2019 were £19,878m (2018: £19,739m).

Strategic Report

The Companies Act 2006 requires the Company to present a fair review of the Group during the financial year. The Strategic Report which includes a review of the Group's business areas, a financial review, the principal and emerging risks facing the Group, any important events affecting the Group since 31 December 2019, and the likely future developments in the Group's business, is set out on pages 2 to 61 which are incorporated into this Directors' Report by reference. The Directors' Report, inclusive of the Strategic Report incorporated therein, forms the management report for the purposes of the Financial Conduct Authority's Disclosure and Transparency Rule 4.1.8R.

Dividends

The Board is recommending a final dividend of 32.1p (2019: 29.7p) per ordinary share to be paid on 28 May 2020 to shareholders appearing on the Register of Members at the close of business on 27 April 2020. Payment of this final dividend remains subject to the

approval of the Company's shareholders at its 2020 Annual General Meeting (AGM). Together with the interim dividend of 13.6p (2018: 12.4p) per ordinary share, paid in September 2019, the total ordinary dividends for the year will be 45.7p (2018: 42.1p). Details of dividend cover and dividend policy are set out on page 56.

Corporate governance

With the exception of provision 19 (length of tenure of the Chairman) and provision 38 (rates of contribution for Executive Pensions), the Company has complied throughout the year with the provisions of the 2018 UK Corporate Governance Code (the Code), which is publicly available on the Financial Reporting Council website (www.frc.org.uk). Details of how the main principles of the Code have been applied and the Directors' statement on internal control are set out in the Corporate Governance Review on pages 71 to 84, which are incorporated into this Directors' Report by reference.

Greenhouse gas emissions

The Company is required to state the annual quantity of emissions in tonnes of carbon dioxide equivalent from Group operational activities. Details of our emissions during the year ended 31 December 2019 and the actions being taken to reduce them are set out in the Corporate Responsibility section of the Strategic Report on pages 48 and 49, which are incorporated into this Directors' Report by reference. Further details can be found in our online Corporate Responsibility Report at

 www.relx.com/go/CRReport.

Directors

The names of the Directors who served on the Board during the year are set out on pages 64, 65, and 78, which are incorporated into this Directors' Report by reference.

Share capital

The Company's issued share capital comprises a single class of ordinary shares, all of which are listed on the London and Amsterdam stock exchanges. It also has securities, in the form of American Depository Shares, traded on the New York Stock Exchange. All issued shares are fully paid up and carry no additional obligations or special rights. Each share carries the right to one vote at general meetings of the Company.

In a general meeting, subject to any rights and restrictions attached to any shares, on a show of hands every member who is present in person shall have one vote and every proxy present who has been duly appointed by one or more members entitled to vote on the resolution has one vote (although a proxy has one vote for and one vote against the resolution if: (i) the proxy has been duly appointed by more than one member entitled to vote on the resolution; and (ii) the proxy has been instructed by one or more of those members to vote for the resolution and by one or more other of those members to vote against it). Subject to any rights or restrictions attached to any shares, on a vote on a resolution on a poll every member present in person or by proxy shall have one vote for every share of which he/she is the holder.

Proxy appointments and voting instructions must be received by the registrars not less than 48 hours before a general meeting. There are no specific restrictions on the size of a holding nor on the transfer of shares, which are both governed by the general provisions of the Articles and prevailing legislation. The Company is not aware of any agreements between shareholders that may

result in restrictions on the transfer of shares or on voting rights attached to the shares. At the 2019 AGM, shareholders passed a resolution authorising the Directors to issue shares for cash on a non-pre-emptive basis up to a nominal value of £14.1m, representing less than 5% of the Company's issued share capital, and authorising the Directors to issue up to an additional 5% of the issued share capital for cash on a non-pre-emptive basis in connection with an acquisition or specified investment. Since the 2019 AGM, no shares have been issued under this authority. The shareholder authority also permitted the Directors to issue shares in order to satisfy entitlements under employee share plans and details of such allotments are described below.

During the year, 3,059,588 ordinary shares in the Company were issued in order to satisfy entitlements under employee share plans as follows: 614,653 under a UK Sharesave option scheme at prices between 596.00p and 1,316.80p per share; 440,537 under the Dutch Debenture Scheme at prices between EUR 5.34 and EUR 19.165, which is now satisfied by way of Company shares; and 2,004,398 under executive share option schemes at prices between 466.50p and 1,769.75p per share. The issued share capital as at 31 December 2019 is shown in note 24 to the consolidated financial statements.

Authority to purchase shares

At the 2019 AGM, shareholders passed a resolution authorising the purchase of up to 201m ordinary shares in the Company (representing less than 10% of the issued ordinary shares) by market purchase. During the year, 33,544,007 ordinary shares with a nominal value of 14 51/116p (representing 1.69% of the ordinary shares in issue on 31 December 2019) were purchased under this and the previous authority, for a total consideration of £600m, including expenses, and subsequently transferred to be held in treasury. The purpose of the share buyback is to reduce the capital of the Company.

On 6 December 2019, the Company cancelled 33.3m ordinary shares held in treasury. Therefore, as at 31 December 2019 there were 42,267,027 ordinary shares held in treasury, representing 2.1% of the issued ordinary shares. A further 4,993,953 ordinary shares were purchased between 2 January 2020 and the date of this report. The authority to make market purchases will expire at the 2020 AGM, at which a resolution to further extend the authority will be submitted to shareholders.

Substantial share interests

As at 31 December 2019, the Company had been notified by the following shareholders that they held an interest of 3% or more in voting rights of its issued share capital pursuant to Rule 5 of the Disclosure and Transparency Rules (DTR):

Notifications received as at 31 December 2019	% of voting rights
■ BlackRock, Inc	7.84%
■ Invesco Limited	4.99%

The percentage interests stated above are as disclosed at the date on which the interests were notified to the Company and, as at 12 February 2020, the Company had not received any further notifications under DTR 5.

Employee Benefit Trust

The trustee of the Employee Benefit Trust held an interest in 6,753,010 ordinary shares in the Company (representing 0.3% of the issued ordinary shares) as at 31 December 2019. The trustee may vote or abstain from voting any shares it holds in any way it sees fit.

Significant agreements – change of control

There are a number of borrowing agreements including credit facilities that, in the event of a change of control of RELX PLC and, in some cases, a consequential credit rating downgrade to sub-investment grade may, at the option of the lenders, require repayment and/or cancellation as appropriate. There are no arrangements between the Company and its Directors or employees providing for compensation for loss of office or employment that occurs specifically because of a takeover, merger or amalgamation with the exception of provisions in the Company's share plans which could result in options or awards vesting or becoming exercisable on a change of control.

Articles

The Company's Articles of Association (the 'Articles'), which were amended once during the year at the Company's 2019 Annual General Meeting, may only be amended by a special resolution of shareholders passed at a general meeting of the Company.

Appointment and replacement of Directors

The appointment, re-appointment and replacement of Directors is governed by the Articles, the Companies Act 2006 and related legislation. Shareholders maintain their right to appoint and re-appoint Directors by way of an ordinary resolution in accordance with the Articles. The Directors may appoint additional or replacement Directors, who may only serve until the following AGM of the Company, at which time they must retire and, if appropriate, seek election by the Company's shareholders. A Director may be removed from office by the Company as provided for by applicable law, in certain circumstances set out in the Articles, and at a general meeting of the Company by the passing of an ordinary resolution.

The Articles provide for a Board of Directors consisting of not fewer than two, but not more than 20 Directors, who manage the business and affairs of the Company.

Powers of Directors

Subject to the provisions of the Companies Act 2006, the Articles and any directions given by special resolutions, the business of the Company shall be managed by the Board which may exercise all the powers of the Company.

Directors' indemnity

In accordance with its Articles, the Company has granted its Directors an indemnity, to the extent permitted by law, in respect of liabilities incurred as a result of their office. This indemnity was in place for Directors that served at any time during the 2019 financial year, and also for each serving Director as at the date of approval of this report. The Company also purchased and maintained throughout the year directors' and officers' liability insurance in respect of itself and its Directors.

Related party transactions

Internal controls are in place to ensure that any related party transactions involving Directors or their connected persons are carried out on an arm's-length basis and are properly recorded and disclosed where appropriate.

Conflicts of interest

Under the Companies Act 2006, the Directors have a duty to avoid situations in which they have, or could have, a direct or indirect interest that conflicts with the interests of the Company. The Board has established formal procedures for identifying, assessing and reviewing any situations where a Director has an interest that conflicts, or may possibly conflict, with the interests of the Company.

The Nominations Committee considers any such conflict or potential conflict and makes a recommendation to the Board on whether to authorise it, as permitted under the Company's Articles. In reaching its decision, the Board is required to act in a way it considers would be most likely to promote the success of the Company and may impose limits or conditions when giving its authorisation, if it thinks this is appropriate. Actual or potential conflicts of interest are reviewed annually by the Nominations Committee.

No contract existed during the year in relation to the Company's business in which any Director was materially interested.

Financial Instruments

The Group's financial risk management objectives and policies, including hedging activities and exposure to risks, are described in note 18 to the consolidated financial statements on pages 157 to 162.

Political donations

The Group does not make donations to European Union (EU) political organisations or incur EU political expenditure. In the US, Group companies donated £60,351 (2018: £58,763) to political organisations. In line with US law, these donations were not made at federal level, but only to candidates and political parties at state and local levels.

Employee relations

The Group is committed to employee involvement and participation. Where appropriate, major announcements are communicated to employees through internal briefings. Information on performance, development, organisational changes and other matters of interest is communicated through briefings and electronic bulletins.

The Company is an equal opportunity employer and does not discriminate on the grounds of race, gender or other characteristics in its recruitment or employment policies. The Group seeks opinions from employees through a triennial survey. The last employee survey was carried out in 2018. Certain employees throughout the Group are eligible to participate in the Group's share incentive plans.

Disabled persons

RELX has a positive approach to inclusion and diversity. Details of the Group's Inclusion and Diversity Policy are set out on page 87, which is incorporated into this Directors' Report by reference. The Group is committed to the full and fair treatment of people with disabilities in relation to job applications, training, promotion and career development. Where existing employees become disabled, our policy is to provide continuing employment, support and training wherever practicable.

Disclosures required under UK Listing Rule 9.8.4

The information required by Listing Rule 9.8.4 is set out on the pages below:

Information required	Page
(1) Interest capitalised by the Group	n/a
(2) Publication of unaudited financial information	n/a
(4) Long-term incentive schemes	n/a
(5) Waiver of emoluments by a director	n/a
(6) Waiver of future emoluments by a director	n/a
(7) Non pro-rata allotments for cash (issuer)	n/a
(8) Non pro-rata allotments for cash (major subsidiaries)	n/a
(9) Parent participation in a placing by a listed subsidiary	n/a
(10) Contracts of significance	n/a
(11) Provision of services by a controlling shareholder	n/a
(12) Shareholder waiver of dividends	150
(13) Shareholder waiver of future dividends	150
(14) Agreements with controlling shareholders	n/a

Financial statements and accounting records

The Directors are responsible for preparing the Directors' Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and Article 4 of the IAS Regulation. The Directors have elected to prepare the individual company financial statements in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework. Under company law the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period.

In preparing the individual company financial statements, the Directors are required to: select suitable accounting policies and then apply them consistently; make judgements and accounting estimates that are reasonable and prudent; state whether Financial Reporting Standard 101 Reduced Disclosure Framework has been followed, subject to any material departures being disclosed and explained in the financial statements; and prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Company will continue in business.

In preparing the Group financial statements, IAS1 requires that Directors: properly select and apply accounting policies; present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information; provide additional disclosures when compliance with the specific requirements of IFRS are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and make an assessment of the Company's ability to continue as a going concern.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Directors' responsibility statement

Each of the Directors, whose names and roles can be found on pages 64 and 65, confirms that, to the best of their knowledge:

- the consolidated financial statements, prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group;
- the individual company financial statements, prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (IFRS 101), give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company; and
- the Directors' Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal and emerging risks and uncertainties that it faces.

Having taken into account all of the matters considered by the Board and brought to the attention of the Board during the year, the Directors are satisfied that the Annual Report and Financial Statements, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

Neither the Company nor the Directors accept any liability to any person in relation to the Annual Report except to the extent that such liability could arise under English law. Accordingly, any liability to a person who has demonstrated reliance on any untrue or misleading statement or omission shall be determined in accordance with Section 90A of the Financial Services and Markets Act 2000.

Disclosure of information to auditors

In accordance with Section 418 of the Companies Act 2006, each Director in office at the date of this Directors' Report is approved, confirms that:

- so far as the Director is aware, there is no relevant audit information of which the Company's auditors are unaware; and
- he/she has taken all the steps that he/she ought to have taken as a Director to make himself/herself aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Going concern

The Directors' statement regarding the appropriateness of adopting the going concern basis of accounting is set out on page 83, which is incorporated into this Directors' Report by reference.

Viability statement

The Directors' statement regarding the long-term viability of the Group is set out on page 84, which is incorporated into this Directors' Report by reference.

Auditors

Resolutions for the re-appointment of Ernst & Young LLP as auditors of the Company and to authorise the Audit Committee, on behalf of the Board, to determine their remuneration will be submitted to shareholders at the 2020 AGM.

Annual General Meeting

The 2020 Annual General Meeting will be held at 10.00am on 23 April 2020 at the Amba Hotel, Strand, London, WC2N 5HX.

By order of the Board

Henry Udow

Company Secretary

12 February 2020

Registered Office

1-3 Strand

London

WC2N 5JR

Financial statements and other information

In this section

- 120 Independent auditor's report
- 128 Consolidated financial statements
- 133 Notes to the consolidated financial statements
- 175 5 year summary

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Independent auditor's report to the members of RELX PLC

OPINION

In our opinion:

- RELX PLC and its subsidiaries, joint ventures and associates ("RELX")'s group financial statements and parent company financial statements (the "financial statements") give a true and fair view of the state of the group's and of the parent company's affairs as at 31 December 2019 and of the group's profit for the year then ended;
- the group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006, and, as regards the group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements of RELX PLC which comprise:

Group	Parent company
Consolidated income statement for the year then ended	Statement of financial position as at 31 December 2019
Consolidated statement of comprehensive income for the year then ended	Statement of changes in equity for the year then ended
Consolidated statement of cash flows for the year then ended	Related notes 1 to 4 to the financial statements including a summary of significant accounting policies
Consolidated statement of financial position as at 31 December 2019	
Consolidated statement of changes in equity for the year then ended	
Related notes 1 to 29 to the financial statements, including a summary of significant accounting policies	

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report below. We are independent of the group and parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO PRINCIPAL RISKS, GOING CONCERN AND VIABILITY STATEMENT

We have nothing to report in respect of the following information in the annual report, in relation to which the ISAs (UK) require us to report to you whether we have anything material to add or draw attention to:

- the disclosures in the annual report set out on pages 58 to 61 that describe the principal risks and explain how they are being managed or mitigated;
- the directors' confirmation set out on page 58 in the annual report that they have carried out a robust assessment of the principal risks facing the entity, including those that would threaten its business model, future performance, solvency or liquidity;
- the directors' statement set out on page 83 in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the entity's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements.
- whether the directors' statement in relation to going concern required under the Listing Rules in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit; or
- the directors' explanation set out on page 84 in the annual report as to how they have assessed the prospects of the entity, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the entity will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

OVERVIEW OF OUR AUDIT APPROACH

Key audit matters	<ul style="list-style-type: none"> ■ Uncertain tax positions ■ Internally developed intangible assets ■ Revenue recognition ■ Finance systems
Audit scope	<ul style="list-style-type: none"> ■ We performed an audit of the complete financial information of six components and audit procedures on specific balances for a further six components. We also instructed one location to perform specified procedures. ■ The components where we performed full or specific audit procedures accounted for 84% of absolute profit before tax, 82% of revenue and 78% of total assets.
Materiality	<ul style="list-style-type: none"> ■ Overall materiality of £90m which represents 5% of profit before tax.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in our opinion thereon, and we do not provide a separate opinion on these matters.

RISK	OUR RESPONSE TO THE RISK	KEY OBSERVATIONS COMMUNICATED TO THE AUDIT COMMITTEE
Uncertain tax positions As described in note 9 to the consolidated financial statements and in the audit committee report (page 112), the Group is subject to tax in numerous jurisdictions. Its operational structure gives rise to potential tax exposures that require management to exercise judgement in making determinations as to the amount of tax that is payable. The Group reports cross-border transactions undertaken between subsidiaries on an arm's-length basis in tax returns in accordance with Organisation for Economic Co-operation and Development (OECD) guidelines. Transfer pricing relies on the exercise of judgement and it is reasonably possible for there to be a significant range of potential outcomes. The Group is subject to tax authority audits in multiple jurisdictions at any point in time and has a number of open tax enquiries. As a result, it has recognised a number of provisions against uncertain tax positions, the valuation of which requires significant assumptions and judgement, as described in note 9. We focused on this area due to the subjectivity in the quantification of the provision and the judgement around the trigger for recognition or release impacting the provision and the effective tax rate.	<p>Our procedures included obtaining an understanding of the tax provisioning processes and evaluating their design, as well as testing internal controls over the tax provisioning process. For example, we tested controls over management's review of the uncertain tax position provisions recorded, including the controls over the development of significant assumptions and judgments.</p> <p>Our procedures on the uncertain tax positions were performed centrally by the group team supported by overseas teams including professionals with specialised skills. Procedures included, among others [i] meeting with members of management responsible for tax to understand the Group cross-border transactions, status of significant provisions, and any changes to management's judgements in the year; [ii] reading correspondence with tax authorities and external advisors to inform our assessment of recorded estimates and evaluate the completeness of the provisions recorded; [iii] independently assessing management's significant assumptions and judgements to record or release provisions following tax audits, settlements and the expiry of timeframes with reference to other similar tax positions the Group has historically held and our knowledge of developments in the jurisdictions in which RELX maintain tax provisions; [iv] testing the underlying schedules for arithmetic accuracy, as well as with reference to applicable tax laws; and [v] evaluating the adequacy of tax disclosures.</p>	We reported our conclusions to the Audit Committee that we challenged the robustness of the key management judgements. We confirmed that we were satisfied that management's judgements in relation to the extent of provisions for uncertain tax positions are appropriate. We noted further that there continues to be a high degree of uncertainty about the eventual outcome of many of these provisions.

RISK	OUR RESPONSE TO THE RISK	KEY OBSERVATIONS COMMUNICATED TO THE AUDIT COMMITTEE
Internally developed intangible assets The Group capitalised internally developed intangible assets of £333 million in the current year (2018: £304 million) and has a year end net book value of £1,264 million (2018: £1,217 million). As described in note 15 to the consolidated financial statements and in the audit committee report (page 112), the capitalisation of costs related to the development of new products and business infrastructure, together with the economic useful lives applied to the resulting assets, requires the exercise of significant judgement. We focused on this area as it is inherently judgemental with respect to technical feasibility, intention and ability to complete the intangible asset, ability to use or sell the asset, ability to generate future economic benefits and ability to measure the costs reliably. As a result these expenditures may be inappropriately capitalised, amortised or valued.	We performed full and specific scope audit procedures over internally developed intangible assets in 4 locations, which covered 71% of the account balance. Procedures included obtaining an understanding of the processes which support the expenditure and subsequent capitalisation of internally developed intangible assets and evaluating their design, as well as testing controls for the capitalisation of internally generated intangible assets. For example, we tested controls over management's review and approval of new capital projects and the capitalisation criteria for costs incurred for the projects. Additionally, procedures included, among others (i) assessing the accounting policy and methodology for capitalisation of expenditures; (ii) evaluating the accuracy and valuation of amounts capitalised to assess that costs are directly attributable and necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management, which was done by assessing if capitalised costs related to an authorised capital project and met the criteria to be capitalised; and (iii) assessing the useful lives adopted based on related business cases and historical experience.	Based on the procedures performed, we did not identify any evidence of material misstatement in the capitalisation of internally developed intangible assets.
Revenue recognition As described in note 2 to the consolidated financial statements, the group earns revenue (£7.9bn recorded in 2019, compared to £7.5bn recorded in 2018) from a variety of sources among the different business areas, including annual subscriptions, transactional usage and exhibition fees. The nature of the risk associated with the accurate recording of revenue varies. We recognise that revenue is a key metric upon which the group is judged, that the group has annual internal targets, and that the group has incentive schemes that are partially impacted by revenue growth. We have determined that there is a risk in each of the business areas related to the opportunity to commit fraud in the respective revenue streams through manual adjustments or override of controls by management.	We performed full and specific scope audit procedures over revenue in 12 locations, which covered 82% of revenue. We performed procedures to address the specific risk in each business area. Procedures included, among others, (i) assessing the processes and testing controls over each significant revenue stream; (ii) evaluating the appropriateness of journal entries impacting revenue, as well as other adjustments made in the preparation of the financial statements; (iii) evaluating management's controls over such adjustments; (iv) inspecting a sample of contracts to check that revenue recognition was in accordance with the contract terms and the group's revenue recognition policies; (v) testing a sample of transactions around period end to test that revenue was recorded in the correct period; and (vi) for revenue streams that have judgemental elements, evaluating management's assumptions.	Based on the procedures performed, we did not identify evidence of material misstatement in the revenue recognised in the year.
Finance systems The group has many IT systems that are vital to the ongoing operations and to the integrity of the financial reporting process. Owing to the global nature of the group and its operations, the applications, associated infrastructure and IT processes that support significant business and financial processes are spread across a number of locations. These are delivered by a mix of in-house teams and third party support providers some of whom reside in different countries from the physical location of the IT infrastructure or the location of the RELX business users. Additionally, due to the rapidly changing IT landscape, the group undergoes numerous IT system migrations. Understanding the IT environment including interfaces between them was an area of audit focus to assess if transactions were being processed accurately.	We utilised professionals with specialised skills to support our evaluation of the design and operation of IT controls to address the group's control objectives and financial reporting risks. Procedures included, among others, (i) holding enquiries of management to understand the IT environment and walking through the financial processes end-to-end in order to understand where IT systems were integral to the group accounting processes; (ii) performing data analytic procedures in certain locations and business areas to understand the flow of transactions and perform specific test procedures; (iii) testing the IT general controls environment for the key applications; (iv) where appropriate, receiving reports from the service auditors of the outsourced systems and evaluating the adequacy of the work performed and following up on matters arising, performing further procedures as necessary; (v) testing system migrations, including testing of controls surrounding the migration; and (vi) where required, testing compensating controls or performing alternative procedures to complement the controls based audit approach.	Based on the procedures performed, we have not identified any misstatements in the financial statements due to any limitations of the IT systems. Our understanding and testing of IT systems and controls supported our audit approach.

In the prior year, our auditor's report included key audit matters in relation to carrying value of goodwill and acquired intangible assets, acquisition accounting for significant new business combinations and corporate simplification. In the current year, these matters were no longer identified as key audit matters as they related to either i) one-time occurrences in 2018 and are no longer significant in 2019, or ii) matters that are no longer deemed to have the greatest effect on overall audit strategy, the allocation of resources in the audit or directing the efforts of the engagement team.

AN OVERVIEW OF THE SCOPE OF OUR AUDIT

Tailoring the scope

Our assessment of audit risk, our evaluation of materiality and our allocation of performance materiality determine our audit scope for each entity within the group. Taken together, this enables us to form an opinion on the consolidated financial statements. We take into account size, risk profile, the organisation of the group and effectiveness of group-wide controls, changes in the business environment and other factors such as recent Internal audit results when assessing the level of work to be performed at each entity.

The group has centralised processes for key judgements and determination of accounting policies. Certain areas of audit focus, namely internally developed intangible assets, revenue recognition, and IT system management are decentralised processes delineated by business area. We have tailored our audit response accordingly and procedures for the areas of focus were performed or directed by the group audit team.

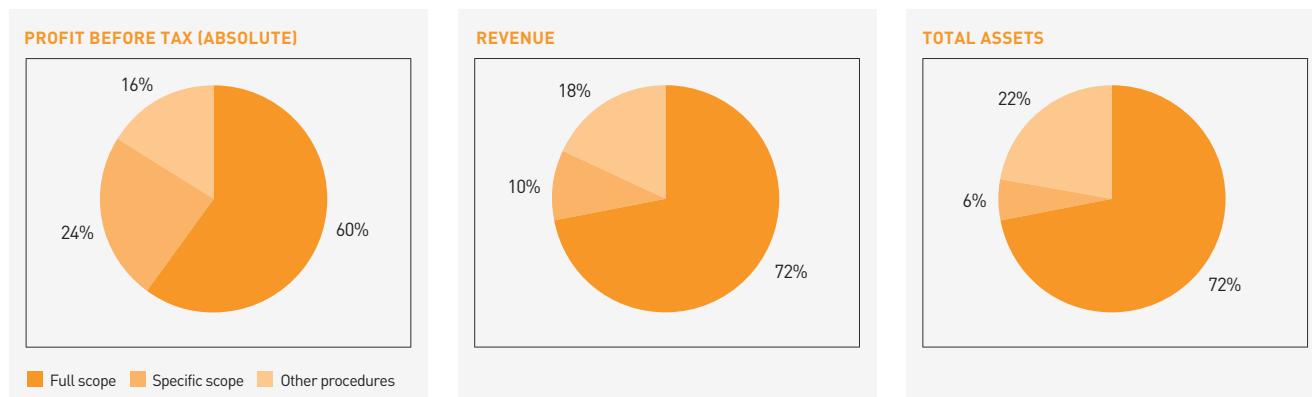
In assessing the risk of material misstatement to the group financial statements, and to ensure we had adequate quantitative coverage of significant accounts in the financial statements, we selected twelve components covering entities within the United Kingdom, the Netherlands, the United States, France, Switzerland, and Japan, which represent the principal business units within the group.

Of the twelve components selected, we performed an audit of the complete financial information of six components ("full scope components") which were selected based on their size or risk characteristics. For the remaining six components ("specific scope components"), we performed audit procedures on specific accounts within that component that we considered had the potential for the greatest impact on the significant accounts in the financial statements either because of the size of these accounts or their risk profile. We also instructed one location to perform specified procedures over manual journal entries to revenue.

The reporting components where we performed audit procedures accounted for 84% (2018: 81%) of the group's profit before tax on an absolute basis¹, 82% (2018: 80%) of the group's revenue and 78% (2018: 75%) of the group's total assets. For the current year, the full scope components contributed 60% (2018: 57%) of the group's profit before tax on an absolute basis, 72% (2018: 70%) of the group's revenue and 72% (2018: 67%) of the group's total assets. The specific scope components contributed 24% (2018: 23%) of the group's profit before tax on an absolute basis, 10% (2018: 10%) of the group's revenue and 6% (2018: 8%) of the group's total assets. The audit scope of these components may not have included testing of all significant accounts of the component but will have contributed to the coverage of significant accounts tested for the group.

Of the remaining components that together represent 16% of the group's profit before tax on an absolute basis, none are individually greater than 1% of the group's profit before tax on an absolute basis. For these components, we performed other procedures, including analytical review, review of internal audit reports, and testing of consolidation journals, intercompany eliminations and foreign currency translation recalculations at the group level to respond to any potential risks of material misstatement to the group financial statements.

The charts below illustrate the coverage obtained from the work performed by our audit teams.



(1) Coverage of profit before tax measured on an absolute basis for each component [components with a loss would be added to both the numerator and denominator].

Changes from the prior year

Changes from the prior year include instructing one location to perform specified procedures around revenue manual journal entries in the current year. In the prior year, we performed procedures around the accounting for significant acquisitions made in the prior year, which are no longer applicable in the current year in those locations.

