Wolters Kluwer

2018 Annual Report

2018 Annual Report

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"I look forward to a rich agenda ahead as we launch our new 2019-2021 strategy *Accelerating Our Value*.

Message from the CEO

Our achievements in 2018 are the result of working alongside our customers and using advanced technologies to address complex problems in society.

For the past 15 years, we have undertaken an ambitious transformational journey, each step along the way has represented a different kind of development for us as an organization. We have transformed into a digital business and are now focused on becoming a global expert solutions company. Our drive and knowledge of our customers, employees, and investors provide a strong foundation as we embark on our 2019-2021 strategy.

In 2018, we delivered 4% organic growth and improved operating margins and cash flow. Digital & services grew 6% organically, representing 88% of total revenues. With 2018 closed, our previous three-year strategy *Growing Our Value* is complete. I would like to reflect on the progress we have made in bringing innovation-led value to our customers and highlight the next phase of the company's development with the launch of our strategy for 2019-2021: *Accelerating Our Value*. It's an exciting time as Wolters Kluwer is leading the market with expert solutions which provide significant value to our customers.

Growing Our Value in 2016-2018

We have successfully executed on our most recent three-year strategic plan. Our 2016-2018 strategy, *Growing Our Value*, aimed to improve our organic growth rate, increase shareholders returns, and further enable the long-term success of the company. Over the last three years, we have expanded our role as a partner that supports customers in their most critical workflows. Building on this momentum, we will continue to grow our expert solutions through digital innovation and global expansion.

The acquisitions we have made in the last three years have allowed us to extend into adjacent markets. CCH Tagetik, Enablon, and eVision are examples of platforms that strengthen our market-leading position. Through eVision, acquired in October 2018, our position as a leader in both environmental, health & safety, and industrial operations risk management software is solidified. We will continue to prioritize strategic partnerships to penetrate new markets that support our strategic goals.

In 2016-2018, we made progress against each of our strategic pillars and we are committed to continue creating value for our customers, employees, investors, and society overall. The immense dedication of our highly specialized employees is one of our greatest strengths. Our employee engagement is very strong and our employees continue to be optimistic about our future. The foundation of our shared values and strong leadership are key drivers of our engagement. As we continue to inspire and celebrate collaborative product development through our many innovation programs, we also remain focused on providing more opportunities for building skills and careers.

Cultivating innovation and co-creation

I am very proud of our portfolio adjustments and the innovative product development we have delivered. I am particularly excited to see the array of solutions each of our divisions are developing using advanced technologies such as artificial intelligence, machine learning, and robotic process automation.

As part of our 2016-2018 strategy, we expanded market coverage and accelerated our development of global platforms and cloud-based integrated solutions. Investing in our culture and engaging employees in creative processes has allowed us to anticipate the needs of clinicians, accountants, lawyers, and tax, finance, audit, compliance, and regulatory professionals. We have taken information and made it more actionable through intelligent solutions and operational agility. Our goal for the future is to complete our vision of delivering a seamless digital experience for our customers.

Impact on society

2018 was a year where we continued to witness the impact our expert solutions have on society. We empowered professionals across industries to work more efficiently and confidently, equipping them with world-class workflow tools. In 2019, we will continue to advance our deep domain expertise through embedding our products in the customer workflow while delivering actionable insight. The deep impact of the work of all the professionals we serve helps to make the world more sustainable and supports societal development.

Accelerating Our Value – Together

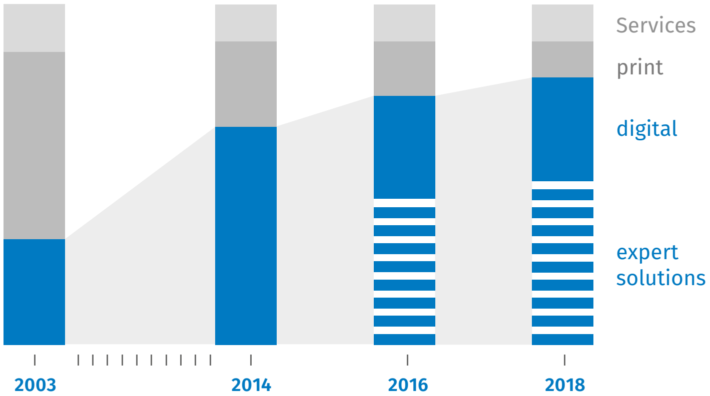
In 2019, we embark on our new three-year strategy, *Accelerating Our Value*, designed to grow our expert solutions, advance our deep domain expertise, and drive operational agility. Working alongside our customers, we will continue to apply advanced technologies to address complex problems in society. I am excited and confident of the strong foundation we have built.

I would like to thank all our employees for their dedication and commitment as we enter the next phase of the company's development. I would also like to thank our external stakeholders and investors, all of whom have been vital in enabling us to create value.

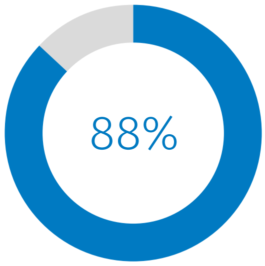
Nancy McKinstry
CEO and Chairman of the Executive Board
Wolters Kluwer

Wolters Kluwer at a Glance in 2018

TRANSFORMATION



DIGITAL & SERVICES



of total revenues, up 6% organically

OUR **PORTFOLIO**

includes: UpToDate, Emmi, TeamMate, CCH Axcess, CT Corporation, OneSumX, Enablon, and eVision.