Involvement with component teams

In establishing our overall approach to the Group audit, we determined the type of work that needed to be undertaken at each of the components by us, as the primary audit engagement team, or by component auditors from other EY global network firms operating under our instruction. Of the six full scope components, audit procedures were performed on three of these directly by the primary audit team. For the six specific scope components, where the work was performed by component auditors, we determined the appropriate level of involvement to enable us to determine that sufficient audit evidence had been obtained as a basis for our opinion on the Group as a whole.

The Group audit team continued to follow a programme of planned visits that has been designed to ensure that the Senior Statutory Auditor, or another Group audit partner, visit all full scope locations and specific scope locations on a rotational basis. During the current year's audit cycle, visits were undertaken by the primary audit team to the component teams in the United Kingdom, the Netherlands, the United States, France and Japan. These visits involved meeting local management and discussing the audit approach with the component audit team and any issues arising from their work. The Group audit team also participated in key discussions, via conference calls with all full and specific scope locations. The primary team interacted regularly with the component teams where appropriate during various stages of the audit, reviewed key working papers and were responsible for the scope and direction of the audit process. This, together with the additional procedures performed at Group level, gave us appropriate evidence for our opinion on the Group financial statements.

OUR APPLICATION OF MATERIALITY

We apply the concept of materiality in planning and performing the audit, in evaluating the effect of identified misstatements on the audit and in forming our audit opinion.

Materiality

The magnitude of an omission or misstatement that, individually or in the aggregate, could reasonably be expected to influence the economic decisions of the users of the financial statements. Materiality provides a basis for determining the nature and extent of our audit procedures.

We determined materiality for the group to be £90 million (2018: £90 million), which is 5% (2018: 5%) of profit before tax. We believe that profit before tax provides us with the best assessment of the requirements of the users of the financial statements.

We determined materiality for the Parent Company to be £90 million (2018: £90 million), which is 0.5% (2018: 0.5%) of equity.

Performance materiality

The application of materiality at the individual account or balance level. It is set at an amount to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality.

On the basis of our risk assessments, together with our assessment of the Group's overall control environment, our judgement was that performance materiality was 75% (2018: 75%) of our planning materiality, namely £68 million (2018: £67.5m). We have set performance materiality at this percentage due to our assessment of the control environment and the historic lack of significant audit findings.

Audit work at component locations for the purpose of obtaining audit coverage over significant financial statement accounts is undertaken based on a percentage of total performance materiality. The performance materiality set for each component is based on the relative scale and risk of the component to the group as a whole and our assessment of the risk of misstatement at that component. In the current year, the range of performance materiality allocated to components was £8.5 million to £53.5 million (2018: £19.4 million to £48.4 million).

Reporting threshold

An amount below which identified misstatements are considered as being clearly trivial.

We agreed with the Audit Committee that we would report to them all uncorrected audit differences in excess of £4.5 million (2018: £4.5 million), which is set at 5% of planning materiality, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds.

We evaluate any uncorrected misstatements against both the quantitative measures of materiality discussed above and in light of other relevant qualitative considerations in forming our opinion.

OTHER INFORMATION

The other information comprises the information included in the annual report set out on pages 2 to 118, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report in this regard.

In this context, we also have nothing to report in regard to our responsibility to specifically address the following items in the other information and to report as uncorrected material misstatements of the other information where we conclude that those items meet the following conditions:

- **Fair, balanced and understandable set out on page 83** – the statement given by the directors that they consider the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the group's performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- **Audit committee reporting set out on page 112** – the section describing the work of the audit committee does not appropriately address matters communicated by us to the audit committee; or
- **Directors' statement of compliance with the UK Corporate Governance Code set out on page 70** – the parts of the directors' statement required under the Listing Rules relating to the company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the group and the parent company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report or the directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors

As explained more fully in the directors' responsibilities statement set out on page 117, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are 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 ISAs (UK) 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 these financial statements.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

The objectives of our audit, in respect to fraud, are; to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and to respond appropriately to fraud or suspected fraud identified during the audit. However, the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the group and determined that the most significant are those that relate to the reporting framework (IFRS, FRS 101, the Companies Act 2006 and UK Corporate Governance Code) and the relevant tax compliance regulations in the jurisdictions in which the group operates.
- We understood how RELX PLC is complying with those frameworks by making enquiries of management, internal audit, those responsible for legal and compliance procedures and the company secretary. We corroborated our enquiries through our review of board minutes and papers provided to the Audit Committee.
- We assessed the susceptibility of the group's financial statements to material misstatement, including how fraud might occur by meeting with management from various parts of the business to understand where it considered there was susceptibility to fraud. We also considered performance targets and their propensity to influence on efforts made by management to manage earnings. We considered the programmes and controls that the group has established to address risks identified, or that otherwise prevent, deter and detect fraud; and how senior management monitors those programmes and controls. Where the risk was considered to be higher, we performed audit procedures to address each identified fraud risk. These procedures included testing manual journals and were designed to provide reasonable assurance that the financial statements were free from fraud or error.
- Based on this understanding we designed our audit procedures to identify non-compliance with such laws and regulations. Our procedures involved: journal entry testing, with a focus on manual consolidation journals and journals indicating large or unusual transactions based on our understanding of the business; enquiries of legal counsel, group management, internal audit, business area management at all full and specific scope management; and focused testing. In addition, we completed procedures to conclude on the compliance of the disclosures in the annual report and accounts with all applicable requirements.
- Any instances of non-compliance with laws and regulations were communicated by/to components and considered in our audit approach, if applicable.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

Other matters we are required to address

- We were appointed by the company on 21 April 2016 to audit the financial statements for the year ending 31 December and subsequent financial periods.
The period of total uninterrupted engagement including previous renewals and reappointments is four years, covering the years ending 2016 to 2019.
- The non-audit services prohibited by the FRC's Ethical Standard were not provided to the group or the parent company and we remain independent of the group and the parent company in conducting the audit.
- The audit opinion is consistent with the additional report to the audit committee.

USE OF OUR REPORT

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Hywel Ball (Senior statutory auditor)

for and on behalf of Ernst & Young LLP, Statutory Auditor

London 12 February 2020

Notes:

- (1) The maintenance and integrity of the RELX PLC web site is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the web site.
- (2) Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Consolidated income statement

FOR THE YEAR ENDED 31 DECEMBER		Note	2019 £m	2018 £m	2017 £m
Revenue	2		7,874	7,492	7,341
Cost of sales			(2,755)	(2,644)	(2,628)
Gross profit			5,119	4,848	4,713
Selling and distribution costs			(1,292)	(1,191)	(1,163)
Administration and other expenses			(1,767)	(1,725)	(1,682)
Share of results of joint ventures			41	32	37
Operating profit	3		2,101	1,964	1,905
Finance income	7		9	6	6
Finance costs	7		(314)	(217)	(205)
Net finance costs			(305)	(211)	(199)
Disposals and other non-operating items	8		51	(33)	15
Profit before tax			1,847	1,720	1,721
Current tax			(382)	(297)	(439)
Deferred tax			44	5	374
Tax expense	9		(338)	(292)	(65)
Net profit for the year			1,509	1,428	1,656
Attributable to:					
RELX PLC shareholders			1,505	1,422	1,648
Non-controlling interests			4	6	8
Net profit for the year			1,509	1,428	1,656
Earnings per share					
FOR THE YEAR ENDED 31 DECEMBER			2019	2018	2017
Basic earnings per share					
RELX PLC	10		77.4p	71.9p	81.6p
Diluted earnings per share					
RELX PLC	10		76.9p	71.4p	81.0p

Consolidated statement of comprehensive income

FOR THE YEAR ENDED 31 DECEMBER	Note	2019 £m	2018 £m	2017 £m
Net profit for the year		1,509	1,428	1,656
Items that will not be reclassified to profit or loss:				
Actuarial (losses)/gains on defined benefit pension schemes	6	(137)	(91)	233
Tax on items that will not be reclassified to profit or loss	9	23	15	(59)
Total items that will not be reclassified to profit or loss		(114)	(76)	174
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translation of foreign operations		(82)	207	(507)
Fair value movements on cash flow hedges	18	16	(59)	137
Transfer to net profit from cash flow hedge reserve	18	35	17	25
Tax on items that may be reclassified to profit or loss	9	(8)	9	(30)
Total items that may be reclassified to profit or loss		(39)	174	(375)
Other comprehensive (loss)/income for the year		(153)	98	(201)
Total comprehensive income for the year		1,356	1,526	1,455
Attributable to:				
RELX PLC shareholders		1,352	1,520	1,447
Non-controlling interests		4	6	8
Total comprehensive income for the year		1,356	1,526	1,455

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information

Consolidated statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER	Note	2019 £m	2018 £m	2017 £m
Cash flows from operating activities				
Cash generated from operations	11	2,724	2,555	2,526
Interest paid (including lease interest)		(175)	(179)	(169)
Interest received		4	24	6
Tax paid (net)		(464)	(415)	(449)
Net cash from operating activities		2,089	1,985	1,914
Cash flows from investing activities				
Acquisitions	11	(423)	(935)	(131)
Purchases of property, plant and equipment		(47)	(56)	(51)
Expenditure on internally developed intangible assets		(333)	(306)	(303)
Purchase of investments		(8)	(13)	(10)
Proceeds from disposals of property, plant and equipment		2	4	1
Gross proceeds from business disposals		82	34	84
Payments on business disposals		(40)	(29)	(43)
Dividends received from joint ventures		34	30	38
Net cash used in investing activities		(733)	[1,271]	(415)
Cash flows from financing activities				
Dividends paid to shareholders	13	(842)	(796)	(762)
Distributions to non-controlling interests		(9)	(8)	(10)
Increase/(decrease) in short-term bank loans, overdrafts and commercial paper	11	98	147	(148)
Issuance of term debt	11	729	958	873
Repayment of term debt	11	(617)	(211)	(712)
Repayment of leases	11	(102)	(95)	(89)
Receipts in respect of subleases	11	16	14	11
Disposal of non-controlling interest		6	–	–
Repurchase of ordinary shares	24	(600)	(700)	(700)
Purchase of shares by Employee Benefit Trust	24	(37)	(43)	(39)
Proceeds on issue of ordinary shares		29	21	32
Net cash used in financing activities		(1,329)	(713)	(1,544)
Increase/(decrease) in cash and cash equivalents	11	27	1	(45)
Movement in cash and cash equivalents				
At start of year		114	111	162
Increase/(decrease) in cash and cash equivalents		27	1	(45)
Exchange translation differences		(3)	2	(6)
At end of year		138	114	111

Consolidated statement of financial position

AS AT 31 DECEMBER	Note	2019 £m	2018 £m
Non-current assets			
Goodwill	14	6,824	6,899
Intangible assets	15	3,452	3,534
Investments in joint ventures	16	118	104
Other investments	16	133	151
Property, plant and equipment	17	180	198
Right-of-use assets	23	264	263
Other receivables		31	-
Deferred tax assets	9	239	455
Net pension assets	6	45	6
Derivative financial instruments	18	58	37
		11,344	11,647
Current assets			
Inventories and pre-publication costs	19	217	212
Trade and other receivables	20	2,067	2,015
Derivative financial instruments	18	23	10
Cash and cash equivalents	11	138	114
		2,445	2,351
Assets held for sale			
		-	1
Total assets		13,789	13,999
Current liabilities			
Trade and other payables	21	3,479	3,432
Derivative financial instruments	18	24	32
Borrowings	22	2,060	1,392
Taxation		372	450
Provisions		12	15
		5,947	5,321
Non-current liabilities			
Derivative financial instruments	18	10	37
Borrowings	22	4,354	4,973
Deferred tax liabilities	9	593	830
Net pension obligations	6	565	439
Other payables		108	-
Provisions		22	36
		5,652	6,315
Liabilities associated with assets held for sale			
		-	4
Total liabilities		11,599	11,640
Net assets		2,190	2,359
Capital and reserves			
Share capital	24	286	290
Share premium	24	1,443	1,415
Shares held in treasury	24	(834)	(734)
Translation reserve		292	374
Other reserves	25	979	984
Shareholders' equity		2,166	2,329
Non-controlling interests		24	30
Total equity		2,190	2,359

The consolidated financial statements were approved by the Board of Directors and authorised for issue on 12 February 2020.
 They were signed on its behalf by:

AJ Habgood
Chair

N Luff
Chief Financial Officer

Consolidated statement of changes in equity

	Note	Share capital £m	Share premium £m	Shares held in treasury £m	Translation reserve £m	Other reserves £m	Shareholders' equity £m	Non- controlling interests £m	Total equity £m
Balance at 1 January 2017		226	3,003	(1,471)	727	(215)	2,270	38	2,308
Total comprehensive income for the year		–	–	–	(507)	1,954	1,447	8	1,455
Dividends paid	13	–	–	–	–	(762)	(762)	(10)	(772)
Issue of ordinary shares, net of expenses		–	32	–	–	–	32	–	32
Repurchase of ordinary shares		–	–	(737)	–	–	(737)	–	(737)
Cancellation of shares	24	(4)	–	570	–	(566)	–	–	–
Increase in share based remuneration reserve (net of tax)		–	–	–	–	42	42	–	42
Settlement of share awards		–	–	37	–	(37)	–	–	–
Acquisitions		–	–	–	–	–	–	1	1
Disposal of business		–	–	–	–	–	–	(15)	(15)
Exchange differences on translation of capital and reserves	2	69	(30)	(50)	9	–	(1)	(1)	(1)
Balance at 1 January 2018		224	3,104	(1,631)	170	425	2,292	21	2,313
Total comprehensive income for the year		–	–	–	207	1,313	1,520	6	1,526
Dividends paid	13	–	–	–	–	(796)	(796)	(8)	(804)
Issue of ordinary shares, net of expenses	24	134	114	–	–	(227)	21	–	21
Repurchase of ordinary shares		–	–	(743)	–	–	(743)	–	(743)
Cancellation of shares	24	(68)	(1,795)	1,601	–	262	–	–	–
Increase in share based remuneration reserve (net of tax)		–	–	–	–	35	35	–	35
Settlement of share awards		–	–	35	–	(35)	–	–	–
Acquisitions		–	–	–	–	–	–	11	11
Exchange differences on translation of capital and reserves		–	(8)	4	(3)	7	–	–	–
Balance at 1 January 2019		290	1,415	(734)	374	984	2,329	30	2,359
Total comprehensive income for the year		–	–	–	(82)	1,434	1,352	4	1,356
Dividends paid	13	–	–	–	–	(842)	(842)	(9)	(851)
Issue of ordinary shares, net of expenses	24	1	28	–	–	–	29	–	29
Repurchase of ordinary shares		–	–	(637)	–	–	(637)	–	(637)
Bonus issue of ordinary share	24	4,000	–	–	–	(4,000)	–	–	–
Cancellation of bonus share	24	(4,000)	–	–	–	4,000	–	–	–
Cancellation of shares	24	(5)	–	504	–	(499)	–	–	–
Increase in share based remuneration reserve (net of tax)		–	–	–	–	33	33	–	33
Settlement of share awards		–	–	33	–	(33)	–	–	–
Acquisitions		–	–	–	–	–	–	(1)	(1)
Put option		–	–	–	–	(103)	(103)	–	(103)
Disposal of non-controlling interest		–	–	–	–	5	5	1	6
Exchange differences on translation of capital and reserves		–	–	–	–	–	–	(1)	(1)
Balance at 31 December 2019		286	1,443	(834)	292	979	2,166	24	2,190

Notes to the consolidated financial statements

for the year ended 31 December 2019

1 Basis of preparation and accounting policies

Basis of preparation

The shares of RELX PLC are traded on the London, Amsterdam and New York stock exchanges. RELX PLC and its subsidiaries, joint ventures and associates are together known as 'RELX'.

In preparing the consolidated financial statements, subsidiaries are accounted for under the acquisition method and investments in associates and joint ventures are accounted for under the equity method. All intra-group transactions and balances are eliminated.

On acquisition of a subsidiary, or interest in an associate or joint venture, fair values, reflecting conditions at the date of acquisition, are attributed to the net assets, including identifiable intangible assets acquired. Adjustments are made to bring accounting policies into line with those of the Group. The results of subsidiaries sold or acquired are included in the consolidated financial statements up to or from the date that control passes from or to the Group.

Non-controlling interests in the net assets of the Group are identified separately from shareholders' equity. Non-controlling interests consist of the amount of those interests at the date of the original acquisition and the non-controlling share of changes in equity since the date of acquisition.

The Directors of RELX PLC, having made appropriate enquiries, consider that adequate resources exist for the Group to continue in operational existence for the foreseeable future and that, therefore, it is appropriate to adopt the going concern basis in preparing the consolidated financial statements for the year ended 31 December 2019.

Accounting policies

The Group's consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and as issued by the International Accounting Standards Board (IASB). The accounting policies under IFRS are included in the relevant notes to the consolidated financial statements. The accounting policies below are applied throughout the financial statements and are unchanged from those applied in preparing the consolidated financial statements for the year ended 31 December 2018.

Foreign exchange translation

The consolidated financial statements are presented in sterling.

Transactions in foreign currencies are recorded at the rate of exchange prevailing on the date of the transaction. Non-monetary assets and liabilities that are measured at historical cost in foreign currencies are translated using the exchange rate at the date of the transaction. At each statement of financial position date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rate prevailing on the statement of financial position date. Exchange differences arising are recorded in the income statement other than where hedge accounting applies, as set out on pages 157 to 162.

Assets and liabilities of foreign operations are translated at exchange rates prevailing on the statement of financial position date. Income and expense items and cash flows of foreign operations are translated at the average exchange rate for the period. Significant individual items of income and expense and cash flows in foreign operations are translated at the rate prevailing on the date of transaction. Exchange differences arising are classified as equity and transferred to the translation reserve. When foreign operations are disposed of, the related cumulative translation differences are recognised within the income statement in the period.

The Group uses derivative financial instruments, primarily forward contracts, to hedge its exposure to certain foreign exchange risks. Details of the Group's accounting policies in respect of derivative financial instruments are set out on page 157.

Critical judgements and key sources of estimation uncertainty

The most significant accounting policies in determining the financial condition and results of the Group, and those requiring the most subjective or complex judgement, relate to and are included in the following notes:

- valuation of goodwill and intangible assets – notes 14 and 15;
- capitalisation of development spend – note 15;
- taxation – note 9; and
- accounting for defined benefit pension schemes – note 6.

Notes to the consolidated financial statements

for the year ended 31 December 2019

1 Basis of preparation and accounting policies (continued)

Other significant accounting policies

The accounting policy in respect of revenue recognition is also significant in determining the financial condition and results of the Group. The application of this policy is straightforward, and is included in note 2.

Standards and amendments effective for the year

RELX adopted IFRS 16 Leases for the year ended 31 December 2018, a year earlier than its mandatory effective date. The impact of the adoption of IFRS 16 was reflected in the consolidated financial statements for the year ended 31 December 2018. Other interpretations and amendments to IFRS effective for 2019 have not had a significant impact on the Group's accounting policies or reporting.

Standards, amendments and interpretations not yet effective

A number of amendments and interpretations have been issued which are not expected to have any significant impact on the accounting policies and reporting.

2 Revenue and segment analysis

Accounting policy

The Group's reported segments are based on the internal reporting structure and financial information provided to the Board.

Adjusted operating profit is the key segmental profit measure used by the Group in assessing performance. Adjusted operating profit is reconciled to operating profit on page 137.

Revenue arises from the provision of products and services under contracts with customers. In all cases, revenue is recognised 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, and is recognised when the customer obtains control of the good or service.

Revenue is stated at the transaction price, which includes allowance for anticipated discounts and returns and excludes customer sales taxes and other amounts to be collected on behalf of third-parties.

Where the goods or services promised within a contract are distinct, they are identified as separate performance obligations and are accounted for separately.

Where separate performance obligations are identified, total revenue is allocated on the basis of relative stand-alone selling prices or management's best estimate of relative value where stand-alone selling prices do not exist. Management estimates may include a cost-plus method or comparable product approach, but must be supported by objective evidence. A residual approach may be applied where it is not possible to derive a reliable management estimate for a specific component.

Revenue is recognised for the various categories as follows:

- Subscriptions – revenue comprises income derived from the periodic distribution or update of a product. Subscription revenue is generally invoiced in advance and recognised systematically over the period of the subscription. Recognition is either on a straight-line basis where the transaction involves the transfer of goods and services to the customer in a consistent manner over a specific period of time; or based on the value received by the customer where the goods and services are not delivered in a consistent manner.
- Transactional – revenue is recognised when control of the product is passed to the customer or the service has been performed. For exhibitions, revenue primarily comprises income from exhibitors and attendees at exhibitions. Exhibition revenue is recognised on occurrence of the exhibition.
- Advertising – revenue is recognised on publication or over the period of online display.

2 Revenue and segment analysis (continued)

RELX is a global provider of information-based analytics and decision tools for professional and business customers. Operating in four major market segments: Scientific, Technical & Medical provides information and analytics that help institutions and professionals progress science, advance healthcare and improve performance; Risk & Business Analytics provides customers with information-based analytics and decision tools that combine public and industry-specific content with advanced technology and algorithms to assist them in evaluating and predicting risk and enhancing operational efficiency; Legal provides legal, regulatory and business information and analytics that helps customers increase their productivity, improve decision-making and achieve better outcomes; and Exhibitions is a leading global events business. It combines face-to-face with data and digital tools to help customers learn about markets, source products and complete transactions.

ANALYSIS BY BUSINESS SEGMENT	Revenue			Adjusted operating profit		
	2019 £m	2018 £m	2017 £m	2019 £m	2018 £m	2017 £m
Scientific, Technical & Medical	2,637	2,538	2,473	982	942	914
Risk & Business Analytics	2,316	2,117	2,073	853	776	760
Legal	1,652	1,618	1,686	330	320	328
Exhibitions	1,269	1,219	1,109	331	313	287
Sub-total	7,874	7,492	7,341	2,496	2,351	2,289
Unallocated items	—	—	—	(5)	(5)	(5)
Total	7,874	7,492	7,341	2,491	2,346	2,284

2019	Scientific, Technical & Medical	Risk & Business Analytics	Legal	Exhibitions	Total
Revenue by geographical market					
North America	1,182	1,843	1,118	248	4,391
Europe*	635	317	340	508	1,800
Rest of world	820	156	194	513	1,683
Total revenue	2,637	2,316	1,652	1,269	7,874
Revenue by format					
Electronic	2,214	2,264	1,400	51	5,929
Face-to-face	8	25	9	1,218	1,260
Print	415	27	243	—	685
Total revenue	2,637	2,316	1,652	1,269	7,874
Revenue by type					
Subscriptions	1,970	872	1,287	—	4,129
Transactional	622	1,428	359	1,269	3,678
Advertising	45	16	6	—	67
Total revenue	2,637	2,316	1,652	1,269	7,874

* Europe includes revenue of £529m from the United Kingdom (2018: £527m; 2017: £521m).

Notes to the consolidated financial statements

for the year ended 31 December 2019

2 Revenue and segment analysis (continued)

2018	Scientific, Technical & Medical	Risk & Business Analytics	Legal	Exhibitions	Total
Revenue by geographical market					
North America	1,118	1,669	1,083	221	4,091
Europe	611	322	340	535	1,808
Rest of world	809	126	195	463	1,593
Total revenue	2,538	2,117	1,618	1,219	7,492

Revenue by format

Electronic	2,094	2,030	1,338	51	5,513
Face-to-face	7	36	10	1,168	1,221
Print	437	51	270	–	758
Total revenue	2,538	2,117	1,618	1,219	7,492

Revenue by type

Subscriptions	1,877	765	1,247	–	3,889
Transactional	615	1,322	365	1,219	3,521
Advertising	46	30	6	–	82
Total revenue	2,538	2,117	1,618	1,219	7,492

2017	Scientific, Technical & Medical	Risk & Business Analytics	Legal	Exhibitions	Total
Revenue by geographical market					
North America	1,045	1,658	1,145	230	4,078
Europe	617	308	340	429	1,694
Rest of world	811	107	201	450	1,569
Total revenue	2,473	2,073	1,686	1,109	7,341

Revenue by format

Electronic	1,995	1,967	1,384	42	5,388
Face-to-face	10	38	7	1,067	1,122
Print	468	68	295	–	831
Total revenue	2,473	2,073	1,686	1,109	7,341

Revenue by type

Subscriptions	1,776	732	1,291	1	3,800
Transactional	646	1,301	389	1,108	3,444
Advertising	51	40	6	–	97
Total revenue	2,473	2,073	1,686	1,109	7,341

Around half of RELX's revenue comes from subscription arrangements, and revenue for these is generally recognised on a straight-line basis over the time period covered by the agreement, in line with the provision of services. There are a number of multi-year contracts, mainly in Risk & Business Analytics, where revenue is recognised on the achievement of delivery milestones or other specified performance obligations. As at 31 December 2019, the aggregate amount of the transaction price of such contracts which relates to performance obligations which have not yet been delivered was approximately £162m (2018: £210m). It is expected that revenue will be recognised in relation to this amount over the next nine years.

ANALYSIS OF REVENUE BY GEOGRAPHICAL ORIGIN	2019 £m	2018 £m	2017 £m
North America	4,308	4,013	3,998
Europe	2,832	2,790	2,644
Rest of world	734	689	699
Total	7,874	7,492	7,341

Revenue by geographical origin from the United Kingdom in 2019 was £1,320m (2018: £1,144m; 2017: £1,085m).

2 Revenue and segment analysis (continued)

ANALYSIS BY BUSINESS SEGMENT	Expenditure on acquired goodwill and intangible assets			Capital expenditure additions			Amortisation of acquired intangible assets			Depreciation and other amortisation		
	2019 £m	2018 £m	2017 £m	2019 £m	2018 £m	2017 £m	2019 £m	2018 £m	2017 £m	2019 £m	2018 £m	2017 £m
Scientific, Technical & Medical	65	106	94	104	100	95	62	58	77	109	109	100
Risk & Business Analytics	47	852	-	96	92	83	170	161	141	89	73	64
Legal	139	30	6	155	145	153	24	33	52	150	147	142
Exhibitions	251	61	33	26	28	24	39	36	44	41	35	37
Total	502	1,049	133	381	365	355	295	288	314	389	364	343

Capital expenditure comprises additions to property, plant and equipment and internally developed intangible assets. Depreciation and other amortisation includes depreciation on right-of-use assets. Amortisation of acquired intangible assets includes amounts in respect of joint ventures of £1m (2018: £1m; 2017: £1m) in Exhibitions.

ANALYSIS OF NON-CURRENT ASSETS BY GEOGRAPHICAL LOCATION	2019 £m	2018 £m	2017 £m
North America	8,365	8,692	7,408
Europe	2,156	1,996	2,016
Rest of world	481	461	459
Total	11,002	11,149	9,883

Non-current assets held in the United Kingdom totalled £1,248m (2018: £988m; 2017: £1,026m). Non-current assets by geographical location exclude amounts relating to deferred tax, pension assets and derivative financial instruments.

Operating profit is reconciled to adjusted operating profit as follows:

RECONCILIATION OF OPERATING PROFIT TO ADJUSTED OPERATING PROFIT	2019 £m	2018 £m	2017 £m
Operating profit	2,101	1,964	1,905
Adjustments:			
Amortisation of acquired intangible assets	295	288	314
Acquisition-related costs	84	84	56
Reclassification of tax in joint ventures	12	11	10
Reclassification of finance income in joint ventures	(11)	(11)	(11)
Adjusted operating profit	2,491	2,346	2,284

The share of post-tax results of joint ventures of £41m (2018: £32m; 2017: £37m) included in operating profit comprised £3m (2018: nil; 2017: £5m) relating to Legal, £36m (2018: £31m; 2017: £32m) relating to Exhibitions and £2m (2018: £1m; 2017: nil) relating to Risk & Business Analytics.

Notes to the consolidated financial statements

for the year ended 31 December 2019

3 Operating profit

Accounting policy

Share based remuneration

The fair value of share based remuneration is determined at the date of grant and recognised as an expense in the income statement on a straight-line basis over the vesting period, taking account of the estimated number of shares that are expected to vest. Market based performance criteria are taken into account when determining the fair value at the date of grant. Non-market based performance criteria are taken into account when estimating the number of shares expected to vest. The fair value of share based remuneration is determined by use of a binomial or Monte Carlo simulation model as appropriate. All of the Group's share based remuneration is equity settled.

Operating profit is stated after charging/[crediting] the following:

	Note	2019 £m	2018 £m	2017 £m
Staff costs				
Wages and salaries		2,116	1,959	1,926
Social security costs		230	215	213
Pensions	6	120	135	95
Share based remuneration		32	41	39
Total staff costs		2,498	2,350	2,273
Depreciation and amortisation				
Amortisation of acquired intangible assets	15	294	287	313
Share of joint ventures' amortisation of acquired intangible assets		1	1	1
Amortisation of internally developed intangible assets	15	249	225	203
Depreciation of property, plant and equipment	17	58	62	65
Depreciation of right-of-use assets		82	77	75
Total depreciation and amortisation		684	652	657
Other expenses and income				
Cost of sales including pre-publication costs and inventory expenses		2,755	2,638	2,628
Short-term and low value lease expenses		20	18	28
Operating lease rentals income		(1)	[3]	[3]

The amortisation of acquired intangible assets is included within administration and other expenses.

The Group provides a number of share based remuneration schemes to Directors and employees. The principal share based remuneration schemes are the Executive Share Option Schemes (ESOS), the Long-Term Incentive Plan (LTIP), the Retention Share Plan (RSP) and the Bonus Investment Plan (BIP). Share options granted under ESOS are exercisable after three years and up to ten years from the date of grant at a price equivalent to the market value of the respective shares at the date of grant. Conditional shares granted under LTIP, RSP and BIP are exercisable after three years for nil consideration if conditions are met. Other awards principally relate to all employee share based saving schemes in the UK and the Netherlands. Further details are provided in the remuneration report on pages 88 to 111.

4 Auditor's remuneration

	2019 £m	2018 £m	2017 £m
Auditor's remuneration			
Payable to the auditors of RELX PLC	0.8	0.9	0.9
Payable to the auditors of the Group's subsidiaries	7.4	6.5	5.9
Audit services	8.2	7.4	6.8
Audit-related assurance services	0.6	0.9	0.8
Total audit and audit-related assurance services	8.8	8.3	7.6
Other services: Due diligence and other transaction-related services	0.1	2.7	0.3
Total non-audit related services	0.1	2.7	0.3
Total auditor's remuneration	8.9	11.0	7.9

Amounts payable to the auditors of the Group's subsidiaries include amounts for the audit of internal controls over financial reporting in accordance with the US Sarbanes-Oxley Act. Included in audit-related assurance services for 2019 are £0.1m in fees for services relating to RELX pension plans (2018: £0.1m). The amounts payable in 2017 to the auditors of RELX PLC also reflect amounts payable to the auditors of RELX NV. The previously reported 2018 fees paid to EY for audit services have been revised to include additional amounts for expenses incurred and final fees for statutory audits which took place subsequent to the audit of the RELX consolidated accounts.

5 Personnel

NUMBER OF PEOPLE EMPLOYED: FULL-TIME EQUIVALENTS	At 31 December			Average during the year		
	2019	2018	2017	2019	2018	2017
Business segment						
Scientific, Technical & Medical	8,100	7,900	7,500	8,000	7,700	7,500
Risk & Business Analytics	9,100	8,700	8,100	9,000	8,600	8,200
Legal	10,600	10,500	10,600	10,600	10,600	10,700
Exhibitions	4,600	4,200	4,000	4,400	4,100	4,000
Sub-total	32,400	31,300	30,200	32,000	31,000	30,400
Corporate/shared functions	800	800	800	800	800	800
Total	33,200	32,100	31,000	32,800	31,800	31,200
Geographical location						
North America	14,100	13,800	13,500	14,000	13,700	13,600
Europe	9,500	9,200	9,100	9,400	9,200	9,200
Rest of world	9,600	9,100	8,400	9,400	8,900	8,400
Total	33,200	32,100	31,000	32,800	31,800	31,200

The number of UK full-time equivalents as at 31 December 2019 was 5,400 (2018: 5,200; 2017: 5,000) and the average during the year was 5,300 (2018: 5,100; 2017: 5,000).

Notes to the consolidated financial statements

for the year ended 31 December 2019

6 Pension schemes

Accounting policy

The expense of defined benefit pension schemes and other post-retirement employee benefits is determined using the projected unit credit method and charged in the income statement as an operating expense, based on actuarial assumptions reflecting market conditions at the beginning of the financial year. Actuarial gains and losses are recognised in full in the statement of comprehensive income in the period in which they occur.

Past service costs and credits are recognised immediately at the earlier of when plan amendments or curtailments occur and when related restructuring costs or termination benefits are recognised. Settlements are recognised when they occur.

Net pension obligations in respect of defined benefit schemes are included in the statement of financial position at the present value of scheme liabilities, less the fair value of scheme assets. Where schemes are in surplus, i.e. assets exceed liabilities, the net pension assets are separately included in the statement of financial position. Any net pension asset is limited to the extent that the asset is recoverable.

The expense of defined contribution pension schemes and other employee benefits is charged in the income statement as incurred.

Critical judgement and key source of estimation uncertainty

At 31 December 2019, the Group operates defined benefit pension schemes in the UK and the US. These schemes require management to exercise judgement in estimating the ultimate cost of providing post-employment benefits, especially given the length of each scheme's liabilities. Accounting for defined benefit pension schemes involves judgement about uncertain events, including the life expectancy of the members, salary and pension increases, inflation, the future operation of each scheme and the rate at which the future pension payments are discounted. Estimates for these factors are used in determining the pension cost and liabilities reported in the financial statements. The estimates made around future developments of each of the critical assumptions are made in conjunction with independent actuaries, and each scheme is subject to a periodic review by independent actuaries. Information regarding the more significant assumptions used for valuation is provided below, together with a sensitivity analysis.

A number of pension schemes are operated around the world. The largest defined benefit schemes as at 31 December 2019 were in the UK and the US, and are summarised below.

Major defined benefit schemes in place at 31 December 2019

The UK scheme is a final salary scheme and is closed to new hires. Members accrue a portion of their final pensionable earnings based on the number of years of service. The US scheme is a cash balance scheme and was closed to future accruals effective 1 January 2019.

Each of the major defined benefit schemes is administered by a separate fund that is legally separated from the Group. The trustees of the pension funds in the UK and plan fiduciaries of the US scheme are required by law to act in the interest of the funds' beneficiaries. In the UK, the trustees of the pension fund are responsible for the investment policy with regard to the assets of the fund. The board of trustees consists of an equal number of company-appointed and member-nominated Directors. In the US, the fiduciary duties for the scheme are allocated between committees which are staffed by senior employees of the Group; the investment committee has the primary responsibility for the investment and management of plan assets. The funding of the Group's major schemes reflects the different rules within each jurisdiction.

6 Pension schemes (continued)

In the UK, the level of funding is determined by statutory triennial actuarial valuations in accordance with pensions legislation. Where the scheme falls below 100% funded status, the Group and the scheme trustees must agree on how the deficit is to be remedied. The UK Pensions Regulator has significant powers and sets out in codes and guidance the parameters for scheme funding. As a result of the 2018 triennial valuation, the Group's remaining deficit funding contributions to the scheme over the period 2020 to 2022 are £132m.

The US scheme has an annual statutory valuation which forms the basis for establishing the employer contribution each year (subject to ERISA and IRS minimums). Should the statutory funded status fall to below 100%, the US Pension Protection Act requires the deficit to be rectified with additional contributions over a seven-year period. The US scheme's funded status is in excess of 100%.

Employer cash contributions to defined benefit pension schemes in respect of 2020 are expected to be approximately £58m including a £44m pension deficit funding contribution relating to the UK scheme recovery plan.

The pension expense (excluding interest amounts) recognised in the income statement consists of:

	2019 £m	2018 £m	2017 £m
Defined benefit pension expense	11	47	4
Defined contribution pension expense	109	95	91
Total	120	142	95

£120m (2018 £135m; 2017: £95m) of the total pension cost is recognised within operating profit.

The amounts recognised in the income statement in respect of defined benefit pension schemes during the year are presented by major scheme as follows:

	2019			2018			2017		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Service cost	21	3	24	27	9	36	33	14	47
Settlement and past service (credits)/cost	(8)	(5)	(13)	11	-	11	(42)	(1)	(43)
Defined benefit pension expense	13	(2)	11	38	9	47	(9)	13	4
Net interest on net defined benefit obligation	9	3	12	6	3	9	10	5	15
Net defined benefit pension expense	22	1	23	44	12	56	1	18	19

In 2019, the past service credit relates to changes to both the UK and US schemes. In 2018, a past service cost was recognised to account for the impact of GMP equalisation in the UK. In 2017 settlement and past service credits primarily related to changes to the UK scheme.

Net interest on net defined benefit pension scheme liabilities is presented within net finance costs in the income statement.

The significant valuation assumptions, determined for each major scheme in conjunction with the respective independent actuaries, are presented below. The net defined benefit pension expense for each year is based on the assumptions and scheme valuations set at 31 December of the prior year.

AS AT 31 DECEMBER	2019		2018		2017	
	UK	US	UK	US	UK	US
Discount rate	2.05%	3.25%	2.85%	4.20%	2.60%	3.55%
Inflation	2.95%	2.50%	3.15%	2.50%	3.15%	2.50%

Discount rates are set by reference to high-quality corporate bond yields.

Mortality assumptions make allowance for future improvements in longevity and have been determined by reference to applicable mortality statistics. The average life expectancy assumptions are set out below:

AS AT 31 DECEMBER 2019	Male average life expectancy		Female average life expectancy	
	UK	US	UK	US
Member currently aged 60 years	85	86	88	88
Member currently aged 45 years	86	87	89	89

Notes to the consolidated financial statements

for the year ended 31 December 2019

6 Pension schemes (continued)

The amount recognised in the statement of financial position in respect of defined benefit pension schemes at the start and end of the year and the movements during the year were as follows:

	2019			2018		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Defined benefit obligation						
At start of year	(3,772)	(1,040)	(4,812)	(3,854)	(1,075)	(4,929)
Service cost	(21)	(3)	(24)	(27)	(9)	(36)
Past service credits/(cost)	8	5	13	(11)	–	(11)
Interest on pension scheme liabilities	(104)	(42)	(146)	(98)	(38)	(136)
Actuarial (loss)/gain on financial assumptions	(495)	(116)	(611)	91	85	176
Actuarial gain/(loss) arising from experience assumptions	22	(5)	17	4	2	6
Contributions by employees	(9)	–	(9)	(8)	–	(8)
Liabilities transferred on settlement	–	65	65	–	–	–
Benefits paid	120	77	197	131	56	187
Exchange translation differences	–	41	41	–	(61)	(61)
At end of year	(4,251)	(1,018)	(5,269)	(3,772)	(1,040)	(4,812)
Fair value of scheme assets						
At start of year	3,413	966	4,379	3,589	1,012	4,601
Interest income on plan assets	95	39	134	92	35	127
Return on assets excluding amounts included in interest income	304	166	470	(184)	(89)	(273)
Contributions by employer	66	6	72	39	7	46
Contributions by employees	9	–	9	8	–	8
Assets transferred on settlement	–	(65)	(65)	–	–	–
Benefits paid	(120)	(77)	(197)	(131)	(56)	(187)
Exchange translation differences	–	(40)	(40)	–	57	57
At end of year	3,767	995	4,762	3,413	966	4,379
Opening net deficit						
Service cost	(359)	(74)	(433)	(265)	(63)	(328)
Net interest on net defined benefit obligation	(21)	(3)	(24)	(27)	(9)	(36)
Settlement and past service credits/(cost)	(9)	(3)	(12)	(6)	(3)	(9)
Contributions by employer	8	5	13	(11)	–	(11)
Contributions by employees	66	6	72	39	7	46
Actuarial (losses)/gains	(169)	45	(124)	(89)	(2)	(91)
Exchange translation differences	–	1	1	–	(4)	(4)
Net pension obligation	(484)	(23)	(507)	(359)	(74)	(433)
Impact of asset ceiling	–	(13)	(13)	–	–	–
Overall net pension obligation	(484)	(36)	(520)	(359)	(74)	(433)

As at 31 December 2019, the defined benefit obligations comprised £5,016m (2018: £4,582m) in relation to funded schemes and £253m (2018: £230m) in relation to unfunded schemes.

The weighted average duration of defined benefit scheme liabilities is 19 years in the UK (2018: 19 years) and 13 years in the US (2018: 12 years). Deferred tax assets of £96m (2018: £86m) are recognised in respect of the pension scheme deficits.

A net pension asset has been recognised in relation to the US funded scheme after considering the guidance in IAS 19 – Employee Benefits and IFRIC 14. The split between net pension obligations and net pension assets is as follows:

	2019 £m	2018 £m
Net pension asset recognised	45	6
Net pension obligation	(565)	(439)
Overall net pension obligation	(520)	(433)

6 Pension schemes (continued)

Amounts recognised in the statement of comprehensive income are set out below:

	2019 £m	2018 £m	2017 £m
Gains and losses arising during the year:			
Experience gains/(losses) on scheme liabilities	17	6	(38)
Experience gains/(losses) on scheme assets	470	(273)	287
Actuarial (losses)/gains on the present value of scheme liabilities due to changes in:			
– discount rates	(743)	242	(102)
– inflation	142	–	69
– other actuarial assumptions	(10)	(66)	17
	(124)	(91)	233
Net cumulative losses at start of year	(704)	(613)	(846)
Net cumulative losses at end of year	(828)	(704)	(613)

Additionally a loss of £13m (2018: nil) is recognised in the statement of comprehensive income in relation to the asset ceiling.

The major categories and fair values of scheme assets at the end of the reporting period are as follows:

FAIR VALUE OF SCHEME ASSETS	2019			2018		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Equities	1,358	126	1,484	1,128	115	1,243
Liability matching assets	1,414	850	2,264	1,363	831	2,194
Property funds and ground leases	715	–	715	723	–	723
Direct lending	182	–	182	151	–	151
Cash and cash equivalents	75	13	88	26	4	30
Other	23	6	29	22	16	38
Total	3,767	995	4,762	3,413	966	4,379

Included within liability matching assets are government bonds totalling £1,486m (2018: £1,448m).

Assets and obligations associated with the schemes are sensitive to changes in the market values of assets and the market-related assumptions used to value scheme liabilities. In particular, adverse changes to asset values, discount rates or inflation could increase future pension costs and funding requirements.

Typically, the Group's schemes are exposed to: investment risks, whereby actual rates of return on plan assets may be below those rates used to determine the defined benefit obligations, and interest rate risks, whereby scheme deficits may increase if bond yields in the UK and the US decline and are not offset by returns in liability matching and other assets. The schemes are also exposed to other risks, such as unanticipated future increases in member longevity patterns and inflation, all potentially leading to an increase in scheme liabilities.

Investment policies of each scheme are intended to ensure continuous payment of defined benefit pensions in the short-term and long-term. Efforts are made to limit risks on marketable securities by adopting investment policies that diversify assets across geographies and among equities, liability matching assets, property funds, cash and other assets. Asset allocations are dependent on a variety of factors including the duration of scheme liabilities and the funded position of the plan.

All equities and bonds have quoted prices in active markets.

Sensitivity analysis

The valuation of the Group's pension scheme liabilities involves significant actuarial assumptions, being the life expectancy of the members, inflation and the rate at which the future pension payments are discounted. Differences arising from actual experience or future changes in assumptions may materially affect future pension charges. In particular, changes in assumptions for discount rates, inflation and life expectancies that are reasonably possible would have the following approximate effects on the defined benefit pension obligations:

	£m
Increase/decrease of 0.25% in discount rate	228
Increase/decrease of 0.25% in the expected inflation rate	105
Increase/decrease of one year in assumed life expectancy	193

The above analysis has been calculated on the same basis used to determine the defined benefit obligation recognised in the statement of financial position. There has been no change in the methods used to prepare the analysis compared with prior years. This sensitivity analysis may not be representative of the actual change in the defined benefit obligation as it is unlikely that changes in the above assumptions would occur in isolation as some of the assumptions may be correlated.

Notes to the consolidated financial statements

for the year ended 31 December 2019

7 Net finance costs

Accounting policy

Borrowing costs that are directly attributable to the acquisition, construction or production of an asset that takes a substantial period of time to bring to use are capitalised. All other interest on borrowings is expensed as incurred. The cost of issuing borrowings is generally expensed over the period of borrowing so as to produce a constant periodic rate of charge.

	2019 £m	2018 £m	2017 £m
Interest on short-term bank loans, overdrafts and commercial paper	(20)	(22)	(10)
Interest on term debt	(266)	(161)	(154)
Interest on lease liabilities	(15)	(14)	(17)
Total borrowing costs	(301)	(197)	(181)
Losses on loans and derivatives not designated as hedges	–	(10)	(9)
Fair value losses on designated fair value hedge relationships	–	(1)	–
Net financing charge on defined benefit pension schemes and other	(13)	(9)	(15)
Finance costs	(314)	(217)	(205)
Interest on bank deposits	3	4	3
Interest income on net finance lease receivables	2	2	2
Fair value gains on designated fair value hedge relationships	1	–	1
Gains on loans and derivatives not designated as hedges	3	–	–
Finance income	9	6	6
Net finance costs	(305)	(211)	(199)

A loss of £1m (2018: losses of £8m; 2017: gains of £63m) on interest rate derivatives designated as cash flow hedges was recognised in other comprehensive income and accumulated in the hedge reserve, and may be reclassified to the income statement in future periods. Gains of nil (2018: gains of £3m; 2017: gains of £65m) in total were transferred from the hedge reserve in the period. The movements in 2017 included gains of £78m related to foreign exchange movements on debt hedges which were reclassified immediately to the income statement and offset £78m of foreign exchange losses on the related debt.

The interest charge on term debt includes a charge of £99m in respect of the early redemption of bonds that were due to be repaid in October 2022. The redemption of these bonds took place in January 2020 and was committed to at 31 December 2019.

8 Disposals and other non-operating items

Accounting policy

Assets of businesses that are available for immediate sale in their current condition and for which a sales process is considered highly probable to complete are classified as assets held for sale and are carried at the lower of carrying value and fair value less costs to sell. Fair value is based on anticipated disposal proceeds, typically derived from firm or indicative offers from potential acquirers. Non-current assets are not amortised or depreciated following their classification as held for sale. Liabilities of businesses held for sale are also separately classified on the statement of financial position. Fair value movements in the venture capital portfolio are reported within disposals and other items – see note 16.

	2019 £m	2018 £m	2017 £m
Revaluation of investments	25	(11)	5
Gain/(loss) on disposal of businesses and assets held for sale	26	(22)	10
Net gain/(loss) on disposals and other non-operating items	51	(33)	15

9 Taxation

Accounting policy

Tax expense comprises current and deferred tax. Current and deferred tax are charged or credited in the income statement except to the extent that the tax arises from a transaction or event which is recognised, in the same or a different period, outside the income statement (either in other comprehensive income, directly in equity, or through a business combination), in which case the tax appears in the same statement as the transaction that gave rise to it.

Current tax is the amount of corporate income taxes expected to be payable or recoverable based on the profit for the period as adjusted for items that are not taxable or not deductible, and is calculated using tax rates and laws that were enacted or substantively enacted at the date of the statement of financial position. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

Current tax includes amounts provided in respect of uncertain tax positions when management expects that, upon examination of the uncertainty by a tax authority in possession of all relevant knowledge, it is more likely than not that an economic outflow will occur. Changes in facts and circumstances underlying these provisions are reassessed at the date of each statement of financial position, and the provisions are remeasured as required to reflect current information.

Deferred tax is recognised on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the statement of financial position. Deferred tax is calculated using tax rates and laws that have been enacted or substantively enacted at the end of the reporting period, and which are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax liabilities are generally recognised for all taxable temporary differences but not recognised for taxable temporary differences arising on investments in subsidiaries, associates and joint ventures where the reversal of the temporary difference can be controlled and it is probable that the difference will not reverse in the foreseeable future. Deferred tax liabilities are not recognised on temporary differences that arise from goodwill which is not deductible for tax purposes.

Deferred tax assets are recognised to the extent it is probable that taxable profits will be available against which the deductible temporary differences can be utilised, and are reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are not recognised in respect of temporary differences that arise on initial recognition of assets and liabilities acquired other than in a business combination. Deferred tax is not discounted.

Critical judgement and key source of estimation uncertainty

The Group is subject to tax in numerous jurisdictions, giving rise to complex tax issues that require management to exercise judgement in making tax determinations. As a multinational enterprise, our tax returns in the countries in which we operate are subject to tax authority audits as a matter of routine. While the Group is confident that tax returns are appropriately prepared and filed, amounts are provided in respect of uncertain tax positions that reflect the risk with respect to tax matters under active discussion with tax authorities, or which are otherwise considered to involve uncertainty.

Provisions against uncertain tax positions are measured using one of the following methods, depending on which of the methods management expects will better predict the amount it will pay over to the tax authority:

- The Single Best Estimate – where there is a single outcome that is more likely than not to occur. This will happen, for example, where the tax outcome is binary (such as whether an entity can deduct an item of expenditure) or the range of possible outcomes is narrow or concentrated on a single value. The most likely outcome may be that no tax is expected to be payable, in which case the provision is nil; or
- A Probability-Weighted Expected Value – where, on the balance of probabilities, something will be paid to the tax authority but the possible outcomes are widely dispersed with low individual probabilities (i.e. there is no single outcome more likely than not to occur). In this case, the provision is the sum of the probability-weighted amounts in the range.

In assessing provisions against uncertain tax positions, management uses in-house tax experts, professional firms and previous experience to inform the evaluation of risk. However, it remains possible that uncertainties will ultimately be resolved at amounts greater or smaller than the liabilities recorded.

In particular, although we report cross-border transactions undertaken between Group subsidiaries on an arm's-length basis in tax returns in accordance with OECD guidelines, transfer pricing relies on the exercise of judgement and it is frequently possible for there to be a range of legitimate and reasonable views. This means that it is impossible to be certain that the returns basis will be sustained on examination. Discussions with tax authorities relating to cross-border transactions and other matters are ongoing in each of our major trading jurisdictions. Although the timing and amount of final resolution of these uncertain tax positions cannot be reliably predicted, no significant impact on the profitability of the Group is expected in the near term.

Estimation of income taxes also includes assessments of the recoverability of deferred tax assets. Deferred tax assets are only recognised to the extent that they are considered recoverable based on existing tax laws and forecasts of future taxable profits against which the underlying tax deductions can be utilised. The recoverability of these assets is reassessed at the end of each reporting period, and changes in recognition of deferred tax assets will affect the tax liability in the period of that reassessment.

Notes to the consolidated financial statements

for the year ended 31 December 2019

9 Taxation (continued)

	2019 £m	2018 £m	2017 £m
Current tax			
United Kingdom	(141)	(71)	(104)
Rest of world	(241)	(226)	(335)
Total current tax charge	(382)	(297)	(439)
Deferred tax	44	5	374
Tax expense	(338)	(292)	(65)

Cash tax paid in the year was £464m (2018: £415m; 2017: £449m), which is different to the tax expense for the year set out above.

There are a number of reasons why the cash tax payments in a particular year will be different from the tax expense in the accounts:

Deferred tax:

- Tax expense includes deferred tax, which is an accounting adjustment arising from temporary differences;
- Temporary differences occur when an item has to be included in the income statement in one year but is taxed in another year; and
- For the purposes of acquisition accounting only, the Group recognises deferred tax liabilities arising on intangible assets. Any unwind of these deferred tax liabilities from the amortisation of intangible assets does not result in cash tax payments.

Timing differences:

- Tax payments relating to a particular year's profits are typically due partly in the year and partly in the following year.

Prior period adjustments:

- Current tax expense is the best estimate at the end of the period of cash tax expected to be paid; and
- To the extent the final liability is higher or lower than that estimate, any cash tax impact will occur in a later period.

Items recorded in equity and other comprehensive income:

- Some of the benefits of tax deductions related to share based payments, pensions and hedging are credited to equity or other comprehensive income rather than to tax expense, and so the cash tax liability will be different to the current tax expense in the income statement in years when those deductions are available.

Set out below is a reconciliation of the difference between tax expense for the period and the theoretical expense calculated by multiplying accounting profit by the applicable tax rate.

We believe the most meaningful applicable rate is that obtained by multiplying the accounting profits and losses of all consolidated entities by the applicable domestic rate in each of those entities' jurisdictions.

The net tax expense charged on profit before tax differs from the theoretical amount that would arise using the weighted average of tax rates applicable to accounting profits and losses of the consolidated entities, as follows:

	2019		2018		2017	
	£m	%	£m	%	£m	%
Profit before tax	1,847		1,720		1,721	
Tax at average applicable rates	(418)	22.6%	(361)	21.0%	(407)	23.6%
Tax effect of share of results of joint ventures	10	(0.5)%	8	(0.5)%	7	(0.4)%
Expenses not deductible for tax purposes	(3)	0.2%	(24)	1.4%	(15)	0.9%
Non-deductible costs of share based remuneration	(1)	0.1%	(1)	0.1%	(1)	0.1%
Non-deductible disposal-related gains and losses	4	(0.2)%	–	0.0%	(36)	2.1%
Deferred tax assets of the period not recognised	(15)	0.8%	(24)	1.4%	(10)	0.6%
Change in recognition of deferred tax assets or liabilities	12	(0.6)%	(15)	0.9%	16	(0.9)%
Other adjustments in respect of prior periods	73	(4.0)%	13	(0.8)%	35	(2.1)%
Exceptional tax credit	–	–	112	(6.5)%	346	(20.1)%
Tax expense	(338)	18.3%	(292)	17.0%	(65)	3.8%

The weighted average applicable tax rate for the year was 22.6% (2018: 21.0%, 2017: 23.6%), reflecting the applicable rates in the countries where the Group operates. The Group's future tax charge will be sensitive to the geographic mix of profits and losses and the tax rates and laws in force in the jurisdictions in which we operate.

9 Taxation (continued)

In the UK, a reduction in the corporation tax rate from 19% to 17% from April 2020 was enacted in 2016. However the current government stated in December 2019 that the corporation tax rate will remain at 19% instead of reducing to 17%. It is expected that this will be included in the UK Budget in March 2020 and enacted shortly afterwards. In the US, the Tax Cuts and Jobs Act included a reduction in the federal corporate tax rate from 35% to 21% from January 2018. In the Netherlands, a reduction in the corporate tax rate from 25% to 21.7% from 2021 was enacted in 2019. In total, the deferred tax effect of changes in tax rates for the year was a tax credit of £6m (2018: £8m, 2017: £346m).

The effective tax rate of 18.3% (2018:17%, 2017:3.8%) is lower than the weighted average applicable tax rate of 22.6% mainly because of a tax credit arising from the substantial resolution of certain prior year tax matters, which is included in other adjustments in respect of prior periods. In 2018 and 2017, the effective tax rate was also lower than the weighted average applicable tax rate due to exceptional tax credits. In 2018, the exceptional tax credit arose from the substantial resolution of certain prior year tax matters and the deferred tax effect of tax rate reductions in the Netherlands and the US. In 2017, the exceptional tax credit related to a one-off non-cash credit from a deferred tax adjustment arising from the US Tax Cuts and Jobs Act.

The following tax has been recognised in other comprehensive income or directly in equity during the year:

	2019 £m	2018 £m	2017 £m
Tax on items that will not be reclassified to profit or loss			
Tax on actuarial movements on defined benefit pension schemes	23	15	(59)
Tax on items that may be reclassified to profit or loss			
Tax on fair value movements on cash flow hedges	(8)	9	(30)
Net tax credit/(debit) recognised in other comprehensive income	15	24	(89)
Tax credit/(debit) on share based remuneration recognised directly in equity	6	(3)	8
Deferred tax assets	239	455	
Deferred tax liabilities	(593)	(830)	
Total	(354)		(375)

Movements in deferred tax liabilities and assets (before taking into consideration the offsetting of balances within the same jurisdiction) are summarised as follows:

	Deferred tax liabilities			Deferred tax assets				Total £m
	Excess of tax allowances over amortisation £m	Acquired intangible assets £m	Other temporary differences £m	Excess of amortisation over tax allowances £m	Tax losses carried forward £m	Pension balances £m	Other temporary differences £m	
Deferred tax (liability)/asset at								
1 January 2018	(267)	(426)	(302)	257	87	66	278	(307)
Credit/(charge) to profit	75	13	13	(51)	(32)	3	(16)	5
Credit/(charge) to equity/other comprehensive income	–	–	–	–	–	15	(3)	12
Acquisitions	–	(88)	–	–	37	–	–	(51)
Exchange translation differences	(12)	(26)	(17)	1	4	2	14	(34)
Deferred tax (liability)/asset at								
1 January 2019	(204)	(527)	(306)	207	96	86	273	(375)
Credit/(charge) to profit	48	9	19	(19)	(18)	(2)	7	44
Credit/(charge) to equity/other comprehensive income	–	–	(17)	–	–	13	10	6
Acquisitions	–	(44)	–	–	–	–	–	(44)
Exchange translation differences	6	19	14	(9)	(3)	(1)	(11)	15
Deferred tax (liability)/asset at								
31 December 2019	(150)	(543)	(290)	179	75	96	279	(354)

Other deferred tax liabilities include temporary differences in respect of property, plant and equipment, capitalised development spend and financial instruments. Other deferred tax assets include temporary differences in respect of share based remuneration provisions and financial instruments.

Notes to the consolidated financial statements

for the year ended 31 December 2019

9 Taxation (continued)

As a result of exemptions on dividends from subsidiaries and capital gains on disposal there are no significant taxable temporary differences associated with investments in subsidiaries, branches, associates and interests in joint arrangements.

Deferred tax assets in respect of tax losses and other deductible temporary differences have only been recognised to the extent that it is more likely than not that sufficient taxable profits will be available to allow the asset to be recovered. Accordingly, no deferred tax asset has been recognised in respect of unused trading losses and interest expenses of approximately £255m (2018: £213m) carried forward at year end. The deferred tax asset not recognised in respect of these losses and interest expenses is approximately £66m (2018: £52m). Of the unrecognised losses and interest expenses, £124m (2018: £93m) will expire if not utilised within ten years and £131m (2018: £121m) will expire after more than ten years or have no expiration date.

Deferred tax assets of approximately £6m (2018: £4m) have not been recognised in respect of tax losses and other temporary differences carried forward of £33m (2018: £24m), which can only be used to offset future capital gains.

10 Earnings per share

Accounting policy

Earnings per share ('EPS') is calculated by taking the reported net profit attributable to shareholders and dividing this by the total weighted average number of shares.

Adjusted earnings per share is calculated by dividing adjusted net profit attributable to RELX PLC shareholders by the total weighted average number of shares.

EARNINGS PER SHARE – FOR THE YEAR ENDED 31 DECEMBER			2019			2018			2017		
	Net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	EPS (pence)		Net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	EPS (pence)		Net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	EPS (pence)
Basic earnings per share	1,505	1,943.5	77.4p		1,422	1,977.2	71.9p		1,648	2,019.4	81.6p
Diluted earnings per share	1,505	1,956.2	76.9p		1,422	1,990.8	71.4p		1,648	2,035.2	81.0p

The diluted figures are calculated after taking account of potential additional ordinary shares arising from share options and conditional shares.

ADJUSTED EARNINGS PER SHARE			2019			2018			2017		
	Adjusted net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	Adjusted EPS (pence)		Adjusted net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	Adjusted EPS (pence)		Adjusted net profit attributable to RELX PLC shareholders £m	Weighted average number of shares (millions)	Adjusted EPS (pence)
Adjusted earnings per share	1,808	1,943.5	93.0p		1,674	1,977.2	84.7p		1,620	2,019.4	80.2p

RECONCILIATION OF ADJUSTED NET PROFIT ATTRIBUTABLE TO RELX PLC SHAREHOLDERS			2019 £m	2018 £m	2017 £m
Net profit attributable to RELX PLC shareholders			1,505	1,422	1,648
Adjustments (post-tax):					
Amortisation of acquired intangible assets			321	322	356
Acquisition-related costs			69	71	43
Net interest on net defined benefit pension obligation and other			10	7	11
Disposals and other non-operating items			(40)	19	1
Other deferred tax credits from intangible assets*			(57)	(55)	(93)
Exceptional tax credit			–	(112)	(346)
Adjusted net profit attributable to RELX PLC shareholders			1,808	1,674	1,620

* Movements on deferred tax liabilities arising on acquired intangible assets that do not qualify for tax amortisation.

11 Statement of cash flows

Accounting policy

Cash and cash equivalents comprise cash balances, call deposits and other short-term highly liquid investments and are held in the statement of financial position at fair value.

RECONCILIATION OF OPERATING PROFIT TO CASH GENERATED FROM OPERATIONS			2019 £m	2018 £m	2017 £m
Operating profit			2,101	1,964	1,905
Share of results of joint ventures			(41)	(32)	(37)
Amortisation of acquired intangible assets			294	287	313
Amortisation of internally developed intangible assets			249	225	203
Depreciation of property, plant and equipment			58	62	65
Depreciation of right-of-use assets			82	77	75
Share based remuneration			32	41	39
Total non-cash items			715	692	695
(Increase)/decrease in inventories and pre-publication costs			(14)	(7)	2
(Increase)/decrease in receivables			(116)	(89)	37
Increase/(decrease) in payables			79	27	(76)
Increase in working capital			(51)	(69)	(37)
Cash generated from operations			2,724	2,555	2,526
CASH FLOW ON ACQUISITIONS		Note	2019 £m	2018 £m	2017 £m
Purchase of businesses		12	(399)	(919)	(117)
Investment in joint ventures			-	-	(1)
Deferred payments relating to prior year acquisitions			(24)	(16)	(13)
Total			(423)	(935)	(131)
RECONCILIATION OF NET BORROWINGS			2019 £m	2018 £m	2017 £m
	Cash and cash equivalents £m	Borrowings £m	Related derivative financial instruments £m	Finance lease receivable £m	
At start of year	114	(6,365)	25	49	(6,177)
Increase/(decrease) in cash and cash equivalents	27	-	-	-	27
(Increase)/decrease in short-term bank loans, overdrafts and commercial paper	-	(98)	-	-	(98)
Issuance of term debt	-	(729)	-	-	(729)
Repayment of term debt	-	617	-	-	617
Repayment of leases	-	102	-	(16)	86
Change in net borrowings resulting from cash flows	27	(108)	-	(16)	(97)
Borrowings in acquired businesses	-	(6)	-	-	(6)
Remeasurement and derecognition of leases	-	(28)	-	-	(28)
Inception of leases	-	(62)	-	2	(60)
Fair value and other adjustments to borrowings and related derivatives	-	(123)	29	-	(94)
Exchange translation differences	(3)	278	(2)	(2)	271
At end of year	138	(6,414)	52	33	(6,191)

Net borrowings comprise cash and cash equivalents, loan capital, lease liabilities and receivables, promissory notes, bank and other loans, derivative financial instruments that are used to hedge certain borrowings and adjustments in respect of cash collateral received/paid. The Group monitors net borrowings as part of capital and liquidity management.

Notes to the consolidated financial statements

for the year ended 31 December 2019

12 Acquisitions

During the year, a number of acquisitions were made. The net assets of the businesses acquired are incorporated at their fair value to the Group. Provisional fair values of the consideration given and of the assets and liabilities acquired are summarised below.

	Fair value 2019 £m	Fair value 2018 £m	Fair value 2017 £m
Goodwill	257	626	77
Intangible assets	245	423	56
Property, plant and equipment	1	5	–
Current assets	20	24	3
Non current assets	4	12	–
Current liabilities	(53)	(72)	(16)
Borrowings	(6)	(12)	–
Deferred tax	(44)	(51)	(2)
Net assets acquired	424	955	118
Consideration (after taking account of £32m (2018: £27m; 2017: £7m) net cash acquired)	424	955	118
Less: consideration deferred to future years	(10)	(36)	(1)
Less: acquisition date fair value of equity interest	(15)	–	–
Net cash flow	399	919	117

Goodwill, being the excess of the consideration over the net tangible and intangible assets acquired, represents benefits which do not qualify for recognition as intangible assets, including: the ability of a business to generate higher returns than individual assets; skilled workforces; and acquisition synergies that are specific to the Group. In addition, goodwill arises on the recognition of deferred tax liabilities in respect of intangible assets for which amortisation does not qualify for tax deductions.

The fair values of the assets and liabilities acquired in the last 12 months are provisional pending the completion of the valuation exercises. Final fair values will be incorporated in the 2020 consolidated financial statements. There were no significant adjustments to the provisional fair values of prior year acquisitions established in 2018.

The businesses acquired in 2019 contributed £51m to revenue, increased adjusted operating profit by £8m, decreased net profit by £9m (after charging £17m of integration costs and amortisation of acquired intangibles) and contributed £3m to net cash outflow from operating activities for the part year under the Group's ownership and before taking account of acquisition financing costs. Had the businesses been acquired at the beginning of the year, on a pro forma basis the Group revenues, adjusted operating profit and net profit attributable to RELX PLC shareholders for the year would have been £7,897m, £2,487m and £1,501m respectively, before taking account of acquisition financing costs.

Since 31 December 2019, the Group has acquired or committed to acquire a number of businesses, for aggregate consideration of £0.6bn. These acquisitions include ID Analytics, a provider of credit and fraud solutions, and Emailage, a provider of email based fraud solutions, both of which will become part of Risk & Business Analytics.

13 Equity dividends

ORDINARY DIVIDENDS PAID IN THE YEAR	2019 £m	2018 £m	2017 £m
RELX PLC	842	420	400
RELX NV	–	376	362
Total	842	796	762

The RELX NV amount shown relates to dividends paid prior to the corporate simplification.

Ordinary dividends declared and paid in the year ended 31 December 2019, in amounts per ordinary share, comprise: a 2018 final dividend of 29.7p (2018: 27.7p; 2017: 25.7p) and a 2019 interim dividend of 13.6p (2018: 12.4p; 2017: 11.7p), giving a total of 43.3p (2018: 40.1p; 2017: 37.4p).

The Directors of RELX PLC have proposed a final dividend of 32.1p (2018: 29.7p; 2017: 27.7p), giving a total for the financial year of 45.7p (2018: 42.1p; 2017: 39.4p). The total cost of funding the proposed final dividend is expected to be £620m, for which no liability has been recognised at the statement of financial position date.

The Employee Benefit Trust has currently waived the right to receive dividends on RELX PLC shares. This waiver has been applied to dividends paid in 2019, 2018 and 2017.

14 Goodwill

Accounting policy

On the acquisition of a subsidiary or business, the purchase consideration is allocated between the net tangible and intangible assets on a fair value basis, with any excess purchase consideration representing goodwill. Goodwill arising on acquisitions also includes amounts corresponding to deferred tax liabilities recognised in respect of acquired intangible assets.

Goodwill is recognised as an asset and reviewed for impairment when there is an indicator that the asset may be impaired and at least annually. Any impairment is recognised immediately in the income statement and not subsequently reversed.

On disposal of a subsidiary or business, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

At each statement of financial position date, the carrying amounts of tangible and intangible assets and goodwill are reviewed to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount, which is the higher of value in use and fair value less costs to sell, of the asset is estimated in order to determine the extent, if any, of the impairment loss. Where the asset does not generate cash flows that are independent from other assets, value in use estimates are made based on the cash flows of the cash generating unit to which the asset belongs. Intangible assets with an indefinite useful life are tested for impairment at least annually and whenever there is any indication that the asset may be impaired.

If the recoverable amount of an asset or cash generating unit is estimated to be less than its net carrying amount, the net carrying amount of the asset or cash generating unit is reduced to its recoverable amount. Impairment losses are recognised immediately in the income statement in administration and other expenses.

Critical judgement and key source of estimation uncertainty

The carrying amounts of goodwill and indefinite lived intangible assets in each business are reviewed for impairment at least annually. The carrying amounts of all other intangible assets are reviewed where there are indications of possible impairment. An impairment review involves a comparison of the carrying value of the asset with estimated values in use based on the latest management cash flow projections, approved by the Board. Key areas of judgement in estimating the values in use of businesses are the growth in cash flows over a forecast period of up to five years, the long-term growth rate assumed thereafter and the discount rate applied to the forecast cash flows. A description of the key assumptions and sensitivities is provided below.

	2019 £m	2018 £m
At start of year	6,899	5,965
Acquisitions	257	626
Disposals/reclassified as held for sale	(64)	(25)
Exchange translation differences	(268)	333
At end of year	6,824	6,899

The carrying amount of goodwill is after cumulative amortisation of £1,178m [2018: £1,222m], which was charged prior to the adoption of IFRS, and £9m [2018: £9m] of subsequent impairment charges recorded in prior years.

Notes to the consolidated financial statements

for the year ended 31 December 2019

14 Goodwill (continued)

Impairment review

Impairment testing of goodwill and indefinite lived intangible assets is performed at least annually in accordance with the methodology described above. There were no charges for impairment of goodwill or indefinite lived intangible assets in 2019 (2018: nil).

Goodwill is compiled and assessed among groups of cash generating units, which represent the lowest level at which goodwill is monitored by management. Typically, acquisitions are integrated into existing business units, and the goodwill arising is allocated to the groups of cash generating units (CGUs) that are expected to benefit from the synergies of the acquisition. As the business areas have become increasingly integrated and globalised, the current CGU allocation reflects the global leverage of assets, skills, knowledge and technology platforms, and the monitoring of goodwill by management.

GOODWILL	2019 £m	2018 £m
Scientific, Technical & Medical	1,594	1,620
Risk & Business Analytics	3,186	3,283
Legal	1,428	1,465
Exhibitions	616	531
Total	6,824	6,899

The key assumptions used for each group of cash generating units are disclosed below:

KEY ASSUMPTIONS	2019		2018	
	Pre-tax discount rate	Nominal long-term market growth rate	Pre-tax discount rate	Nominal long-term market growth rate
Scientific, Technical & Medical	9.4%	3%	10.0%	3%
Risk & Business Analytics	10.0%	3%	11.5%	3%
Legal	10.6%	2%	12.2%	2%
Exhibitions	11.6%	3%	12.7%	3%

The pre-tax discount rates used are based on the Group's weighted average cost of capital, adjusted to reflect a risk premium specific to each business. The Group's weighted average cost of capital is derived from a risk free rate, a market risk premium, a risk adjustment (beta) and a cost of debt adjustment. The key assumptions within the forecast growth in the cash flows over a forecast period of up to five years are revenue growth, operating margin and cash conversion. Revenue growth and operating profit margin forecasts for each CGU are derived from past results adjusted by management based on salient current and future considerations. Cash conversion rates for each CGU are based on historical cash conversion rates. Nominal long-term market growth rates, which are applied after the forecast period of up to five years, do not exceed the long-term average growth prospects for the sectors and territories in which the businesses operate.

A sensitivity analysis has been performed based on changes in key assumptions considered to be reasonably possible by management: an increase in the discount rate of 0.5%, a decrease in the compound annual growth rate for cash flow in the five-year forecast period of 2.0%, and a decrease in the nominal long-term market growth rates of 0.5%. The sensitivity analysis shows that no impairment charges would result from these scenarios.

15 Intangible assets

Accounting policy

Intangible assets acquired as part of a business combination are stated in the statement of financial position at their fair value as at the date of acquisition, less accumulated amortisation. Internally generated intangible assets are stated in the statement of financial position at the directly attributable cost of creation of the asset, less accumulated amortisation.

Intangible assets acquired as part of business combinations comprise: market-related assets (e.g. trademarks, imprints, brands); customer-related assets (e.g. subscription bases, customer lists, customer relationships); editorial content; software and systems (e.g. application infrastructure, product delivery platforms, in-process research and development); contract-based assets (e.g. publishing rights, exhibition rights, supply contracts); and other intangible assets. Internally generated intangible assets typically comprise software and systems development where an identifiable asset is created that is probable to generate future economic benefits.

Intangible assets, other than journal titles determined to have indefinite lives, are amortised on a straight-line basis over their estimated useful lives. The estimated useful lives of intangible assets with finite lives are as follows: market and customer-related assets – 3 to 40 years; content, software and other acquired intangible assets – 3 to 20 years; and internally developed intangible assets – 3 to 10 years. Journal titles determined to have indefinite lives are not amortised and are subject to impairment review at least annually, including a review of events and circumstances to ensure that they continue to support an indefinite useful life.

Critical judgements and key sources of estimation uncertainty

On acquisition of a subsidiary or business, the purchase consideration is allocated between the net tangible and intangible assets other than goodwill on a fair value basis, with any excess purchase consideration representing goodwill. The valuation of acquired intangible assets represents the estimated economic value in use, using standard valuation methodologies, including as appropriate, discounted cash flow, relief from royalty and comparable market transactions. Acquired intangible assets are capitalised and amortised systematically over their estimated useful lives, subject to impairment review. The assumptions used are subject to management judgement.

Appropriate amortisation periods are selected based on assessments of the longevity of the brands and imprints, the strength and stability of customer relationships, the market positions of the acquired assets and the technological and competitive risks that they face. Certain intangible assets in relation to acquired science and medical publishing businesses have been determined to have indefinite lives. The longevity of these assets is evidenced by their long-established and well-regarded journal titles, and their characteristically stable market positions. The assumptions used are subject to management judgement.

Development spend encompasses investment in new products and other initiatives, ranging from the building of online delivery platforms, to launch costs of new services, to building new infrastructure and applications. Launch costs and other ongoing operating expenses of new products and services are expensed as incurred. The costs of building product applications, platforms and infrastructure are capitalised as intangible assets, where the investment they represent has demonstrable value and the technical and commercial feasibility is assured. Costs eligible for capitalisation must be incremental, clearly identified and directly attributable to a particular project. The resulting assets are amortised over their estimated useful lives. Impairment reviews are carried out at least annually where indicators of impairment are identified. Judgement is required in the assessment of the potential value of a development project, the identification of costs eligible for capitalisation and the selection of appropriate asset lives.

Notes to the consolidated financial statements

for the year ended 31 December 2019

15 Intangible assets (continued)

	Market and customer-related £m	Content, software and other £m	Total acquired intangible assets £m	Internally developed intangible assets £m	Total £m
Cost					
At 1 January 2018	3,519	3,492	7,011	2,691	9,702
Acquisitions	310	113	423	–	423
Additions	–	–	–	304	304
Disposals/reclassified as held for sale	(15)	(11)	(26)	(148)	(174)
Exchange translation differences	211	130	341	99	440
At 1 January 2019	4,025	3,724	7,749	2,946	10,695
Acquisitions	161	84	245	–	245
Additions	–	–	–	333	333
Disposals/reclassified as held for sale	(28)	(57)	(85)	(130)	(215)
Exchange translation differences	(158)	(116)	(274)	(108)	(382)
At 31 December 2019	4,000	3,635	7,635	3,041	10,676
Accumulated amortisation					
At 1 January 2018	1,907	3,046	4,953	1,555	6,508
Charge for the year	169	118	287	225	512
Disposals/reclassified as held for sale	(15)	(11)	(26)	(111)	(137)
Exchange translation differences	105	113	218	60	278
At 1 January 2019	2,166	3,266	5,432	1,729	7,161
Charge for the year	182	112	294	249	543
Disposals/reclassified as held for sale	(28)	(57)	(85)	(130)	(215)
Exchange translation differences	(91)	(103)	(194)	(71)	(265)
At 31 December 2019	2,229	3,218	5,447	1,777	7,224
Net book amount					
At 31 December 2018	1,859	458	2,317	1,217	3,534
At 31 December 2019	1,771	417	2,188	1,264	3,452

Included in content, software and other acquired intangible assets are assets with a net book value of £54m (2018: £80m) that arose on acquisitions completed prior to the adoption of IFRS that have not been allocated to specific categories of intangible assets. Internally developed intangible assets typically comprise software and systems development where an identifiable asset is created that is expected to generate future economic benefits.

Included in market and customer-related intangible assets are £114m (2018: £119m) of journal titles relating to Scientific, Technical & Medical determined to have indefinite lives based on an assessment of their historical longevity and stable market positions. Indefinite lived intangibles are tested for impairment at least annually. See note 14 for details of impairment testing.

16 Investments

Accounting policy

Investments, other than investments in joint arrangements and associates, are stated in the statement of financial position at fair value. Changes in the fair value of investments held as part of the venture capital portfolio are reported in disposals and other non-operating items in the income statement. All items recognised in the income statement relating to investments, other than investments in joint arrangements and associates, are reported as disposals and other non-operating items.

Venture capital investments and equity investments represent interests in unlisted securities. The fair value of unlisted securities is based on management's estimate of fair value based on standard valuation techniques, including market comparisons and discounts of future cash flows, having regard to maximising the use of observable inputs and adjusting for risk. Advice from valuation experts is used as appropriate.

All joint arrangements are classified as joint ventures because the Group shares joint control and has rights to the net assets of the arrangements. Investments in joint ventures and associates are accounted for under the equity method and stated in the statement of financial position at cost as adjusted for post-acquisition changes in the Group's share of net assets, less any impairment in value.

	2019 £m	2018 £m
Investments in joint ventures	118	104
Venture capital investments	133	151
Total	251	255

The value of venture capital investments and equity investments has been determined by reference to other observable market inputs or, when these are not available, by reference to inputs we believe would reflect the assumptions market participants would use. Gains and losses included in the consolidated income statement are provided in note 8.

An analysis of changes in the carrying value of investments in joint ventures is set out below:

	2019 £m	2018 £m
At start of year	104	102
Share of results of joint ventures	41	32
Dividends received from joint ventures	(34)	(30)
Additions	24	2
Disposals	(11)	-
Exchange translation differences	(6)	(2)
At end of year	118	104

Summarised aggregate information in respect of the Group's share of joint ventures is set out below:

	RELX's share	
	2019 £m	2018 £m
Revenue	123	101
Net profit for the year	41	32
 Total assets	112	96
Total liabilities	(58)	(49)
Net assets	54	47
Goodwill	64	57
Total	118	104

The Group's consolidated other comprehensive income includes no income or losses relating to joint ventures in either period.

Notes to the consolidated financial statements

for the year ended 31 December 2019

17 Property, plant and equipment

Accounting policy

Property, plant and equipment are stated in the statement of financial position at cost less accumulated depreciation. No depreciation is provided on freehold land. Freehold buildings and long leaseholds are depreciated over their estimated useful lives up to a maximum of 50 years. Short leases are written off over the duration of the lease. Depreciation is provided on other assets on a straight-line basis over their estimated useful lives as follows:

- land and buildings: land – not depreciated; leasehold improvements – shorter of life of lease and 10 years;
- fixtures and equipment: plant – 3 to 20 years; office furniture, fixtures and fittings – 5 to 10 years; computer systems, communication networks and equipment – 3 to 7 years.

	2019			2018		
	Land and buildings £m	Fixtures and equipment £m	Total £m	Land and buildings £m	Fixtures and equipment £m	Total £m
Cost						
At start of year	223	640	863	217	599	816
Acquisitions	1	–	1	–	5	5
Capital expenditure	5	42	47	5	51	56
Disposals/reclassified as held for sale	(8)	(59)	(67)	(8)	(40)	(48)
Exchange translation differences	(8)	(21)	(29)	9	25	34
At end of year	213	602	815	223	640	863
Accumulated depreciation						
At start of year	146	519	665	137	485	622
Charge for the year	9	49	58	9	53	62
Disposals/reclassified as held for sale	(7)	(59)	(66)	(6)	(40)	(46)
Exchange translation differences	(5)	(17)	(22)	6	21	27
At end of year	143	492	635	146	519	665
Net book amount	70	110	180	77	121	198

No depreciation is provided on freehold land of £14m (2018: £14m).

Amounts relating to right-of-use assets under IFRS 16 can be found in note 23.

18 Financial instruments

Accounting policy

Financial instruments comprise investments (other than investments in joint ventures or associates), trade receivables, cash and cash equivalents, payables and accruals, borrowings and derivative financial instruments.

Investments (other than investments in joint ventures and associates) are described in note 16. The fair value of such investments is based on standard valuation techniques, including market comparisons and discounts of future cash flows, having regard to maximising the use of observable inputs and adjusting for risk. (These investments are typically classified as either Level 2 or 3 in the IFRS 13 fair value hierarchy).

Trade receivables are carried in the statement of financial position at invoiced value less allowance for expected credit losses. Expected credit losses are based on the ageing of trade receivables, experience and circumstance. Borrowings and payables are recorded initially at fair value and subsequently carried at amortised cost (other than fixed rate borrowings in designated hedging relationships for which the carrying amount of the hedged portion of the borrowings is subsequently adjusted for the gain or loss attributable to the hedged risk).

Derivative financial instruments are used to hedge interest rate and foreign exchange risks. Where an effective hedge is in place against changes in the fair value of fixed rate borrowings, the hedged borrowings are adjusted for changes in fair value attributable to the risk being hedged with a corresponding income or expense included in the income statement within finance costs. The offsetting gains or losses from remeasuring the fair value of the related derivatives are also recognised in the income statement within finance costs. When the related derivative expires, is sold or terminated, or no longer qualifies for hedge accounting, the cumulative change in fair value of the hedged borrowing is amortised in the income statement over the period to maturity of the borrowing using the effective interest method.

Changes in the fair value of derivative financial instruments that are designated and effective as hedges of future cash flows are recognised (net of tax) in other comprehensive income and accumulated in the hedge reserve. With effect from 1 January 2018, the fair value amounts relating to foreign currency basis spreads are recorded in a separate component of equity in the cost of hedging reserve. If a hedged firm commitment or forecasted transaction results in the recognition of a non-financial asset or liability, then, at the time that the asset or liability is recognised, the associated gains or losses on the derivative that had previously been recognised in other comprehensive income are included in the initial measurement of the asset or liability. For hedges that do not result in the recognition of an asset or a liability, amounts deferred in the hedge reserve are recognised in the income statement in the same period in which the hedged item affects net profit or loss. Any ineffective portion of hedges is recognised immediately in the income statement.

Cash flow hedge accounting is discontinued when a hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument recognised in other comprehensive income is either retained in the hedge reserve until the firm commitment or forecasted transaction occurs, or, where a hedged transaction is no longer expected to occur, is immediately credited or expensed in the income statement.

Derivative financial instruments that are not designated as hedging instruments are recorded in the statement of financial position at fair value, with changes in fair value recognised in the income statement.

The fair values of derivative financial instruments represent the replacement costs calculated using observable market rates of interest and exchange. The fair value of long-term borrowings is calculated by discounting expected future cash flows at observable market rates. (These instruments are accordingly classified as Level 2 in the IFRS 13 fair value hierarchy.)

The main financial risks faced by the Group are liquidity risk, market risk – comprising interest rate risk and foreign exchange risk – and credit risk. Financial instruments are used to finance the Group's businesses and to manage interest rate and foreign exchange risks. The Group's businesses do not enter into speculative derivative transactions. Details of financial instruments subject to liquidity, market and credit risks are described below.

Liquidity risk

The Group maintains a range of borrowing facilities and debt programmes to fund its requirements at competitive rates.

The balance of long-term debt, short-term debt and committed bank facilities is managed to provide security of funding, taking into account the cash generation cycle of the business and the uncertain size and timing of acquisition spend. To accommodate the significant free cash flow generated by the Group and to capitalise on an inexpensive source of funding, a meaningful portion of the overall debt portfolio is typically kept short-term as long as there exists acceptable liquidity in the commercial paper markets and sufficient capacity under committed credit lines. The Group's treasury policies ensure adequate liquidity by requiring that (a) no more than \$1.5bn of term debt matures in any 12-month period, (b) the sum of term debt maturing over the ensuing 12 months plus short-term borrowings is less than the sum of available cash plus committed facilities and (c) minimum levels of borrowing with maturities over three and five years are maintained.

The treasury policies ensure debt efficiency by (a) targeting certain levels of short-term borrowings across a given year, (b) maintaining a weighted average maturity of the gross debt portfolio of approximately five years and (c) minimising surplus cash balances. From time to time, based on cash flow and market conditions, the Group may redeem term debt early or repurchase outstanding debt in the open market.

Notes to the consolidated financial statements

for the year ended 31 December 2019

18 Financial instruments (continued)

Debt is issued to meet the funding requirements of various jurisdictions and in the currencies that are needed. It is recognised that debt can act as a natural translation hedge of earnings, net assets and net cash flow in currencies other than the reporting currency. For this reason, the majority of the Group's net debt is denominated in US dollars and euros, reflecting the Group's largest geographical markets.

There were no changes to the Group's long-term approach to capital and liquidity management during the year.

The remaining contractual maturities for borrowings and derivative financial instruments are shown in the table below. The table shows undiscounted principal and interest cash flows and includes contractual gross cash flows to be exchanged as part of cross-currency interest rate swaps and forward foreign exchange contracts where there is a legal right of set-off.

	Carrying amount £m	Contractual cash flow							Total £m
		Within 1 year £m	1-2 years £m	2-3 years £m	3-4 years £m	4-5 years £m	More than 5 years £m		
Borrowings									
Fixed rate borrowings	(5,293)	(1,332)	(528)	(134)	(732)	(498)	(2,791)	(6,015)	
Floating rate borrowings	(779)	(779)	—	—	—	—	—	(779)	
Lease liabilities	(342)	(104)	(92)	(62)	(50)	(32)	(48)	(388)	
Derivative financial liabilities									
Interest rate derivatives	(4)	(1)	—	—	—	(1)	(2)	(4)	
Cross-currency interest rate swaps	(1)	(41)	(16)	(16)	(35)	(15)	(512)	(635)	
Forward foreign exchange contracts	(29)	(1,984)	(351)	(179)	(34)	—	—	(2,548)	
Derivative financial assets									
Interest rate derivatives	35	19	10	8	8	3	—	48	
Cross-currency interest rate swaps	14	31	7	7	26	7	515	593	
Forward foreign exchange contracts	32	1,977	354	185	35	—	—	2,551	
Total	(6,367)	(2,214)	(616)	(191)	(782)	(536)	(2,838)	(7,177)	

	Carrying amount £m	Contractual cash flow							Total £m
		Within 1 year £m	1-2 years £m	2-3 years £m	3-4 years £m	4-5 years £m	More than 5 years £m		
Borrowings									
Fixed rate borrowings	(5,315)	(752)	(610)	(552)	(879)	(732)	(2,555)	(6,080)	
Floating rate borrowings	(690)	(686)	—	—	—	—	(4)	(690)	
Lease liabilities	(360)	(104)	(92)	(75)	(47)	(30)	(63)	(411)	
Derivative financial liabilities									
Interest rate derivatives	(15)	(2)	(2)	(2)	(2)	(3)	(8)	(19)	
Cross-currency interest rate swaps	(1)	(48)	(21)	(21)	(21)	(39)	(557)	(707)	
Forward foreign exchange contracts	(53)	(1,498)	(375)	(181)	(25)	—	—	(2,079)	
Derivative financial assets									
Interest rate derivatives	21	12	13	3	1	5	3	37	
Cross-currency interest rate swaps	13	33	8	8	8	25	553	635	
Forward foreign exchange contracts	13	1,473	361	173	26	—	—	2,033	
Total	(6,387)	(1,572)	(718)	(647)	(939)	(774)	(2,631)	(7,281)	

The carrying amount of derivative financial liabilities comprises £4m (2018: £15m) in relation to fair value hedges, £13m (2018: £41m) in relation to cash flow hedges and £17m (2018: £13m) not designated as hedging instruments. The carrying amount of derivative financial assets comprises £50m (2018: £33m) in relation to fair value hedges, £27m (2018: £7m) in relation to cash flow hedges and £4m (2018: £7m) not designated as hedging instruments.

Other payables balance of £108m (2018: nil), including put options, are currently expected to be settled in 4 to 5 years.

18 Financial instruments (continued)

At 31 December 2019, the Group had access to a \$3,000m committed bank facility, consisting of various tranches with maturities through to July 2024, which was undrawn. This facility backs up short-term borrowings. All borrowings that mature within the next twelve months can be covered by the facility and by utilising available cash resources.

The committed bank facility is subject to a financial covenant typical to the Group's size and financial strength. The Group had significant headroom within this covenant for the year ended 31 December 2019. There are no financial covenants in any outstanding public bonds.

Market risk

The Group's primary market risks are interest rate fluctuations and exchange rate movements. Derivatives are used to manage the risks associated with interest rate and exchange rate movements and the Group does not enter into speculative derivatives. Where the impact of derivatives on the income statement and the statement of financial position could be significant, hedge accounting is applied (subject to satisfying the required criteria) as described in 'Hedge accounting' below. Derivatives used by the Group for hedging a particular risk are not specialised and are generally available from numerous sources. The impact of market risks on net post-employment benefit obligations and taxation is excluded from the following market risk sensitivity analysis.

Interest rate exposure management

The Group's interest rate exposure management policy aims to minimise interest costs with an acceptable level of year on year volatility. To achieve this, the Group uses fixed rate term debt and interest rate swaps to give a target mix of fixed rate and floating rate borrowings. Interest rate derivatives are used only to hedge an underlying risk and no net market positions are held.

At 31 December 2019, 46% of gross bank and bond borrowings were at fixed rate. A 100 basis point reduction in interest rates would result in an estimated decrease in net finance costs of £31m (2018: £32m), based on the composition of financial instruments including cash, cash equivalents, bank loans and commercial paper borrowings at 31 December 2019. A 100 basis point rise in interest rates would result in an estimated increase in net finance costs of £31m (2018: £32m).

The impact on net equity of a theoretical change in interest rates as at 31 December 2019 is restricted to the change in carrying value of floating rate to fixed rate interest rate derivatives in a designated cash flow hedge relationship and undesignated interest rate derivatives. A 100 basis point reduction in interest rates would result in an estimated decrease in net equity of £1m (2018: £1m) and a 100 basis point increase in interest rates would increase net equity by an estimated £1m (2018: £1m). The impact of a change in interest rates on the carrying value of fixed rate borrowings in a designated fair value hedge relationship would be offset by the change in carrying value of the related interest rate derivative. Fixed rate borrowings not in a designated hedging relationship are carried at amortised cost.

Foreign currency exposure management

Translation exposures arise on the earnings and net assets of individual businesses whose operational currencies are other than sterling. Some of these exposures are offset by denominating borrowings in US dollars, euros and other currencies. Currency exposures on transactions denominated in a foreign currency are generally hedged using forward contracts. In addition, recurring transactions and future investment exposures may be hedged, in advance of becoming contractual. The precise policy differs according to the specific circumstances of the individual businesses. Highly predictable future cash flows may be covered for transactions expected to occur during the next 24 months (50 months for the Scientific, Technical & Medical subscription businesses) within limits defined according to the period before the transaction is expected to become contractual. Cover takes the form of foreign exchange forward contracts. Further information is provided in 'Cash flow hedges' below.

A theoretical weakening of all currencies by 10% against sterling at 31 December 2019 would decrease the carrying value of net assets, excluding net borrowings, by £749m (2018: £782m). This would be offset to a degree by a decrease in net borrowings of £526m (2018: £625m). A strengthening of all currencies by 10% against sterling at 31 December 2019 would increase the carrying value of net assets, excluding net borrowings, by £749m (2018: £782m) and increase net borrowings by £526m (2018: £625m).

A retranslation of the Group's net profit for the year, assuming a 10% weakening of all foreign currencies against sterling but excluding transactional exposures, would reduce net profit by £129m (2018: £127m). A 10% strengthening of all foreign currencies against sterling on this basis would increase net profit for the year by £129m (2018: £127m).

Notes to the consolidated financial statements

for the year ended 31 December 2019

18 Financial instruments (continued)

Credit risk

The Group seeks to manage interest rate risk and limit foreign exchange risks described above by the use of financial instruments and as a result has a credit risk from the potential non-performance by the counterparties to these financial instruments, which are unsecured. The amount of this credit risk is normally restricted to the amounts of any hedge gain and not the principal amount being hedged. The Group also has a credit exposure to counterparties for the full principal amount of cash and cash equivalents. Credit risks are controlled by monitoring the credit quality of these counterparties, principally licensed commercial banks and investment banks with strong long-term credit ratings, and the amounts outstanding with each of them.

The Group has treasury policies in place which do not allow concentrations of risk with individual counterparties and do not allow significant treasury exposures with counterparties which are rated lower than A-/A3 by Standard & Poor's, Moody's and Fitch.

At 31 December 2019, cash and cash equivalents totalled £138m (2018: £114m), of which 93% (2018: 93%) was held with banks rated A-/A3 or better.

The Group also has credit risk with respect to trade receivables due from its customers, which include national and state governments, academic institutions and large and small enterprises including law firms, book stores and wholesalers. The concentration of credit risk from trade receivables is limited due to the large and broad customer base. Trade receivable exposures are managed locally in the business units where they arise. Where appropriate, business units seek to minimise this exposure by taking payment in advance and through management of credit terms. Expected credit losses are based on management's assessment of the risk taking into account the ageing profile, experience and circumstance. The maximum exposure to credit risk is represented by the carrying amount of each financial asset, including derivative financial instruments, recorded in the statement of financial position.

Included within trade receivables are the following amounts which are past due, after considering loss allowance: past due up to one month £215m (2018: £181m); past due two to three months £108m (2018: £93m); past due four to six months £39m (2018: £37m); and past due greater than six months £45m (2018: £35m).

Hedge accounting

The hedging relationships that are designated under IFRS 9 – Financial Instruments with effect from 1 January 2018, and/or that were previously designated under IAS 39 – Financial Instruments are described below.

Fair value hedges

The Group has entered into interest rate swaps and cross-currency interest rate swaps to hedge the exposure to changes in the fair value of fixed rate borrowings due to interest rate and foreign currency movements which could affect the income statement. The table below details the designated fair value hedge relationships that were in place at 31 December 2019, swapping fixed rate term debt issues denominated in US dollars (USD) and euros to floating rate USD and euro debt respectively for the whole or part of their term, together with the related fixed and floating rates.

FAIR VALUE HEDGE RELATIONSHIPS	31 December 2019 Principal amount £m	31 December 2018 Principal amount £m		Fixed rate	Floating rate
		31 December 2018 Principal amount £m	Fixed rate		
€550m loan notes and €550m interest rate swaps maturing 2020	(466)	(494)	2.5%	LIBOR+1.1%	
€500m bond and €500m interest rate swaps maturing 2021	(423)	(449)	0.4%	LIBOR+0.3%	
\$700m bond and \$700m interest rate swaps maturing 2023	(528)	(549)	3.5%	LIBOR+0.8%	
€500m bond and €500m interest rate swaps maturing 2024	(423)	(449)	1.0%	LIBOR+0.7%	
€600m bond and €600m/\$669.3m cross-currency interest rate swaps maturing 2025	(505)	(525)	1.3%	LIBOR+1.3%	
\$200m bond and \$200m interest rate swaps maturing 2027	(151)	(157)	7.2%	LIBOR+5.8%	
	(2,496)	(2,623)			

18 Financial instruments (continued)

The gains and losses on the borrowings and related derivatives designated as fair value hedges, which are included in the income statement as part of finance costs, together with the total carrying values of the borrowings and related derivatives included in the statement of financial position, for the three years ended 31 December 2019, 2018 and 2017 were as follows:

GAINS/(LOSSES) ON BORROWINGS AND RELATED DERIVATIVES AND CARRYING VALUES	1 January 2019 £m	Fair value movement gain/(loss) £m	Exchange gain/(loss) £m	31 December 2019 £m	Carrying values £m	
USD debt	13	(26)	-	(13)	(699)	
Related interest rate swaps	(14)	27	-	13	13	
	(1)	1	-	-	(686)	
EUR debt	(39)	(2)	2	(39)	(1,853)	
Related interest rate swaps	39	2	(2)	39	39	
	-	-	-	-	(1,814)	
Total relating to USD and EUR debt	(26)	(28)	2	(52)	(2,552)	
Total related interest rate swaps	25	29	(2)	52	52	
Net (loss)/gain on borrowings and related derivatives/total carrying value	(1)	1	-	-	(2,500)	
GAINS/(LOSSES) ON BORROWINGS AND RELATED DERIVATIVES AND CARRYING VALUES	1 January 2018 £m	Fair value movement gain/(loss) £m	Exchange gain/(loss) £m	31 December 2018 £m	Carrying values £m	
USD debt	12	-	1	13	(701)	
Related interest rate swaps	(12)	(1)	(1)	(14)	(14)	
	-	(1)	-	(1)	(715)	
EUR debt	(17)	(21)	(1)	(39)	(1,952)	
Related interest rate swaps	17	21	1	39	39	
	-	-	-	-	(1,913)	
Total relating to USD and EUR debt	(5)	(21)	-	(26)	(2,653)	
Total related interest rate swaps	5	20	-	25	25	
Net loss on borrowings and related derivatives/total carrying value	-	(1)	-	(1)	(2,628)	
GAINS/(LOSSES) ON BORROWINGS AND RELATED DERIVATIVES AND CARRYING VALUES	1 January 2017 £m	Fair value movement gain/(loss) £m	De-designated £m	Exchange gain/(loss) £m	31 December 2017 £m	Carrying values £m
USD debt	16	(1)	(2)	(1)	12	(147)
Related interest rate swaps	(16)	1	2	1	(12)	(12)
	-	-	-	-	-	(159)
EUR debt	(33)	17	-	(1)	(17)	(1,922)
Related interest rate swaps	32	(16)	-	1	17	17
	(1)	1	-	-	-	(1,905)
Total relating to USD and EUR debt	(17)	16	(2)	(2)	(5)	(2,069)
Total related interest rate swaps	16	(15)	2	2	5	5
Net (loss)/gain on borrowings and related derivatives/total carrying value	(1)	1	-	-	-	(2,064)

All fair value hedges were highly effective throughout the three years ended 31 December 2019.

Notes to the consolidated financial statements

for the year ended 31 December 2019

18 Financial instruments (continued)

Gross borrowings as at 31 December 2019 included £19m (2018: £23m) in relation to fair value adjustments to borrowings previously designated in a fair value hedge relationship which were de-designated in 2008. The related derivatives were closed out on de-designation with a cash inflow of £62m. £3m (2018: £3m) of these fair value adjustments were amortised in the year as a reduction to finance costs.

Cash flow hedges

As part of the Group's interest rate exposure management, it has entered into certain cross-currency interest rate derivatives, individual components of which have been accounted for as cash flow hedges (with the remaining components accounted for as fair value hedges, as described above). These comprised the following:

- 1 Interest rate derivatives which swapped a fixed rate CHF 275m bond, issued in June 2013 and maturing in December 2018, to floating rate USD debt for the whole of its term. The component relating to the swap of fixed rate CHF coupons to fixed rate USD cash flows was accounted for as a cash flow hedge under IAS 39 and was de-designated on 31 December 2017. The gains which had accumulated in the cash flow hedge reserve up to the date of de-designation were reclassified to the income statement as part of finance costs during 2018.
- 2 Interest rate derivatives which swapped a fixed rate €600m bond, issued in May 2015 and maturing in May 2025, to floating rate USD debt for the whole of its term. The component relating to the swap of floating rate euro cash flows to floating rate USD cash flows (including credit margin) was accounted for as a cash flow hedge under IAS 39 up to 31 December 2017. From 1 January 2018 the component relating to the swap of the euro credit margin to USD is being accounted for a cash flow hedge under IFRS 9, with the amount associated with foreign currency basis spreads recorded in the cost of hedging reserve.

As part of the Group's foreign currency exposure management, it has entered into forward foreign exchange contracts which fix the exchange rate on a portion of future foreign currency subscription revenues forecast by the businesses for up to 50 months. These have been accounted for as cash flow hedges under IAS 39 and under IFRS 9 of the forecast foreign currency revenues, with gains and losses on the forward contracts deferred in the hedge reserve until the related revenue is recognised, at which time the accumulated gains and losses are reclassified to the income statement.

Movements in the hedge reserve in 2018 and 2019 and, with effect from 1 January 2018, the cost of hedging reserve, including gains and losses on cash flow hedging instruments, were as follows:

	Interest rate hedge reserve £m	Cost of hedging reserve £m	Foreign currency hedge reserve £m	Total £m
Hedge reserve at 31 December 2017: gains/(losses) deferred	5	–	(7)	(2)
Reclassification on 1 January 2018	(1)	1	–	–
Losses arising in 2018	–	(8)	(51)	(59)
Amounts recognised in income statement	(3)	–	20	17
Hedge reserve at 31 December 2018: gains/(losses) deferred	1	(7)	(38)	(44)
(Losses)/gains arising in 2019	(1)	–	17	16
Amounts recognised in income statement	–	–	35	35
Hedge reserve at 31 December 2019: (losses) /gains deferred	–	(7)	14	7

All cash flow hedges were highly effective throughout the two years ended 31 December 2019.

A deferred tax credit of nil (2018: £8m) in respect of the above gains and losses at 31 December 2019 was also deferred in the hedge reserve.

Of the amounts recognised in the income statement in the year, losses of £35m (2018: £20m) were recognised in revenue, and gains of nil (2018: £3m) were recognised in finance costs. A tax credit of £6m (2018: £3m) was recognised in relation to these items.

The deferred gains and losses on foreign currency cash flow hedges at 31 December 2019 are currently expected to be recognised in the income statement in future years as shown in the table below, together with the principal amount of hedges relating to each year and their total carrying values included within derivative assets and liabilities in the statement of financial position:

	Foreign currency hedge reserve £m	Principal amount of hedges £m	Carrying values £m
2020	7	502	5
2021	2	394	2
2022	4	221	4
2023	1	34	1
Total	14	1,151	12

The cash flows for these hedges are expected to occur in line with the recognition of the gains and losses in the income statement, or in the preceding year. These cash flows are included in the table on page 158.

19 Inventories and pre-publication costs

Accounting policy

Inventories and pre-publication costs are stated at the lower of cost, including appropriate attributable overhead, and estimated net realisable value. Such costs typically comprise direct internal labour costs and externally commissioned editorial and other fees.

Pre-publication costs, representing costs incurred in the origination of content prior to publication, are expensed systematically reflecting the expected sales profile over the estimated economic lives of the related products, generally up to five years.

Annual reviews are carried out to assess the recoverability of carrying amounts.

	2019 £m	2018 £m
Raw materials	2	2
Pre-publication costs	181	171
Finished goods	34	39
Total	217	212

20 Trade and other receivables

	2019 £m	2018 £m
Trade receivables	1,858	1,829
Loss allowance	(88)	(87)
	1,770	1,742
Prepayments and accrued income	236	224
Current tax receivable	28	–
Net finance lease receivable	33	49
Total	2,067	2,015

Trade receivables are predominantly non-interest bearing and their carrying amounts approximate to their fair value.

Trade receivables are stated net of a loss allowance for expected credit losses. The movements in the loss allowance during the year were as follows:

	2019 £m	2018 £m
At start of year	87	79
Charge for the year	8	14
Trade receivables written off	(4)	(8)
Exchange translation differences	(3)	2
At end of year	88	87

21 Trade and other payables

Accounting policy

Deferred income is recognised when either a customer has paid consideration, or RELX has an unconditional right to an amount of consideration, in advance of the goods and services being delivered.

	2019 £m	2018 £m
Trade payables	173	187
Accruals	684	711
Social security and other taxes	129	127
Other payables	422	407
Deferred income	2,071	2,000
Total	3,479	3,432

Trade and other payables are predominantly non-interest bearing and their carrying amounts approximate to their fair value.

Notes to the consolidated financial statements

for the year ended 31 December 2019

22 Borrowings

Accounting policy

Borrowings are recorded initially at fair value and subsequently carried at amortised cost, other than fixed rate borrowings in designated hedging relationships for which the carrying amount of the hedged portion of the borrowings is subsequently adjusted for the gain or loss attributable to the hedged risk. When the related derivative in such a hedging relationship expires, is sold or terminated, or no longer qualifies for hedge accounting, the cumulative change in fair value of the hedged borrowing is amortised in the income statement over the period to maturity of the borrowing using the effective interest method.

	2019			2018		
	Falling due within 1 year £m	Falling due in more than 1 year £m	Total £m	Falling due within 1 year £m	Falling due in more than 1 year £m	Total £m
Financial liabilities measured at amortised cost:						
Short-term bank loans, overdrafts and commercial paper	779	-	779	686	-	686
Term debt	716	1,792	2,508	614	1,808	2,422
Lease liabilities	93	249	342	92	268	360
Term debt in fair value hedging relationships	472	2,080	2,552	-	2,652	2,652
Term debt previously in fair value hedging relationships	-	233	233	-	245	245
Total	2,060	4,354	6,414	1,392	4,973	6,365

The total fair value of financial liabilities measured at amortised cost (excluding lease liabilities) is £3,491m (2018: £3,254m). The total fair value of term debt in fair value hedging relationships is £2,629m (2018: £2,742m). The total fair value of term debt previously in fair value hedging relationships is £276m (2018: £283m).

RELX PLC has given guarantees in respect of certain long-term and short-term borrowings issued by subsidiaries. Included within term debt above are debt securities issued by RELX Capital Inc., a 100% indirectly owned finance subsidiary of RELX PLC, which have been registered with the US Securities and Exchange Commission. RELX PLC has fully and unconditionally guaranteed these securities, which are not guaranteed by any other subsidiary of RELX PLC.

Analysis by year of repayment

	2019				2018			
	Short-term bank loans, overdrafts and commercial paper			Lease liabilities	Short-term bank loans, overdrafts and commercial paper			Lease liabilities
	£m	£m	£m	£m	£m	£m	£m	£m
Within 1 year	779	1,188	93	2,060	686	614	92	1,392
Within 1 to 2 years	-	425	87	512	-	508	87	595
Within 2 to 3 years	-	33	57	90	-	451	70	521
Within 3 to 4 years	-	658	47	705	-	688	42	730
Within 4 to 5 years	-	433	29	462	-	669	27	696
After 5 years	-	2,556	29	2,585	-	2,389	42	2,431
After 1 year	-	4,105	249	4,354	-	4,705	268	4,973
Total	779	5,293	342	6,414	686	5,319	360	6,365

Short-term bank loans, overdrafts and commercial paper were backed up at 31 December 2019 by a \$3,000m (£2,262m) committed bank facility, consisting of tranches of: \$31m maturing in 2021, \$1,219m maturing in 2022, \$44m maturing in 2023 and \$1,706m maturing in 2024. The committed bank facility was undrawn.

22 Borrowings (continued)

Analysis by currency

	2019			2018				
	Short-term bank loans, overdrafts and commercial paper £m	Term debt £m	Lease liabilities £m	Total £m	Short-term bank loans, overdrafts and commercial paper £m	Term debt £m	Lease liabilities £m	Total £m
US dollars	309	2,915	168	3,392	19	2,493	177	2,689
£ sterling	–	–	71	71	317	300	66	683
Euro	423	2,378	70	2,871	318	2,526	85	2,929
Other currencies	47	–	33	80	32	–	32	64
Total	779	5,293	342	6,414	686	5,319	360	6,365

Included in the US dollar amounts for term debt above is £525m (2018: £544m) of debt denominated in euros (£600m) (2018: €600m) that was swapped into US dollars on issuance and against which there are related derivative financial instruments, which, as at 31 December 2019, had a fair value of £21m (2018: £19m).

23 Lease arrangements

Accounting policy

All leases where RELX is the lessee (with the exception of short-term and low-value leases) are recognised in the statement of financial position. A lease liability is recognised based on the present value of the future lease payments, and a corresponding right-of-use asset is recognised. The right-of-use asset is depreciated over the shorter of the lease term or the useful life of the asset. Lease payments are apportioned between finance charges and a reduction of the lease liability.

Low-value items and short-term leases with a term of 12 months or less are not required to be recognised on the balance sheet and payments made in relation to these leases are recognised on a straight-line basis in the income statement.

The leases held by the Group can be split into two categories: property and non-property. The Group leases various properties, principally offices, which have varying terms and renewal rights that are typical to the territory in which they are located. Non-property includes all other leases, such as cars and printers.

Right-of-use assets

	Property £m	Non- property £m	2019 £m	Property £m	Non- property £m	2018 £m
At start of year	246	17	263	264	23	287
Additions	57	5	62	26	5	31
Acquisitions	4	–	4	7	5	12
Remeasurement	29	–	29	13	–	13
Disposals	(2)	(1)	(3)	(2)	(8)	(10)
Depreciation	(74)	(8)	(82)	(68)	(9)	(77)
Exchange translation differences	(9)	–	(9)	6	1	7
At end of year	251	13	264	246	17	263

Notes to the consolidated financial statements

for the year ended 31 December 2019

23 Lease arrangements (continued)

Lease liability

	2019 £m	2018 £m
Current		
Property	(87)	(83)
Non-property	(6)	(9)
Non-current		
Property	(242)	(260)
Non-property	(7)	(8)
Total	(342)	(360)

Interest expense on the lease liabilities recognised within finance costs was £15m (2018: £14m; 2017: £17m).

As at 31 December 2019, RELX was committed to leases with future cash outflows totalling £9m (31 December 2018: £40m) which had not yet commenced and as such are not accounted for as a liability as at 31 December 2019. A liability and corresponding right-of-use asset will be recognised for these leases at the lease commencement date.

RELX subleases vacant space available within its leased properties. IFRS 16 specifies conditions whereby a sublease is classed as a finance lease for the sub-lessor. The finance lease receivable balance held is as follows:

Short-term and low-value lease expenses have been disclosed in note 3.

	2019 £m	2018 £m
Net finance lease receivable	33	49

Interest income recognised in relation to finance lease receivables is disclosed in note 7.

24 Share capital, share premium and shares held in treasury

Accounting policy

Shares of RELX PLC that are repurchased and not cancelled are classified as shares held in treasury. The consideration paid, including directly attributable costs, is recognised as a deduction from equity. Shares of RELX PLC that are purchased by the Employee Benefit Trust are also classified as shares held in treasury, with the cost recognised as a deduction from equity.

RELX PLC

CALLED UP SHARE CAPITAL – ISSUED AND FULLY PAID	No. of shares	2019 £m	No. of shares	2018 £m
At start of year	2,011,043,101	290	1,123,682,106	162
Issue of ordinary shares	3,059,558	1	1,580,885	–
Issue of bonus share	1	–	–	–
Issue of ordinary shares in exchange for RELX NV shares	–	–	930,780,110	134
Cancellation of shares	(33,300,001)	(5)	(45,000,000)	(6)
At end of year	1,980,802,659	286	2,011,043,101	290

At the 2019 AGM shareholders approved the issue of a bonus share with £4bn nominal value. The share was subsequently cancelled via a capital reduction, creating £4bn of distributable reserves in RELX PLC to replace the RELX NV reserves lost in the corporate simplification.

24 Share capital, share premium and shares held in treasury (continued)

NUMBER OF ORDINARY SHARES	Year ended 31 December			2018 Shares in issue net of treasury shares (millions)
	2019 Shares in issue (millions)	Treasury shares (millions)	Shares in issue net of treasury shares (millions)	
RELX PLC				
At start of year	2,011.0	(49.1)	1,961.9	1,060.1
Issue of ordinary shares	3.1	-	3.1	1.6
Issue of ordinary shares in exchange for RELX NV shares	-	-	-	927.3
Repurchase of ordinary shares	-	(33.5)	(33.5)	(26.9)
Net release/(purchase) of shares by the Employee Benefit Trust	-	0.4	0.4	[0.2]
Cancellation of shares	(33.3)	33.3	-	-
At end of year	1,980.8	(48.9)	1,931.9	1,961.9

During the year, RELX PLC repurchased 33.5m (2018: 26.9m; 2017: 23.1m) RELX PLC ordinary shares for an average price of 1,789p; these shares are held in treasury. The total consideration for the RELX PLC repurchases was £600m (2018: £700m, including consideration for 17.5m shares purchased by RELX NV prior to the corporate simplification).

In 2018, as a result of the corporate simplification, RELX NV shares were cancelled and replaced with RELX PLC shares. This amounted to 930,780,110 RELX NV shares being cancelled and the same number of RELX PLC shares issued in exchange.

The Employee Benefit Trust purchases RELX PLC shares which, at the trustees' discretion, can be used in respect of the exercise of share options and to meet commitments under conditional share awards. During the year, the Employee Benefit Trust purchased 2.2m shares for a total cost of £37m (2018: £43m; 2017: £39m). At 31 December 2019, shares held by the Employee Benefit Trust were £94m (2018: £90m; 2017: £82m) at cost.

The issue of ordinary shares in the year relates to the exercise of share options.

All of the RELX PLC ordinary shares rank equally with respect to voting rights and rights to receive dividends, except for shares held in treasury, which do not attract voting or dividend rights. There are no restrictions on the rights to transfer shares.

At 31 December 2019, RELX PLC shares held in treasury related to 6,753,010 (2018: 7,130,366; 2017: 3,493,817) RELX PLC ordinary shares held by the Employee Benefit Trust; and 42,267,027 (2018: 42,023,020; 2017: 60,077,786) RELX PLC ordinary shares held by the parent company. During December 2019, 33.3m (2018: 45m) RELX PLC ordinary shares held in treasury were cancelled.

On 6 December 2019, RELX PLC announced a non-discretionary programme to repurchase further ordinary shares up to the value of £100m. At 31 December 2019, an accrual of £100m was recognised in respect of this non-discretionary commitment. A further 5.0m RELX PLC ordinary shares have been repurchased in January and February 2020 under this programme.

Notes to the consolidated financial statements

for the year ended 31 December 2019

25 Other reserves

	Hedge reserve 2019 £m	Other reserves 2019 £m	Total 2019 £m	Total 2018 £m
At start of year	(36)	1,020	984	425
Profit attributable to RELX PLC shareholders	–	1,505	1,505	1,422
Dividends paid	–	(842)	(842)	(796)
Actuarial losses on defined benefit pension schemes	–	(137)	(137)	(91)
Fair value movements on cash flow hedges	16	–	16	(59)
Transfer to net profit from cash flow hedge reserve	35	–	35	17
Tax recognised in other comprehensive income	(8)	23	15	24
Increase in share based remuneration reserve (net of tax)	–	33	33	35
Issue of ordinary shares, net of expenses	–	–	–	(227)
Bonus issue of ordinary share	–	(4,000)	(4,000)	–
Cancellation of bonus share	–	4,000	4,000	–
Cancellation of shares	–	(499)	(499)	262
Settlement of share awards	–	(33)	(33)	(35)
Put option	–	(103)	(103)	–
Disposal of non-controlling interests	–	5	5	–
Exchange translation differences	–	–	–	7
At end of year	7	972	979	984

Other reserves principally comprise retained earnings and the share based remuneration reserve.

26 Related party transactions

Transactions between RELX PLC and subsidiaries of the Group have been eliminated within the consolidated financial statements. Transactions with joint ventures were made on normal market terms of trading and comprise sales of goods and services of £4m (2018: £3m; 2017: £16m) and the rendering and receiving of goods and services of £0.1m (2018: £0.1m; 2017: £0.1m). As at 31 December 2019, amounts owed by joint ventures were £5m (2018: £2m; 2017: £2m) and amounts due to joint ventures were £0.5m (2018: £0.9m; 2017: £1m). See note 6 for details of the Group's participation in defined benefit pension schemes.

Key management personnel are also related parties as defined by IAS 24 – Related Party Disclosures and comprise the Executive and Non-Executive Directors of RELX PLC. Key management personnel remuneration is set out below. For reporting purposes, salary, benefits and annual incentive payments are considered short-term employee benefits.

KEY MANAGEMENT PERSONNEL REMUNERATION	2019 £m	2018 £m	2017 £m
Salaries, other short-term employee benefits and non-executive fees	7	7	5
Post-employment benefits	1	1	1
Share based remuneration*	7	7	8
Total	15	15	14

	Salary £'000	Benefits £'000	Annual incentive £'000	Cost of share based remuneration* £'000	Cost of pension provision* £'000	Total £'000
Total Executive Directors	2019	1,984	101	3,038	7,343	725
	2018	1,935	99	3,033	7,003	741
	2017	1,889	101	1,964	8,205	983
						13,142

* The figures for share based awards are calculated in accordance with the methodology set out in the UK Regulations. The figure for performance-related share based awards includes share price appreciation since the date the award was granted. Please see page 99 for further details. The cost of pension provision is calculated in accordance with the methodology set out in the UK Regulations. The amount is reduced by the Directors' contributions and participation fee for defined benefit schemes and reduced by the payments made to defined contribution schemes or in lieu of pension.

26 Related party transactions (continued)

NON-EXECUTIVE DIRECTORS	2019 £'000	2018 £'000	2017 £'000
Fees and benefits	1,569	1,634	1,396

The remuneration of non-executive directors comprises fees for services, and benefits primarily relating to tax filing support in respect of filings resulting from their directorships. No deemed benefits were provided during 2019 to former Directors (2018: nil; 2017: £2,460). No loans, advances or guarantees have been provided on behalf of any Director. The aggregate gains made by Executive Directors on the exercise of options during 2019 were nil (2018: nil; 2017: £2,804,358).

27 Exchange rates

The following exchange rates have been applied in preparing the consolidated financial statements:

	Income statement			Statement of financial position	
	2019	2018	2017	2019	2018
Euro to sterling	1.14	1.13	1.14	1.18	1.11
US dollar to sterling	1.28	1.34	1.29	1.33	1.27

28 Approval of financial statements

The consolidated financial statements were approved and authorised for issue by the Board of Directors on 12 February 2020.

Notes to the consolidated financial statements

for the year ended 31 December 2019

29 Related undertakings

A full list of related undertakings (comprising subsidiaries, joint ventures, associates and other significant holdings) is set out below. All are 100% owned directly or indirectly by the Group except where percentage ownership denoted in (x%).

Company name	Share class	Reg office	Company name	Share class	Reg office
Australia					
Elsevier (Australia) Pty Ltd	Ordinary	AUS3	LexisNexis Risk Solutions S.A.S.	Ordinary	COL1
Fair Events Pty Ltd (49%)	Ordinary	AUS2			
Fitness Show Pty Ltd	Ordinary	AUS4			
Reed Business Information (Australia) Pty Ltd	Ordinary	AUS1			
Reed Exhibitions Australia Pty Ltd	Ordinary	AUS3			
Reed International Books Australia Pty Ltd	Ordinary	AUS3			
Reed Oz Comic-Con Pty Ltd	Ordinary	AUS3			
RELX Australia Pty Ltd	Ordinary	AUS3	Reed Exhibitions Free Zone-LLC	Ordinary	UAE1
Symbiotic Technologies Operation Pty Ltd	Ordinary	AUS5	RELX Middle East FZ-LLC	Ordinary	UAE2
ThreatMetrix Pty Ltd	Ordinary	AUS5			
Austria					
Expoxx Messebau GmbH	Registered Capital	AUT1			
LexisNexis Verlag ARD ORAC GmbH & Co KG	Registered Capital	AUT2			
ORAC Gesellschaft m.b.H.	Registered Capital	AUT2			
Reed CEE GmbH	Registered Capital	AUT1			
Reed Messe Salzburg GmbH	Registered Capital	AUT3			
Reed Messe Wien GmbH	Registered Capital	AUT1			
RELX Austria GmbH	Registered Capital	AUT3			
System StandBau GmbH	Registered Capital	AUT3			
Belgium					
F4F Europe NV/SA	Ordinary	BEL2			
LexisNexis BVBA	Ordinary	BEL1			
Brazil					
Elsevier Editora Ltda	Quotas	BRA1			
Fircosoft Brasil Consultoria e Servicos de Informatica Ltda	Ordinary	BRA2			
LexisNexis Informações e Sistemas Empresariais Ltda	Quotas shares	BRA6			
LexisNexis Servicos de Analise de Risco Ltda	Quotas shares	BRA3			
MLex Brasil Midia Mercadologica Ltda (91%)	Quotas	BRA4			
Reed Exhibitions Alcantara Machado Ltda	Quotas shares	BRA3			
SST Software do Brasil Ltda	Ordinary	BRA5			
Canada					
LexisNexis Canada Inc	Class B Voting	CAN1			
RELX Canada Ltd	Common shares	CAN3			
Science-Metrix Inc	Common shares	CAN4			
ThreatMetrix (Canada) Inc	Common shares	CAN2			
China					
Beijing Bakery China Exhibitions Co., Ltd (25%)	Registered Capital	CHN1			
Beijing Medtime Elsevier Education Technology Co., Ltd (49%)	Registered Capital	CHN2			
C-One Energy (Guangzhou) Co., Ltd	Registered Capital	CHN5			
Genilex Information Technology Co., Ltd	Registered Capital	CHN6			
ICIS Consulting (Beijing) Co., Ltd	Registered Capital	CHN7			
KeAi Communications Co., Ltd (49%)	Registered Capital	CHN8			
LexisNexis Risk Solutions (Shanghai) Information Technologies Co., Ltd	Registered Capital	CHN9			
Mack Brooks (Shanghai) Ltd	Registered Capital	CHN18			
Reed Business Information (Shanghai) Co Ltd	Registered Capital	CHN17			
Reed Elsevier Information Technology (Beijing) Co., Ltd	Registered Capital	CHN3			
Reed Exhibitions (China) Co., Ltd	Registered Capital	CHN4			
Reed Exhibitions Hengjin Co., Ltd (51%)	Registered Capital	CHN16			
Reed Exhibitions (Shanghai) Co., Ltd	Registered Capital	CHN13			
Reed Hongda Exhibitions (Henan) Co., Ltd (51%)	Registered Capital	CHN11			
Reed Huabei Exhibitions (Beijing) Co., Ltd (51%)	Registered Capital	CHN4			
Reed Huabo Exhibitions (Shenzhen) Co., Ltd (65%)	Registered Capital	CHN12			
Reed Huagun Exhibitions Co., Ltd (52%)	Registered Capital	CHN4			
Reed Kuozhan Exhibitions (Shanghai) Co., Ltd (60%)	Registered Capital	CHN10			
Reed Sinopharm Exhibitions Co., Ltd (50%)	Registered Capital	CHN4			
RELX (China) Investment Co., Ltd	Registered Capital	CHN12			
Shanghai Datong Medical Information Technology Co., Ltd	Registered Capital	CHN14			
Shanghai SinoReal Exhibitions Co., Ltd (27.5%)	Registered Capital	CHN15			
Colombia					
Denmark					
Elsevier A/S	Ordinary	DNK1			
Dubai, UAE					
Reed Exhibitions Free Zone-LLC	Ordinary	UAE1			
RELX Middle East FZ-LLC	Ordinary	UAE2			
Egypt					
Elsevier Egypt LLC	Ordinary	EGY1			
France					
Elsevier Holding France SAS	Ordinary	FRA1			
Elsevier Masson SAS	Ordinary	FRA1			
Evoluprint SAS	Ordinary	FRA2			
Fircosoft SAS	Ordinary	FRA8			
GIE EDI Data (83%)	Ordinary	FRA3			
GIE Juris Data	Ordinary	FRA3			
GIE PRK - Publicite Robert Krier	Registered Capital	FRA4			
LexisNexis Business Information Solutions SA	Ordinary	FRA3			
LexisNexis Business Information Solutions Holding SA	Ordinary	FRA5			
LexisNexis International Development & Services SAS	Ordinary	FRA3			
LexisNexis SA	Ordinary	FRA3			
Reed Exhibitions ISG SARL	Registered capital	FRA6			
Reed Expositions France SAS	Ordinary	FRA4			
Reed Midem SAS	Registered capital	FRA6			
Reed Organisation SAS	Ordinary	FRA4			
RELX France SA	Registered capital	FRA6			
RELX France Services SAS	Registered capital	FRA8			
SAFISA (50%)	Ordinary	FRA7			
Germany					
Aries GmbH & Co KG	Registered Capital	DEU2			
Aries Medical Knowledge Verwaltungsgesellschaft mbH	Registered Capital	DEU2			
Elsevier GmbH	Registered Capital	DEU4			
Elsevier Information Systems GmbH	Registered Capital	DEU3			
LexisNexis GmbH	Registered Capital	DEU5			
PatentSight GmbH	Registered Capital	DEU7			
Reed Exhibitions (Germany) GmbH	Registered Capital	DEU5			
Reed Exhibitions Deutschland GmbH	Registered Capital	DEU1			
RELX Deutschland GmbH	Registered Capital	DEU1			
Tschach Solutions GmbH	Ordinary	DEU6			
Greece					
Mack Brooks Hellas SA	Ordinary	GRE1			
Hong Kong					
Ascend China Holding Ltd	Ordinary	HNK1			
JC Exhibition and Promotion Ltd (65%)	Ordinary	HNK1			
JYLN Sager Ltd	Ordinary	HNK3			
Mlex Asia Ltd (91%)	Ordinary	HNK5			
Reed Business Information (China) Ltd	Ordinary	HNK2			
Reed Exhibitions Ltd	Ordinary	HNK1			
RELX (Greater China) Ltd	Ordinary	HNK4			
India					
Chempotech India Expo Pvt Ltd (25%)	Ordinary	IND7			
Chemspec India Expo Pvt Ltd (50%)	Ordinary	IND7			
FircoSoft India Private Ltd	Ordinary	IND2			
Next Events Pvt Ltd	Registered Capital	IND4			
Parity Computing India Pvt Ltd	Ordinary	IND5			
Reed Elsevier Publishing (India) Pvt Ltd	Ordinary	IND3			
Reed Manch Exhibitions Private Ltd (70%)	Ordinary	IND4			
Reed Triune Exhibitions Private Ltd (72%)	Ordinary	IND6			
RELX India Private Ltd	Ordinary	IND1			

29 Related undertakings (continued)

Company name	Share class	Reg office	Company name	Share class	Reg office			
Indonesia								
PT Reed Exhibitions Indonesia (70%)	Class A	IDN2	Elsevier (Singapore) Pte Ltd	Ordinary	SGP1			
PT Reed Panorama Exhibitions (50%)	Class B		Lexis-Nexis Philippines Pte Ltd (75%)	Ordinary B	SGP2			
	Ordinary	IDN1	Mack Brooks Asia Pte Ltd	Preference shares				
Ireland								
Elsevier Services Ireland Ltd	Ordinary	IRL2	Reed Business Information Pte Ltd	Ordinary	SGP5			
LexisNexis Risk Solutions (Europe) Ltd	Ordinary	IRL1	RE (HAPL) Pte Ltd	Ordinary	SGP3			
LexisNexis Risk Solutions (Ireland) Ltd	Ordinary	IRL1	RELX (Singapore) Pte. Ltd	Ordinary	SGP1			
3D4Medical Ltd	Ordinary	IRL3	ThreatMetrix Pte Ltd	Ordinary	SGP2			
3D4Medical Support Services Ltd	Ordinary	IRL3		Ordinary	SGP4			
Israel								
LexisNexis Israel Ltd	Ordinary	ISR1	Fircosoft South Africa (Pty) Ltd	Ordinary	ZAF1			
Italy								
Elsevier SRL	Registered Capital	ITA1	Globalrange SA (Pty) Ltd	Ordinary	ZAF2			
ICIS Italia SRL	Ordinary	ITA2	Korbitec (Pty) Ltd (78%)	Ordinary	ZAF3			
Reed Exhibitions ISG Italy SRL	Ordinary	ITA1	LegalPerfect Software Solutions (Pty) Ltd (78%)	Ordinary	ZAF3			
Reed Exhibitions Italia SRL	Ordinary	ITA1	LexisNexis (Pty) Ltd (78%)	Ordinary	ZAF3			
Japan								
Ascend Japan KK	Ordinary	JPN1	LexisNexis Academic (Pty) Ltd (78%)	Ordinary	ZAF3			
Elsevier Japan KK	Ordinary	JPN2	LexisNexis Risk Management (Pty) Ltd (78%)	Ordinary	ZAF3			
LexisNexis Japan KK	Common Stock	JPN3	Property Payment Exchange (SA) (Pty) Ltd (78%)	Ordinary	ZAF3			
PatentSight Japan Inc	Common Shares	JPN6	RELX (Pty) Ltd	Ordinary	ZAF3			
Reed Exhibitions Japan KK	Ordinary	JPN4	Reed Exhibitions (Pty) Ltd (90%)	A-shares	ZAF3			
Reed ISG Japan KK	Ordinary	JPN5	Reed Events Management (Pty) Ltd (90%)	Ordinary	ZAF3			
ThreatMetrix GK	Membership Interest	JPN7	Reed Exhibitions Group (Pty) Ltd (90%)	Ordinary	ZAF3			
Korea (South)								
Elsevier Korea LLC	Ordinary	KOR1	Reed Venue Management (Pty) Ltd (90%)	A-shares	ZAF3			
LexisNexis Legal and Professional Service Korea Ltd	Ordinary	KOR2	Winsearch Services (Pty) Ltd (78%)	Ordinary	ZAF3			
Reed Exhibitions Korea Ltd	Ordinary	KOR3	Spain					
Reed Exportum Ltd (60%)	Ordinary	KOR4	Elsevier Espana SL	Participations	ESP1			
Reed K. Fairs Ltd (70%)	Ordinary	KOR3	Switzerland					
Malaysia								
LexisNexis Malaysia Sdn Bhd	Ordinary	MYS1	Elsevier Finance SA	Ordinary	CHE1			
Reed Exhibitions Sdn Bhd	Ordinary	MYS1	Fircosoft Schweiz GmbH	Ordinary	CHE2			
Mexico								
Masson-Doyma Mexico, S.A.	Ordinary	MEX1	RELX Risks SA	Ordinary	CHE1			
Reed Exhibitions Mexico S.A. de C.V.	Ordinary	MEX1	RELX Swiss Holdings SA	Ordinary	CHE1			
Morocco								
Reed Exhibitions Morocco SARL	Ordinary	MAR1	Taiwan					
New Zealand								
LexisNexis NZ Ltd	Ordinary	NZL1	Elsevier Taiwan LLC	Ordinary	TWN1			
Philippines								
Reed Elsevier Shared Services (Philippines) Inc.	Common Shares	PHL1	Thailand					
Poland								
AI Digital Contracts Sp.z.o.o. (75%)	Ordinary	POL1	Mack Brooks Exhibitions Asia Ltd (49%)	Ordinary	THA3			
Elsevier Sp.z.o.o.	Ordinary	POL2	Reed Tradex Company Ltd (49%)	Ordinary	THA1			
Russia								
Ecatech Company OOO	Ordinary	RUS1	RELX Holding (Thailand) Co., Ltd	Ordinary	THA2			
Elsevier OOO	Participation Shares	RUS1	RELX Information Analytics (Thailand) Co., Ltd	Ordinary	THA4			
LexisNexis OOO	Registered Capital	RUS1	The Netherlands					
Real Estate Events Direct OOO (80%)	Ordinary	RUS2	AGRM Solutions C.V.	Partnership Interest	NLD1			
RELX OOO	Ordinary	RUS1	Elsevier B.V.	Ordinary	NLD1			
3D4Medical OOO	Ordinary	RUS3	Elsevier Employment Services B.V.	Ordinary	NLD1			
Saudi Arabia								
Reed Sunaidi Exhibitions LLC (50%)	Ordinary	SAU1	ICIS Benchmarking Europe B.V.	Ordinary	NLD1			
Turkey								
Elsevier STM Bilgi Hizmetleri Limited Şirketi	Ordinary	TUR1	LexisNexis Business Information Solutions B.V.	Ordinary	NLD1			
Mack Brooks Fuarcilik A.S.	Registered Capital		LexisNexis Univentio B.V.	Ordinary	NLD2			
Reed Tüyap Fuarcılık A.Ş. (50%)	A Ordinary B Ordinary		Misset Uitgeverij B.V. (49%)	Ordinary	NLD4			

Notes to the consolidated financial statements

for the year ended 31 December 2019

29 Related undertakings (continued)

Company name	Share class	Reg office	Company name	Share class	Reg office
United Kingdom					
Adaptris Group Ltd	Ordinary	GBR2	Accuity Inc.	Common Stock	USA1
Bradfield Brett Holdings Ltd	7 1/2% Preferred Income, Ordinary	GBR1	Accuity Asset Verification Services Inc.	Common Stock	USA1
Butterworths Ltd	Ordinary	GBR5	American Textile Machinery Exhibitions International Inc. (40%)	Common Stock	USA3
Cordery Ltd (71%)	Ordinary	GBR5	Aries Systems Corporation	Common Stock	USA3
Cordery Compliance Ltd (71%)	Ordinary	GBR5	Derman, Inc.	Common Stock	USA4
Crediva Ltd	Ordinary	GBR6	Dunlap-Hanna Publishers (50%)	Partnership Interest	USA7
Dew Events Ltd	Ordinary	GBR3	Elsevier Holdings Inc.	Common Stock	USA3
Digital Foundry Network (50%)	Ordinary	GBR3	Elsevier Inc.	Common Stock	USA3
Drayton Legal Recoveries Ltd	Ordinary	GBR7	Elsevier Medical Information LLC	Membership Interest	USA3
E & P Events LLP (50%)	No Shares	GBR3	Elsevier STM Inc.	Common Stock	USA3
Elsevier Ltd	Ordinary	GBR8	Enclarity, Inc.	Common Stock	USA2
Elsevier Life Sciences IP Ltd	Ordinary	GBR8	ExitCare LLC	Membership Interest	USA3
Fastener Fairs Ltd	Ordinary, Ordinary-A, Ordinary-B	GBR4	Gamer Network Inc.	Common Stock	USA3
Formpart (EPS) Ltd	Ordinary	GBR1	Gaming Business Asia LLC (50%)	Common Stock	USA3
Formpart (HPL) Ltd	Ordinary	GBR1	Health Market Science, Inc.	Membership Interest	USA3
Gamer Edition Ltd	Ordinary	GBR3	IDG-RBI China Publishers LLC (50%)	Common Stock	USA2
Gamer Events Ltd	Ordinary	GBR3	Intelligize, Inc.	Common Stock	USA3
Gamer Network Ltd	Ordinary	GBR3	Knovel Corporation	Common Stock	USA3
Imbibe Media Ltd	Ordinary	GBR3	Knowable Inc (75%)	Common Stock	USA8
Information Handling Ltd (85%)	Ordinary	GBR1	LexisNexis Claims Solutions Inc.	Common Stock	USA2
Insurance Initiatives Ltd	Ordinary	GBR10	LexisNexis Coplogic Solutions Inc.	Common Stock	USA2
Knowable Ltd (75%)	Ordinary	GBR1	LexisNexis Puerto Rico Inc.	Common Stock	USA9
Knowable Holdings Ltd (75%)	Ordinary	GBR1	LexisNexis Risk Assets Inc.	Common Stock	USA2
Legend Exhibitions Ltd	Ordinary	GBR13	LexisNexis Risk Data Management Inc.	Common Stock	USA2
LexisNexis Risk Solutions UK Ltd	Ordinary	GBR9	LexisNexis Risk Holdings Inc.	Common Stock	USA2
Mack Brooks Events Ltd	Ordinary	GBR3	LexisNexis Risk Solutions Inc.	Common Stock	USA2
Mack-Brooks Exhibitions Ltd	Ordinary	GBR3	LexisNexis Risk Solutions FL Inc.	Common Stock	USA2
Mack-Brooks [France] Ltd	Ordinary	GBR3	LexisNexis Special Services Inc.	Common Stock	USA6
Mack-Brooks Publishing Ltd	Ordinary, A Ordinary	GBR3	LexisNexis VitalChek Network Inc.	Common Stock	USA2
Mack Brook Specialty Publishing Ltd	Ordinary	GBR3	Mack Brooks Exhibitions Inc.	Common Stock	USA3
MCM Central Ltd	Ordinary	GBR2	Matthew Bender & Company, Inc.	Common Stock	USA3
MCM Expo Ltd	Ordinary	GBR2	MLex US, Inc. (91%)	Common Stock	USA3
Mendeley Ltd	Ordinary	GBR7	Parity Computing, Inc.	Common Stock	USA3
MLex Ltd	Ordinary	GBR4	PCLaw Time Matters LLC (51%)	No Stock	USA2
Newsflo Ltd	Ordinary	GBR1	PoliceReports.US, LLC	Membership Interest	USA2
NLife Ltd (23.5%)	Ordinary	GBR12	Portfolio Media, Inc.	Common Stock	USA3
Offshore Europe (Management) Ltd	Ordinary	GBR3	Reed Business Information Inc.	Common Stock	USA5
Offshore Europe Partnership (50%)	Partnership Interest	GBR3	Reed Technology and Information Services Inc.	Common Stock	USA3
Out There Gaming Ltd (70%)	Ordinary	GBR3	RELX Capital Inc.	Common Stock	USA4
Oxford Spires Management Co; Ltd (55%)	Ordinary	GBR10	RELX Inc.	Common Stock	USA3
Prean Holdings Ltd	Deferred, Ordinary	GBR1	RELX Risks Inc.	Common Stock	USA2
RE Directors [No.1] Limited	Ordinary	GBR1	RELXUS Holdings Inc.	Common Stock	USA3
RE Directors [No.2] Limited	Ordinary	GBR1	Reman, Inc.	Common Stock	USA3
RE (RCB) Ltd	Ordinary	GBR1	REVIV Partnership LP	No Stock	USA4
RE Secretaries Ltd	Ordinary	GBR1	SAFI Americas LLC (50%)	Membership Interest	USA3
RE (SOE) Ltd	Ordinary	GBR3	The Reed Elsevier Ventures 2005 Partnership LP	Partnership Interest	USA4
Reed Business Information Ltd	Ordinary	GBR2	The Reed Elsevier Ventures 2006 Partnership LP	Partnership Interest	USA4
Reed Business Information [Holdings] Ltd	Ordinary	GBR2	The Reed Elsevier Ventures 2009 Partnership LP	Partnership Interest	USA4
Reed Elsevier (UIG) Ltd	Ordinary	GBR1	The Reed Elsevier Ventures 2010 Partnership LP	Partnership Interest	USA4
Reed Events Ltd	Ordinary	GBR3	The Reed Elsevier Ventures 2011 Partnership LP	Partnership Interest	USA4
Reed Exhibitions Ltd	Ordinary	GBR3	The Reed Elsevier Ventures 2012 Partnership LP	Partnership Interest	USA4
Reed Nominees Ltd	Ordinary	GBR1	The Reed Elsevier Ventures 2013 Partnership LP	Partnership Interest	USA4
Reed Publishing Corporation Ltd	Ordinary	GBR1	The Remick Publishers (50%)	Partnership Interest	USA7
RELX [Holdings] Ltd	Ordinary	GBR1	ThreatMetrix, Inc.	Common Stock	USA2
RELX [Investments] plc	Ordinary	GBR1	World Compliance, Inc.	Common Stock	USA4
RELX [UK] Ltd	Ordinary	GBR1	3D4Medical.com, LLC	Membership Interest	USA10
RELX Finance Ltd	Ordinary	GBR1	3D4Medical Inc.	Common Stock	USA10
RELX Group plc	Ordinary	GBR1	Vietnam		
RELX Overseas Holdings Ltd	Ordinary	GBR1	Reed Tradex Vietnam LLC (49%)	Ordinary	VIE1
REV Venture Partners Ltd	Ordinary	GBR1			
Symbiotic Technologies Operations Ltd	Ordinary	GBR9			
Tracesmart Ltd	Ordinary	GBR5			
Whitehall Debenture Company Limited	A Ordinary	GBR1			
Wunelli Ltd	B Ordinary	GBR1			
	Ordinary	GBR11			

29 Related undertakings (continued)

Registered offices

Australia

- AUS1:** Building B, Level 2, Unit 11, 1 Maitland Place, Baulkham Hills NSW 2153, Australia
AUS2: 383 Kent Street, Sydney NSW 2000, Australia
AUS3: 'Tower 2' Level 10, 475 Victoria Avenue, Chatswood NSW 2067
AUS4: Fordham Business Advisors Pty Ltd, Rialto South Tower Level 35, 525 Collins Street, Melbourne, Vic, 3000
AUS5: 1303, 799 Pacific Highway, Chatswood, NSW 2067

Austria

- AUT1:** Messeplatz 1, 1020, Wien, Austria
AUT2: Marxergasse 25, 1030, Wien, Austria
AUT3: Am Messezentrum 6, 5020, Salzburg, Austria

Belgium

- BEL1:** Oudenaardseheerweg 129, 9810 Nazareth, Belgium
BEL2: Guldensporenpark 36D, 9820 Merelbeke, Belgium

Brazil

- BRA1:** Rua da Assembleia no 100, 6th Floor, RJ Centro, Rio de Janeiro, 20011-904, Brazil
BRA2: Rua Bela Cintra 2305, São Paulo, 01415-009, Brazil
BRA3: Rua Bela Cintra no. 1200, 10th floor, São Paulo, 01415-001, Brazil
BRA4: Avenida paulista, 2300-Piso Pilots room 28, São Paulo, 01310-300, Brazil
BRA5: Rua Cel Fonseca, 203A-Centro, Botucatu, SP, 18600-200, Brazil
BRA6: Rua Bela Cintra no. 1200, 5th floor, São Paulo, 01415-002, Brazil

Canada

- CAN1:** 123 Commerce Valley Drive East, Suite 700, Markham, Ontario, L3T 7W8, Canada
CAN2: 177 King Street West, Suite 400, Toronto-Dominion Centre Toronto, Ontario, M5K 0A1, Canada
CAN3: 555 Richmond Street West, Toronto, Ontario, M5V 3B1, Canada
CAN4: 26E-1501 av. McGill College, Montreal, Quebec, H3A 3N9, Canada

China

- CHN1:** Zhongkun Building, Room 612, Gaoliangqiaoxie Street, No. 59, Haidian District, Beijing, 100044, China
CHN2: West Building of Administration Building, Xueyuan Road No. 38 Peking University Health Science Center, Haidian District, Beijing, 100191, China
CHN3: Oriental Plaza, No. 1 East Chang An Ave, Tower W1, 7th Floor, Unit 1-7, Dong Cheng District, Beijing, 100738, China
CHN4: Ping An International Finance Center, Room 1504, 15th Floor, Tower A-101, 3-24 floor, Xinyuan South Road, Chaoyang District, Beijing, 100027, China
CHN5: Unit 2480, Building 2, No. 7, Chuangxin Road, Science Park of Changping District, Beijing, China
CHN6: Unit B1303-1 & 1305, 13F Center Plaza, 161 Linhe Road West, Tianhe District Guangzhou, China
CHN7: 404 F4, No. 9 Shangdi 9th Street, Haidian District, Beijing, 100085, China
CHN8: Room 5106, Raffles City, 268 Middle Xizang Road, Huangpu District, Shanghai, 200001, China
CHN9: Room A 100 of Room 0307, Floor 3, Building 3, 7 Middle Dongsanhuan road, Chaoyang District, Beijing
CHN10: Intercontinental Center, 42F, 100 Yutong Road, Zhabei District, Shanghai, 200070, China
CHN11: Shenzhen International Chamber of Commerce Tower, Room 1801-1802, 1805, Fuhua 3rd Road, Futian District, Shenzhen, 518048, China
CHN12: Room 319, 238 Jianguansan Road, Jing'an District, Shanghai, China
CHN13: Room 304, Santian Building, No.8, Huajing Road, Pudong District, Shanghai, 200070, China
CHN14: Building 2, Room No. 3895, Changjiang Avenue, No. 161, Changliang Farm, Chongming County, Shanghai Municipality
CHN15: FL2, No. 979, Yunhan Road, Nicheng Town, Pudong New Area
CHN16: Floor 2, No. 979, Yunhan Road, Nicheng Town, Pudong New Area, Shanghai
CHN17: 4/F Block C, No 999 Jingzhong Road, Changning District, Shanghai, China
CHN18: Room Jia301-22, No15, Lane152, Yanchang Road, Shanghai, China

Colombia

- COL1:** Philippe Prietocarrizosa & Uria Abogados, Carrera 9 No. 74-08 Oficina 105, Bogotá, d.c., 76600, Colombia

Denmark

- DNK1:** Niels Jernes Vej 10, 9220, Aalborg Øst, Denmark

Dubai, UAE

- UAE1:** Office G-49, Building No 9, Dubai Media City, Post Box 502425, Dubai, United Arab Emirates
UAE2: Al Sufouh Complex, Floor 3, No. 304, Dubai, United Arab Emirates

Egypt

- EGY1:** Land Mark Office Building, 2nd Floor, 90th Street, City Center, 5th Settlement, New Cairo, Cairo, Egypt

Registered offices

France

- FRA1:** 65, rue Camille Desmoulins, 92130, Issy les Moulineaux, France
FRA2: Parc Euronord – 10, rue du Parc - 31150 Bruguières
FRA3: 141 rue de Javel, 75015 Paris
FRA4: 52 Quai de Dion Bouton 92800 Puteaux
FRA5: Immeuble « Technopolis », 350 rue Georges Besse – Nîmes (30000)
FRA6: 27-33 quai Alphonse Le Gallo, 92100, Boulogne-Billancourt, France
FRA7: 6-8 Rue Chaptal, 75009 Paris
FRA8: 151-155 Rue de Bercy, 75012 Paris, France

Germany

- DEU1:** Völklinger Strasse 4, 40219, Düsseldorf, Germany
DEU2: Leichlinger Street 14, 40764, Langenfeld, Germany
DEU3: Theodor-Heuss-Allee 108, D-60488, Frankfurt am Main, Hesse, Germany
DEU4: Hackerbrücke 6, 80335, Munich, Germany
DEU5: Heerder Sandberg 30, 40549, Düsseldorf, Germany
DEU6: Steinhäuserstrasse 9, 76135, Karlsruhe, Germany
DEU7: Joseph-Schumpeter-Allee 33, 53227, Bonn

Greece

- GRE1:** 188A, Filolaou Str., Athens, 11632, Greece

Hong Kong

- HNK1:** 20/F Alexandra House, 18 Chater Road, Central, Hong Kong
HNK2: Level 54 Hopewell Center, 183 Queens Road East (Tricor Office), Hong Kong
HNK3: Flat 1506, 15/F, Lucky Center, No. 165-171 Wan Chai Road, Wan Chai, Hong Kong
HNK4: 11/F Oxford House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong
HNK5: 3901, 39th Floor Hopewell Center, 183 Queens Road East, Wanchai, Hong Kong

India

- IND1:** 818, 8th Floor, Indraprakash Builing, 21 Barakhamba Road, New Delhi, 110001, India
IND2: S21 Vatika Centre, No 471 Anna Salai, Teynampet, Chennai, 600035, India
IND3: 818, 8th Floor, Indraprakash Builing, 21 Barakhamba Road, New Delhi, 110001, India
IND4: Unit no 03,04,05 first floor, Southern Park D2 Saket, New Delhi, South Delhi, 110017, India
IND5: 99/100, Prestige Towers Unit No. 505, Fifth Floor, Residency Road, Bangalore , Karnataka, 560025, India
IND6: #25, 3rd floor, 8th Main Road, Vasanthnager, Bangalore, 560052, India
IND7: B-602, Godrej coliseum, K. J. Hospital Road, Sion (E), Mumbai, 400022, India

Indonesia

- IDN1:** Panorama Building, 5th Floor, Jalan Tomang Raya No. 63, Jakarta, 11440, Indonesia
IDN2: Menara Citicon Level 8, Unit 8011 & 8012 Jl. Letjen S. Parman No. 8 Kav 72 Slipi Palmerah Jakarta Barat 11410 Indonesia

Ireland

- IRL1:** 80 Harcourt Street, Dublin 2, Ireland
IRL2: Suite 4320, Atlantic Avenue, Westpark Business Campus, Shannon, Clare, Ireland
IRL3: 1st Floor The Grange Stillorgan Road, Blackrock, Co Dublin, Ireland

Israel

- ISR1:** Meitar, attorneys at Law, 16 Abba Hillel Road, Ramat Gan, 5250608, Israel

Italy

- ITA1:** Via Marostica 1, 20146, Milan, Italy
ITA2: Studio Colombo e Associati, Via Cino del Duca 5, 20122, Milano, Italy

Japan

- JPN1:** Kyodo Tsushin Kaikan 2F, 2-2-5 Toronomon, Minato-ku, Tokyo, 105-0001
JPN2: Ark Mori Building, 1-12-32 Akasaka, Minato-ku, Tokyo, 107-6029, Japan
JPN3: 1-9-15, Higashi Azabu, Minato-ku Tokyo Japan
JPN4: Shinjuku-Nomura Bldg., 1-26-2 Nishi-shinjuku, Shinjuku-ku, Tokyo, Japan
JPN5: 13-12 Rokubancho, Chiyoda-ku, Tokyo, Japan
JPN6: 7F Cross Office Uchisaiwaicho, 1-18-6 Nishi-Shinbashi, Minato-ku, Tokyo
JPN7: 2-6, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo

Korea (South)

- KOR1:** Chunwoo Building, 4th floor, 534 Itaewon-dong, Yongsan-gu, Seoel, 140-861, Korea, Republic of
KOR2: 206 Noksapyeong-daero, Yongsan-gu, Seoel, Korea, Republic of
KOR3: Room 4401, Trade Tower, 159-1, Samseong-dong, Gangnam-gu Seoul, 135-729, Republic of Korea
KOR4: 1324 Block A Tera Tower II, 201, Songpa-daero, Songpa-gu, Seoul, 05854

Notes to the consolidated financial statements

for the year ended 31 December 2019

29 Related undertakings (continued)

Registered offices

Malaysia

MYS1: 6th Floor, Akademi Etiqa, No. 23 Jalan Melaka, 50100 Kuala Lumpur, Malaysia

Mexico

MEX1: Insurgentes Sur # 1388 Piso 8, Col. Actipan, Deleg. Benito Juarez, C.P. 03230 Ciudad de México, México

Morocco

MAR1: 104 bis, Boulevard Abdelmoumen, 4 eme etage, Casablanca, Morocco

New Zealand

NZL1: Level 1, 138 The Terrace, P.O. Box 472, Wellington 6011, New Zealand

Philippines

PHL1: Building H, 2nd Floor, U.P. AyalaLand TechnoHub, Commonwealth Avenue, Quezon City, Metro Manila, 1101, Philippines

Poland

POL1: Sw. Antoniego 2/4 50-073, Wrocław, Poland

POL2: Natpoll Building, ul. Migdalowa 4/59, 02-796, Warsaw, Poland

Russia

RUS1: 2-y Syromyatnichesky per.1, Delta Plaza business center, 105120, Moscow, Russian Federation

RUS2: Petrozavodskaya street 28/4, Building VI, room 2, 125475, Moscow, Russian Federation

RUS3: Krasnykh Partizan st. 152, Office 505, 350049, Krasnodar, Russian Federation

Saudi Arabia

SAU1: Al Fadl Commercial Center, Jeddah, 21411, Saudi Arabia

Singapore

SGP1: 3 Killiney Road, #08-01 Winsland House 1, Singapore, 239119, Singapore

SGP2: 80 Robinson Road, #02-00, Singapore, 068898, Singapore

SGP3: 1 Changi Business Park Crescent, #06-01 Plaza 8 & CBP, Singapore, 48602551, Singapore

SGP4: 8 Robinson Road #03-00 ASO Building Singapore 048544

SGP5: 120 Lower Delta Road #12-02, Cendex Centre, Singapore, 169208

South Africa

ZAF1: Regus Brooklyn Bridge, 3rd Floor Steven House, Brooklyn Bridge Office Park, Fehrsen Street, Brooklyn, Pretoria

ZAF2: Fourways Gold Park, 1st Floor – Wentworth Building, 32 Roos Street, Fourways, 2191, South Africa

ZAF3: 215 Peter Mokaba Road (North Ridge Road), Morningside, Durban, Kwa-Zulu Natal, 4001, South Africa

Spain

ESP1: C/Josep Tarradellas 20-30, 1º/20029, Barcelona, Spain

Switzerland

CHE1: Espace de L'Europe 3, 2002 Neuchatel, Switzerland

CHE2: Regus Brooklyn Bridge, 3rd Floor Steven House Brooklyn, 570 Fehrsen Street, 0181, Brooklyn, Pretoria, Switzerland

Taiwan

TWN1: Rm N818, 8F, Chia Hsin Building II, No.9, Lane 3, Minsheng West Road, Taipei 10449, Taiwan

Registered offices

Thailand

THA1: Sathorn Nakorn Building, Floor 32, No. 100/68-69 North Sathon Road, Silom, Bangrak, Bangkok, 10500, Thailand

THA2: 14th Floor, CTI Tower, 191/70-73 Ratchadapisek Road, Khwaeng Klongtoey, Khet, Klongtoey, Bangkok, Thailand

THA3: 140/36, New IT Tower, 17th Floor, Silom Road, Bangrak 10500, Bangkok, Thailand

THA4: 2 Ploenchit Centre, Room 7, Floor G, Sukhumvit Road, Klongtoey, Bangkok, 10110, Thailand

The Netherlands

NLD1: Radarweg 29, 1043 NX Amsterdam, Netherlands

NLD2: Galileiweg 8, 2333 BD Leiden, Netherlands

NLD3: Evert van de Beekstraat 1 The Base 3/F, 1118CL Schiphol

NLD4: Prins Hendrikstraat 17, 7001 GK Doetinchem

NLD5: Spaklerweg 53, 1114 AE Amsterdam-Duivendrecht

Turkey

TUR1: Maslak Mah. Bilim Sokak Sun Plaza Kat:13 Şişli-Maslak, İstanbul, Turkey

TUR2: E-5 Karayolu Üzeri, Gürpınar Kavşağı 34500, Büyücekmece, İstanbul, 34500, Turkey

TUR3: Fulya Mah. Hakkı Yeten Cad. No:10/C, Selenium Plaza Kat:5,6 Fulya, Beşiktaş İstanbul, Turkey

United Kingdom

GBR1: 1-3 Strand, London, WC2N 5JR, United Kingdom

GBR2: Quadrant House, The Quadrant, Sutton, Surrey, SM2 5AS, United Kingdom

GBR3: Gateway House 28 The Quadrant, Richmond, Surrey, TW9 1DN, United Kingdom

GBR4: Lexis House, 30 Farringdon Street, London, EC4A 4HH, United Kingdom

GBR5: Global Reach, Dunleavy Drive, Cardiff, CF11 0SN, United Kingdom

GBR6: The Eye, 1 Procter Street, London, WC1V 6EU, United Kingdom

GBR7: The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

GBR8: 35 - 37 St. Marys Gate, Nottingham, United Kingdom, NG1 1PU

GBR9: 1st Floor 80 Moorbridge Road, Maidenhead, Berkshire, SL6 8BW

GBR10: 40 Kimbolton Road, Bedford, England, MK40 2NR

GBR11: 1000 Lakeside, Western Road, Portsmouth, PO6 3EN, United Kingdom

GBR12: 5 Oakwood Drive, Loughborough, England, LE11 3QF

GBR13: 28 The Quadrant, Richmond, Surrey, England, TW9 1DN

United States

USA1: 1007 Church Street, Evanston IL 60201

USA2: 1000 Alderman Dr., Alpharetta, GA 30005

USA3: 230 Park Ave, New York, NY 10169

USA4: 1105 North Market St, Wilmington, DE 19801

USA5: 3355 West Alabama Street, Houston, TX 77098

USA6: Puerta Del Condado #1095, Wilson Ave, Local #3, San Juan, PR 00907

USA7: 313 Washington Street, Suite 400, Newton, MA 02458

USA8: 1209 Orange Street, Wilmington, DE 19801

USA9: 9443 Springboro Pike, Miamisburg, OH 45342

USA10: 15633 Rising River PLN, San Diego, CA 92127-5100

Vietnam

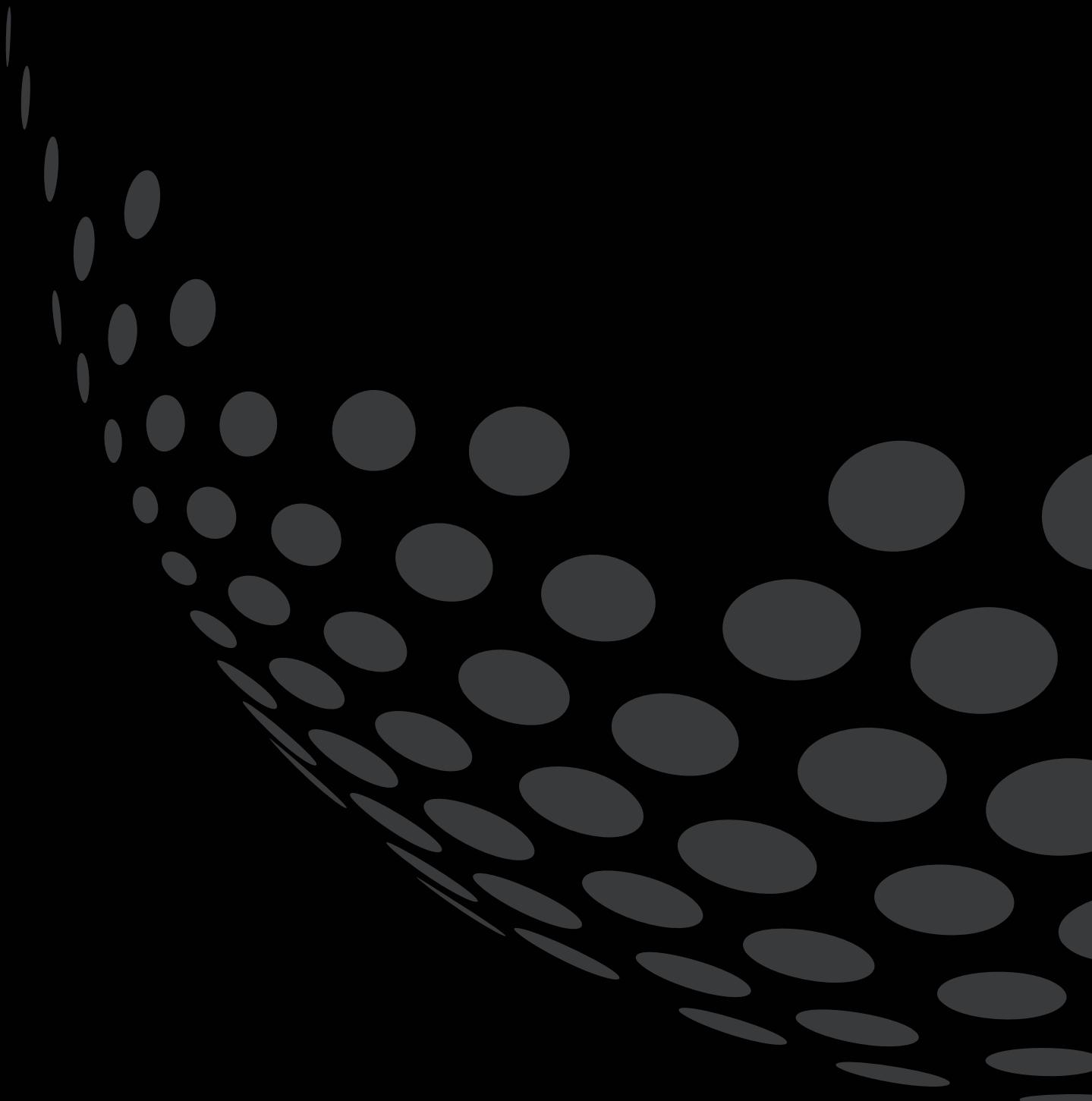
VIE1: 2nd Floor, Kova Center, 92G-92H Nguyen Huu Canh Street, Ward no. 22, District. Binh Thanh, Ho Chi Minh City, Vietnam

5 year summary

	Note	2019 £m	2018 £m	2017 £m	2016 £m	2015 £m
RELX consolidated financial information						
Revenue		7,874	7,492	7,341	6,889	5,971
Reported operating profit		2,101	1,964	1,905	1,708	1,497
Adjusted operating profit	1	2,491	2,346	2,284	2,114	1,822
Reported net profit attributable to RELX PLC shareholders		1,505	1,422	1,648	1,150	1,008
Adjusted net profit attributable to RELX PLC shareholders	1	1,808	1,674	1,620	1,473	1,275
RELX PLC financial information						
Reported earnings per ordinary share (pence)		77.4p	71.9p	81.6p	55.8p	46.4p
Adjusted earnings per ordinary share (pence)		93.0p	84.7p	80.2p	71.4p	60.5p
Dividend per ordinary share (pence)	2	45.7p	42.1p	39.4p	35.95p	29.7p

(1) Adjusted figures are presented as additional performance measures used by management. A reconciliation of the adjusted measures to the comparable GAAP measures can be found on page 184. Adjusted measures are stated before amortisation of acquired intangible assets, the net financing cost on defined benefit pension schemes and acquisition-related costs, exceptional tax credits and in respect of attributable net profit, reflect a tax rate that excludes the effect of movements in deferred taxation assets and liabilities that are not expected to crystallise in the near term and includes the benefit of tax amortisation where available on acquired goodwill and intangible assets. Acquisition-related financing costs and profit and loss from disposal gains and losses and other non-operating items are also excluded from the adjusted figures.

(2) Dividend per ordinary share is based on the interim dividend and proposed final dividend for the relevant year.



RELX PLC Annual Report and Financial Statements

In this section

- 178 RELX PLC statement of financial position
- 179 RELX PLC statement of changes in equity
- 179 RELX PLC accounting policies
- 180 Notes to the RELX PLC financial statements

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and
other information

RELX PLC statement of financial position

AS AT 31 DECEMBER	Note	2019 £m	2018 £m
Non-current assets			
Investments in subsidiary undertakings	1	18,318	18,314
Investments in joint ventures	1	—	—
		18,318	18,314
Current assets			
Cash and cash equivalents		—	1
Trade and other receivables		—	1
Receivables: amounts due from subsidiary undertakings		1,662	1,536
Total assets		19,980	19,852
Current liabilities			
Taxation		—	4
Other payables		102	109
		102	113
Net assets		19,878	19,739
Capital and reserves			
Share capital		286	290
Share premium		1,443	1,415
Shares held in treasury		(739)	(643)
Capital redemption reserve		36	31
Other reserves		168	164
Merger reserve		11,150	15,150
Net profit		1,548	2,063
Reserves		5,986	1,269
Shareholders' equity		19,878	19,739

The RELX PLC Company financial statements were approved by the Board of Directors and authorised for issue on 12 February 2020.
 They were signed on its behalf by:

A J Habgood
 Chair

N L Luff
 Chief Financial Officer

RELX PLC statement of changes in equity

	Share capital £m	Share premium £m	Shares held in treasury £m	Capital redemption reserve ⁽¹⁾ £m	Other reserves ⁽²⁾ £m	Merger reserve ⁽¹⁾ £m	Net profit £m	Reserves ⁽³⁾ £m	Total £m
Balance at 1 January 2018	162	1,309	(753)	25	160	–	817	1,454	3,174
Total comprehensive income for the year	–	–	–	–	–	–	2,063	–	2,063
Dividends paid ⁽⁴⁾	–	–	–	–	–	–	–	(420)	(420)
Repurchase of ordinary shares	–	–	(472)	–	–	–	–	–	(472)
Cancellation of shares	(6)	–	582	6	–	–	–	(582)	–
Issue of ordinary shares, net of expenses	–	13	–	–	–	–	–	–	13
Issue of ordinary shares in exchange for RELXNV shares	134	93	–	–	–	15,150	–	–	15,377
Equity instruments granted to employees of the Group	–	–	–	–	4	–	–	–	4
Transfer of net profit to reserves	–	–	–	–	–	–	(817)	817	–
Balance at 1 January 2019	290	1,415	(643)	31	164	15,150	2,063	1,269	19,739
Total comprehensive income for the year	–	–	–	–	–	–	1,548	–	1,548
Dividends paid ⁽⁴⁾	–	–	–	–	–	–	–	(842)	(842)
Repurchase of ordinary shares	–	–	(600)	–	–	–	–	–	(600)
Cancellation of shares	(5)	–	504	5	–	–	–	(504)	–
Bonus issue of ordinary share	4,000	–	–	–	–	(4,000)	–	–	–
Cancellation of bonus share	(4,000)	–	–	–	–	–	–	4,000	–
Issue of ordinary shares, net of expenses	1	28	–	–	–	–	–	–	29
Equity instruments granted to employees of the Group	–	–	–	–	4	–	–	–	4
Transfer of net profit to reserves	–	–	–	–	–	–	(2,063)	2,063	–
Balance at 31 December 2019	286	1,443	(739)	36	168	11,150	1,548	5,986	19,878

(1) The capital redemption and merger reserve do not form part of the distributable reserves balance.

(2) Other reserves relate to equity instruments granted to employees of the Group under share based remuneration arrangements, and do not form part of the distributable reserves balance.

(3) Distributable reserves at 31 December 2019 were £6,795m (2018: £2,689m) comprising net profit and reserves, net of shares held in treasury.

(4) Refer to note 13 of the RELX consolidated financial statements on page 150 for further dividend disclosure.

RELX PLC accounting policies

Basis of preparation

RELX PLC meets the definition of a qualifying entity under FRS 100 (Financial Reporting Standard 100) issued by the Financial Reporting Council (FRC). Accordingly, the financial statements are prepared in accordance with FRS 101 (Financial Reporting Standard 101) – Reduced Disclosure Framework as issued by the Financial Reporting Council, incorporating the Amendments to FRS 101 issued by the FRC in July 2015 and the amendments to company law made by The Companies, Partnerships and Groups (Accounts and Reports) Regulations 2015.

As permitted by FRS 101, RELX PLC has taken advantage of the disclosure exemptions available under that standard in relation to share based payments, financial instruments, capital management, presentation of comparative information in respect of certain assets, presentation of a cash flow statement, standards not yet effective, impairment of assets and related party transactions.

The RELX PLC financial statements have been prepared on the historical cost basis.

Unless otherwise indicated, all amounts in the financial statements are in millions of pounds.

The RELX PLC financial statements should be read in conjunction with the Group consolidated financial statements and notes presented on pages 128 to 175, which are also presented as the RELX PLC consolidated financial statements. See the Basis of preparation of the consolidated financial statements on page 133.

The RELX PLC financial statements are prepared on a going concern basis, as explained on page 83.

As permitted by section 408 of the Companies Act 2006, and in compliance with The Companies, Partnerships and Groups (Accounts and Reports) Regulations 2015, the Company has not presented its own profit and loss account but has presented the net profit for the year on the statement of financial position.

The RELX PLC accounting policies under FRS 101 are set out below.

Investments

Fixed asset investments are stated at cost, less provision, if appropriate, for any impairment in value. The fair value of the award of share options and conditional shares over RELX PLC ordinary shares to employees of the Group are treated as a capital contribution.

Other assets and liabilities are stated at historical cost, less provision, if appropriate, for any impairment in value.

Shares held in treasury

The consideration paid, including directly attributable costs, for shares repurchased is recognised as shares held in treasury and presented as a deduction from total equity. Details of share capital and shares held in treasury are set out in note 24 of the Group consolidated financial statements.

Foreign exchange translation

Transactions entered into in foreign currencies are recorded at the exchange rates applicable at the time of the transaction.

Taxation

Refer to note 9 on pages 145 to 148 of the consolidated financial statements for the taxation accounting policies.

Notes to the RELX PLC financial statements

1 Investments

	Subsidiary undertaking £m	Joint venture £m	Total £m
At 1 January 2018	–	3,027	3,027
Acquisition of interest in RELX Group plc not already owned	18,310	(3,027)	15,283
Equity instruments granted to employees of the Group	4	–	4
At 1 January 2019	18,314	–	18,314
Equity instruments granted to employees of the Group	4	–	4
At 31 December 2019	18,318	–	18,318

The acquisition of the remaining RELX Group plc interest in 2018 relates to the transfer of RELX NV's previously held interest in RELX Group plc as a result of the corporate simplification. Following the simplification, RELX Group plc is recognised as a 100% owned subsidiary of RELX PLC.

2 Related party transactions

All transactions with joint ventures, subsidiaries and the Group's employees, which are related parties of RELX PLC, are reflected in these financial statements. Transactions with key management personnel including share based remuneration costs are set out in note 26 of the Group consolidated financial statements and details of the Directors' remuneration are included in the Directors' Remuneration Report on pages 88 to 111.

3 Contingent liabilities

There are contingent liabilities in respect of borrowings of subsidiaries guaranteed by RELX PLC as follows:

	2019 £m	2018 £m
Contingent liabilities	5,777	5,775

Financial instruments disclosures in respect of the borrowings covered by the above guarantees are given in note 18 of the Group's consolidated financial statements.

4 Bonus share issue

At the 2019 AGM shareholders approved the issue of a bonus share with £4bn nominal value. The share was subsequently cancelled via a capital reduction, creating £4bn of distributable reserves in RELX PLC to replace the RELX NV reserves lost in the corporate simplification.

Other financial information

In this section

- 182 Summary financial information in euros
- 183 Summary financial information in US dollars
- 184 Reconciliation of adjusted to GAAP measures

Overview

Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and
other information

Summary financial information in euros

Basis of preparation

The Group's consolidated financial information is presented in sterling. The summary financial information is a simple translation of the Group's consolidated financial statements into euros at the stated rates of exchange.

EXCHANGE RATES FOR TRANSLATION	Income statement			Statement of financial position		
	2019	2018	2017	2019	2018	2017
Euro to sterling	1.14	1.13	1.14	1.18	1.11	1.12

Consolidated income statement

FOR THE YEAR ENDED 31 DECEMBER	2019 €m	2018 €m	2017 €m
Revenue	8,976	8,466	8,369
Operating profit	2,395	2,219	2,172
Profit before tax	2,106	1,944	1,962
Net profit attributable to RELX PLC shareholders	1,716	1,607	1,879
Adjusted operating profit	2,840	2,651	2,604
Adjusted profit before tax	2,508	2,424	2,395
Adjusted net profit attributable to RELX PLC shareholders	2,061	1,892	1,847
Adjusted earnings per ordinary share	€1.060	€0.957	€0.915
Basic earnings per ordinary share	€0.883	€0.813	€0.930
Net dividend per ordinary RELX PLC share paid in the year	€0.494	€0.453	€0.426
Net dividend per ordinary RELX PLC share paid and proposed in relation to the financial year	€0.521	€0.476	€0.449

Consolidated statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER	2019 €m	2018 €m	2017 €m
Net cash from operating activities	2,381	2,243	2,182
Net cash used in investing activities	(835)	(1,436)	(473)
Net cash used in financing activities	(1,515)	(806)	(1,760)
Increase/(decrease) in cash and cash equivalents	31	1	(51)
Movement in cash and cash equivalents			
At start of year	127	124	190
Increase/(decrease) in cash and cash equivalents	31	1	(51)
Exchange translation differences	5	2	(15)
At end of year	163	127	124
Adjusted cash flow	2,738	2,535	2,505

Consolidated statement of financial position

AS AT 31 DECEMBER	2019 €m	2018 €m	2017 €m
Non-current assets	13,386	12,928	11,673
Current assets	2,885	2,609	2,475
Assets held for sale	-	1	-
Total assets	16,271	15,538	14,148
Current liabilities	7,018	5,906	5,224
Non-current liabilities	6,669	7,010	6,333
Liabilities associated with assets held for sale	-	4	-
Total liabilities	13,687	12,920	11,557
Net assets	2,584	2,618	2,591

Summary financial information in US dollars

Basis of preparation

The Group's consolidated financial information is presented in sterling. The summary financial information is a simple translation of the Group's consolidated financial statements into US dollars at the stated rates of exchange. It does not represent a restatement under US GAAP which would be different in some significant respects.

EXCHANGE RATES FOR TRANSLATION	Income statement			Statement of financial position		
	2019	2018	2017	2019	2018	2017
US dollars to sterling	1.28	1.34	1.29	1.33	1.27	1.35

Consolidated income statement

FOR THE YEAR ENDED 31 DECEMBER	2019	2018	2017
	US\$m	US\$m	US\$m
Revenue	10,079	10,039	9,470
Operating profit	2,689	2,632	2,457
Profit before tax	2,364	2,305	2,220
Net profit attributable to RELX PLC shareholders	1,926	1,905	2,126
Adjusted operating profit	3,188	3,144	2,946
Adjusted profit before tax	2,816	2,874	2,710
Adjusted net profit attributable to RELX PLC shareholders	2,314	2,243	2,090
Adjusted earnings per American Depository Share (ADS)	\$1.191	\$1.134	\$1.035
Basic earnings per ADS	\$0.991	\$0.963	\$1.053
Net dividend per RELX PLC ADS paid in the year	\$0.554	\$0.537	\$0.482
Net dividend per RELX PLC ADS paid and proposed in relation to the financial year	\$0.585	\$0.564	\$0.508

Consolidated statement of cash flows

FOR THE YEAR ENDED 31 DECEMBER	2019	2018	2017
	US\$m	US\$m	US\$m
Net cash from operating activities	2,674	2,660	2,469
Net cash used in investing activities	(938)	(1,703)	(535)
Net cash used in financing activities	(1,701)	(956)	(1,992)
Increase/(decrease) in cash and cash equivalents	35	1	(58)
Movement in cash and cash equivalents			
At start of year	145	150	199
Increase/(decrease) in cash and cash equivalents	35	1	(58)
Exchange translation differences	4	(6)	9
At end of year	184	145	150
Adjusted cash flow	3,075	3,006	2,834

Consolidated statement of financial position

AS AT 31 DECEMBER	2019	2018	2017
	US\$m	US\$m	US\$m
Non-current assets	15,088	14,792	14,070
Current assets	3,252	2,986	2,984
Assets held for sale	-	1	-
Total assets	18,340	17,779	17,054
Current liabilities	7,910	6,758	6,296
Non-current liabilities	7,517	8,020	7,635
Liabilities associated with assets held for sale	-	5	-
Total liabilities	15,427	14,783	13,931
Net assets	2,913	2,996	3,123

Reconciliation of adjusted to GAAP measures

The Group uses adjusted figures, which are not defined by generally accepted accounting principles ('GAAP') such as IFRS, as additional performance measures. These measures are used by management, alongside the comparable GAAP measures, in evaluating the business performance. The measures may not be comparable to similarly reported measures by other companies.

A reconciliation of non-GAAP measures to relevant GAAP measures is as follows:

YEAR ENDED 31 DECEMBER	2019 £m	2018 £m
Operating profit	2,101	1,964
Adjustments:		
Amortisation of acquired intangible assets	295	288
Acquisition-related costs	84	84
Reclassification of tax in joint ventures	12	11
Reclassification of finance income in joint ventures	(1)	(1)
Adjusted operating profit	2,491	2,346
Profit before tax	1,847	1,720
Adjustments:		
Amortisation of acquired intangible assets	295	288
Acquisition-related costs	84	84
Reclassification of tax in joint ventures	12	11
Net interest on net defined benefit pension obligation and other	13	9
Disposals and other non-operating items	(51)	33
Adjusted profit before tax	2,200	2,145
Tax charge	(338)	(292)
Adjustments:		
Deferred tax movements on goodwill and acquired intangible assets	26	34
Tax on acquisition-related costs	(15)	(13)
Reclassification of tax in joint ventures	(12)	(11)
Tax on net interest on net defined benefit pension obligation and other	(3)	(2)
Tax on disposals and other non-operating items	11	(14)
Other deferred tax credits from intangible assets*	(57)	(55)
Exceptional tax credit**	–	(112)
Adjusted tax charge	(388)	(465)
Net profit attributable to RELX PLC shareholders	1,505	1,422
Adjustments (post-tax):		
Amortisation of acquired intangible assets	321	322
Acquisition-related costs	69	71
Net interest on net defined benefit pension obligation and other	10	7
Disposals and other non-operating items	(40)	19
Other deferred tax credits from intangible assets*	(57)	(55)
Exceptional tax credit**	–	(112)
Adjusted net profit attributable to RELX PLC shareholders	1,808	1,674
Cash generated from operations	2,724	2,555
Adjustments:		
Dividends received from joint ventures	34	30
Purchases of property, plant and equipment	(47)	(56)
Proceeds from disposals of property, plant and equipment	2	4
Expenditure on internally developed intangible assets	(333)	(306)
Payments in relation to acquisition-related costs	63	77
Pension recovery payment	44	20
Repayment of lease principal	(86)	(82)
Sublease payments received	1	1
Adjusted cash flow	2,402	2,243

* Movements on deferred tax liabilities arising on acquired intangible assets that do not qualify for tax amortisation.

** In 2018 relates to the substantial resolution of certain prior year tax matters and deferred tax effect of tax rate reductions in the Netherlands and US.

Shareholder information

In this section

- 186 Shareholder information
- 188 Shareholder information and contacts
- IBC 2020 financial calendar

Overview

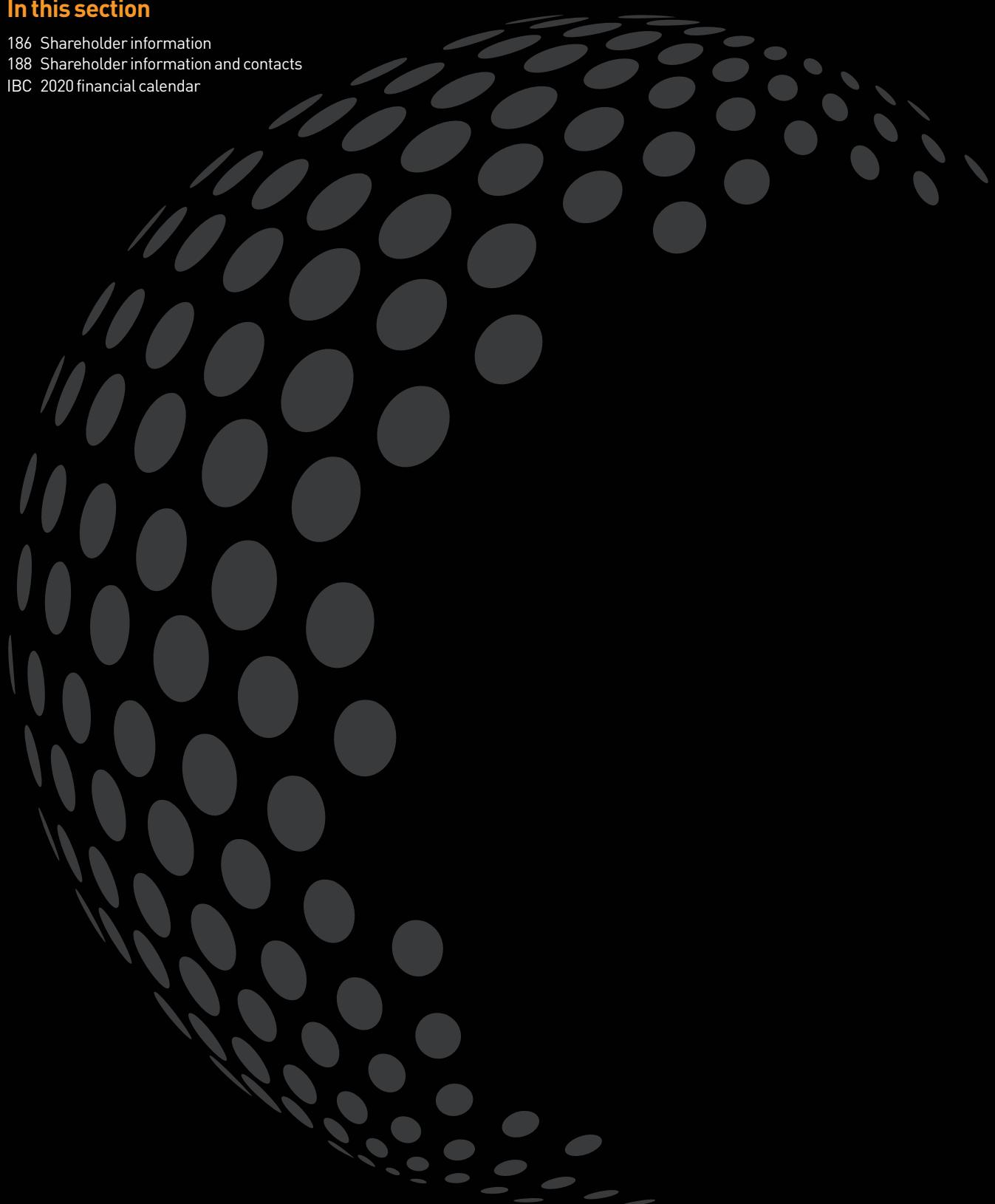
Market segments

Corporate Responsibility

Financial review

Governance

Financial statements and other information



Shareholder information

Annual Report and Financial Statements 2019

The Annual Report and Financial Statements for RELX PLC for the year ended 31 December 2019 are available on the Group's website, and from the registered office of RELX PLC shown on page 188. Additional financial information, including the interim and full-year results announcements, trading updates and presentations, is also available on the Group's website,

 www.relx.com

The consolidated financial statements set out in the Annual Report and Financial Statements are expressed in sterling, with summary financial information expressed in euros and US dollars.

Share price information

RELX PLC's ordinary shares are traded on the London Stock Exchange.

	PLC
Trading symbol	REL
ISIN	GB00B2B0DG97

RELX PLC's ordinary shares are also traded on the Euronext Amsterdam Stock Exchange.

	PLC
Trading symbol	REN
ISIN	GB00B2B0DG97

The RELX PLC ordinary shares are traded on the New York Stock Exchange in the form of American Depository Shares (ADSs), evidenced by American Depository Receipts (ADRs).

	PLC ADRs
Ratio to ordinary shares	1:1
Trading symbol	RELX
CUSIP code	759530108

The RELX PLC ordinary share price and the ADS price may be obtained from the Group's website, other online sources and the financial pages of some newspapers.

 For further information visit the 'Investor Centre' section of the Group's website www.relx.com/investorcentre

Information for registered ordinary shareholders

Shareholder services

The RELX PLC ordinary share register is administered by Equiniti Limited. Equiniti provides a free online portal for shareholders at www.shareview.co.uk. Shareview allows shareholders to monitor the value of their shareholdings, view their dividend payments and submit dividend mandate instructions. Shareholders can also submit their proxy voting instructions ahead of company meetings, as well as update their personal contact details. Shareview Dealing provides a share purchase and sale facility. Equiniti's contact details are shown on page 188.

Electronic communications

While hard copy shareholder communications continue to be available to those shareholders requesting them, in accordance with the Companies Act 2006 and the Company's articles of association, the Company uses the Group's website as the main method of communicating with shareholders. By registering their details online at Shareview, shareholders can be notified by email when shareholder communications are published on the Group's website. Shareholders can also use the Shareview website to appoint a proxy to vote on their behalf at shareholder meetings.

Shareholders who hold their Company shares through CREST may appoint proxies for shareholder meetings through the CREST electronic proxy appointment service by using the procedures described in the CREST manual.

Dividend mandates

Shareholders are encouraged to have their dividends paid directly into a UK bank or building society account. This method of payment reduces the risk of delay or loss of dividend cheques in the post and ensures the account is credited on the dividend payment date. A dividend mandate form can be obtained online at www.shareview.co.uk, or by contacting Equiniti at the address shown on page 188.

Equiniti has established a service for overseas shareholders in over 90 countries, which enables shareholders to have their dividends automatically converted from sterling and paid directly into their nominated bank account. Further details of this service, and the fees applicable, are available at www.shareview.co.uk/info/ops or by contacting Equiniti at the address shown on page 188.

Dividend Reinvestment Plan

Shareholders can choose to reinvest their Company dividends by purchasing further shares through the Dividend Reinvestment Plan (DRIP) provided by Equiniti. Further information concerning the DRIP facility, together with the terms and conditions and an application form can be obtained online at www.shareview.co.uk/info/drip or by contacting Equiniti at the address shown on page 188.

Share dealing service

A telephone and internet dealing service is available through Equiniti, which provides a simple way for UK resident shareholders to buy or sell their shares. For telephone dealing call 0345 603 7037 between 8.30am and 5.30pm (UK time), Monday to Friday (excluding public holidays in England and Wales), and for internet dealing log on to www.shareview.co.uk/dealing. You will need your shareholder reference number shown on your dividend confirmation.

ShareGift

The Orr Mackintosh Foundation operates a charity share donation scheme for shareholders with small parcels of shares whose value makes it uneconomic to sell them. Details of the scheme can be obtained from the ShareGift website at www.sharegift.org, or by telephoning ShareGift on 020 7930 3737.

Sub-division of ordinary shares and share consolidation

On 28 July 1986, each RELX PLC ordinary share of £1 nominal value was sub-divided into four ordinary shares of 25p each. On 2 May 1997, each 25p ordinary share was sub-divided into two ordinary shares of 12.5p each. On 7 January 2008, the ordinary shares of 12.5p each were consolidated on the basis of 58 new ordinary shares of 14^{51/116}p nominal value for every 67 ordinary shares of 12.5p each held.

Capital gains tax

The mid-market price of RELX PLC's £1 ordinary shares on 31 March 1982 was 282p. Adjusting for the sub-divisions and share consolidation referred to above results in an equivalent mid-market price of 40.72p for each existing ordinary share of 14^{51/116}p nominal value.

Warning to shareholders – unsolicited investment advice

- From time to time shareholders may receive unsolicited calls from fraudsters
- Fraudsters use persuasive and high-pressure tactics to lure investors into scams, sometimes known as boiler room scams
- They may offer to sell shares that turn out to be worthless or non-existent, or to buy shares at an inflated price in return for an upfront payment
- While high profits are promised, if you buy or sell shares in this way you will probably lose your money
- Thousands of people contact the Financial Conduct Authority about investment fraud each year, with victims losing an average of £32,000

How to avoid share fraud and boiler room scams

The Financial Conduct Authority (FCA) has issued some guidance on how to recognise and avoid investment fraud:

- Legitimate firms authorised by the FCA are unlikely to contact you unexpectedly with an offer to buy or sell shares
- If you receive an unsolicited phone call, do not get into a conversation, note the name of the person and firm contacting you and then end the call
- Check the Financial Services Register available at <https://register.fca.org.uk/> to see if the person and firm contacting you is authorised by the FCA. If you wish to call the person or firm back, only use the contact details listed on the Register
- Call the FCA on 0800 111 6768 if the firm does not have any contact details on the Register, or if you are told that they are out of date
- Search the list of unauthorised firms to avoid at <https://www.fca.org.uk/consumers/unauthorised-firms-individuals#list>
- If you do buy or sell shares through an unauthorised firm, you will not have access to the Financial Ombudsman Service or the Financial Services Compensation Scheme
- Consider obtaining independent financial and professional advice before you hand over any money. If it sounds too good to be true, it probably is.

How to report a scam

If you are approached by fraudsters, please tell the FCA using the share fraud reporting form at www.fca.org.uk/consumers/report-scams-unauthorised-firms, where you can find out more about investment scams. You can also call the FCA Consumer Helpline on 0800 111 6768.

If you have already paid money to share fraudsters, you should contact Action Fraud on 0300 123 2040 or use their online tool: http://www.actionfraud.police.uk/report_fraud

Shareholder information and contacts

Information for holders of ordinary shares held through Euroclear Nederland

Shareholders with enquiries concerning RELX PLC ordinary shares that are not held directly on the Register of Members and are ultimately held through Nederlands Centraal Instituut voor Giraal Effectenverkeer BV (Euroclear Nederland) should direct their enquiries to the broker, financial intermediary, bank or other financial institution that holds the shares on their behalf.

Dividend Reinvestment Plan

Shareholders can choose to reinvest their dividends by purchasing shares through the Dividend Reinvestment Plan (DRIP) provided by ABN AMRO Bank NV. Further information concerning the DRIP facility can be obtained online at www.securitiesinfo.com.

Information for ADR holders

ADR shareholder services

Enquiries concerning RELX PLC ADRs should be addressed to the ADR Depository, Citibank NA, at the address shown below. Dividend payments on RELX PLC ADRs are converted into US dollars by the ADR Depository.

Annual Report on Form 20-F

The RELX Annual Report on Form 20-F is filed electronically with the United States Securities and Exchange Commission. A copy of the Form 20-F is available on the Group's website, or from the ADR Depository at the address shown below.

Contacts

RELX PLC

Head Office and Registered Office

1-3 Strand
London WC2N 5JR
United Kingdom
Tel: +44 (0)20 7166 5500
Fax: +44 (0)20 7166 5799

Auditors

Ernst & Young LLP
1 More London Place
London SE1 2AF
United Kingdom

Registrar

Equiniti Limited
Aspect House
Spencer Road
Lancing BN99 6DA
West Sussex
United Kingdom

www.shareview.co.uk

Tel: 0371 384 2960 (UK callers)
Tel: +44 121 415 0165 (callers outside the UK)

Dividend currency elections

Shareholders appearing on the Register of Members or holding their shares through CREST will continue to receive their dividends in Pounds Sterling, but will have the option to elect to receive their dividends in Euro. Euro payments will be made by cheque only.

Shareholders who appear on the Register of Members and wish to receive their dividend in Euro should contact our Registrar, Equiniti on 0371 384 2960 (UK) or +44 (0) 121 415 0165 (from outside the UK) for a dividend election form and further information regarding the Euro dividend option. Alternatively, shareholders can view and update their current dividend elections by registering for a Shareview Portfolio at www.shareview.co.uk/register.

Shareholders who hold their shares through CREST and wish to receive their dividend in Euro, must do so by following the CREST Elections process.

Shareholders who hold RELX PLC shares through Euroclear Nederland (via banks and brokers), will automatically receive their dividends in Euro, but will have the option to elect to receive their dividends in Pounds Sterling.

Shareholders who hold their shares through Euroclear Nederland and wish to receive their dividends in Pounds Sterling should contact their broker, financial intermediary, bank or other financial institution that holds the shares on their behalf.

Listing/paying agent for shares listed on Euronext Amsterdam held through Euroclear Nederland

ABN AMRO Bank NV
Department Corporate Broking and Issuer Services HQ7212
Gustav Mahlerlaan 10
1082 PP Amsterdam
The Netherlands

Email: corporate.broking@nl.abnamro.com

www.securitiesinfo.com

RELX PLC ADR Depository

Citibank Depositary Receipt Services
PO Box 43077
Providence, RI 02940-3077
USA

www.citi.com/dr

Email: citibank@shareholders-online.com
Tel: +1 877 248 4327
+1 781 575 4555 (callers outside the US)

2020 financial calendar

13 February	Results announcement for the year ended 31 December 2019
23 April	Trading update issued in relation to the 2020 financial year
23 April	Annual General Meeting – Amba Hotel, Strand, London WC2N 5HX
24 April	Ex-dividend date – 2019 final dividend, ordinary shares and ADRs
27 April	Record date – 2019 final dividend, ordinary shares and ADRs
13 May	Dividend currency and DRIP election deadline
18 May	Euro dividend equivalent announcement
28 May	Payment date – 2019 final dividend, ordinary shares
2 June	Payment date – 2019 final dividend, ADRs
23 July	Interim results announcement for the six months to 30 June 2020
30 July*	Ex-dividend date – 2020 interim dividend, ordinary shares and ADRs
31 July*	Record date – 2020 interim dividend, ordinary shares and ADRs

* Please note that these dates are provisional and subject to change. The 2020 Interim Dividend payment dates in respect of ordinary shares and ADRs will be confirmed by the Company in its 2020 Interim Results announcement, currently scheduled for release on 23 July 2020.

Dividend history

The following tables set out dividends paid (or proposed) in relation to the three financial years 2017–2019.

ORDINARY SHARES	pence per PLC ordinary share	Payment date
Final dividend for 2019**	32.10	28 May 2020
Interim dividend for 2019	13.60	2 September 2019
Final dividend for 2018	29.70	4 June 2019
Interim dividend for 2018	12.40	24 August 2018
Final dividend for 2017	27.70	22 May 2018
Interim dividend for 2017	11.70	25 August 2017

**Proposed dividend, to be submitted for approval at the Annual General Meeting of RELX PLC in April 2020

ADRS	\$ per PLC ADR	Payment date
Final Dividend for 2019***	***	2 June 2020
Interim Dividend for 2019	0.16398	5 September 2019
Final Dividend for 2018	0.37612	7 June 2019
Interim Dividend for 2018	0.15914	29 August 2018
Final dividend for 2017	0.37159	25 May 2018
Interim dividend for 2017	0.15085	30 August 2017

***Payment will be determined using the appropriate £/US\$ exchange rate on 28 May 2020.

Credits

Designed and produced by

Conran Design Group

Board photography by

Douglas Fry, Piranha Photography

Printed by

Pureprint Group, ISO14001, FSC® certified and CarbonNeutral®

Printed on Revive 100 Silk which is made from 100% recovered waste. All of the pulp is bleached using an elemental chlorine free process (ECF). Printed in the UK by Pureprint using their environmental printing technology; vegetable inks were used throughout. Pureprint is a CarbonNeutral® company. Both manufacturing mill and printer are ISO14001 registered and are Forest Stewardship Council® (FSC) chain-of-custody certified.