SERVING CUSTOMERS IN **180+**

countries. Operations in 40+ countries

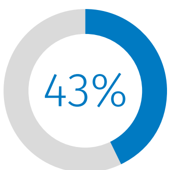
A RICH **182-YEAR**

heritage of strong values, deep domain knowledge, innovation, and a continuous focus on the customer

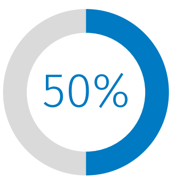
99%

of our active employees completed the Annual Compliance Training

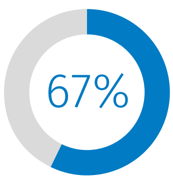
DIVERSITY



female Supervisory Board



female Executive Board



female divisional CEOs

18,600

employees worldwide

2018 FINANCIAL HIGHLIGHTS

€4.3
billion revenues

23.0%
adjusted operating profit margin

€762
million adjusted free cash flow

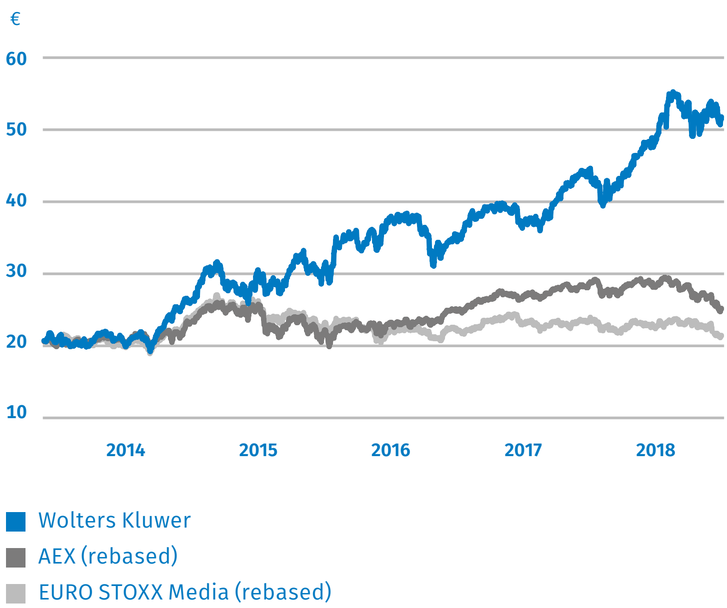
4.3%
organic revenue growth

10.9%
return on invested capital

78%
recurring revenues, up 5% organically

WOLTERS KLUWER SHARES HAVE INCREASED 149%

2014-2018



8%-10%
of total revenues invested in new and enhanced products

Report of the Executive Board

Deliver Deep Impact

Evolving workflows through innovation
Wolters Kluwer has served the world's professionals for many decades, helping them enhance workflows and make informed decisions when it matters most. The powerful relationship between people and their work is what drives us to evolve our expert solutions for professionals and the wider economy, enabling our customers to deliver meaningful impact. Expertise and trusted knowledge have been our guiding principles since the very beginning. Today, our principles allow us to protect people's health and prosperity and contribute to a safe and just society.

Over the last 15 years, Wolters Kluwer has transformed into a market leader and trusted partner to clinicians, accountants, lawyers, and tax, finance, audit, compliance, and regulatory professionals. Since 2003, the organization's leadership has been committed to a company-wide digital vision. In 2018, our continued investment in new technologies and expertise resulted in 88% of our revenues coming from digital & services. We remain focused on innovation and will continue to reinvest 8%-10% of total revenues towards product development and enhancements.

Machine-enabled human experts
Digitalization and new technologies have had a deep impact on the daily work of professionals across all industries. From doctors and educators to lawyers and investors, expert solutions are more critical than ever as individuals are faced with rapid technological changes. These developments dictate the need for enhanced levels of innovation in our industry. Our in-house innovation labs and our central technology organization, our Global Platform Organization, work closely with customers. We deliver actionable insights and invaluable end-to-end digital experiences. Every day, we solve problems that have real-world impact through solutions that combine predictive analytics, machine learning, natural language processing, and human expertise.

Innovation and impact
We work alongside our customers to create and manage solutions driven by a deep understanding of their needs, addressing the rapid changes in their environment. Teams from the Global Platform Organization and Global Business Services, who manage our technology infrastructure, engage in design thinking to anticipate and meet customer needs in each of our divisions.

2016-2018 Growing Our Value strategy
Every three years, we review and update our strategic priorities which are at the center of our value creation model. *Growing Our Value*, our 2016-2018 strategy, aimed to sustain and further improve our organic growth rate, while increasing margins and returns to shareholders with a focus on growing value for our customers, employees, investors, and society.

2019-2021 Accelerating Our Value strategy
2019 will be the first year of our new strategy, *Accelerating Our Value*, which will set the course for the organization over the next three years. Over the past 15 years, we have laid the foundation for this logical next step in our evolution. Transforming our portfolio from print to digital has been critical to the company's success to date and has allowed us to complete our transition to a leading provider of expert solutions.

Our new business strategy will drive our day-to-day operations from 2019 through 2021 and consists of three pillars. These pillars reflect our strategic priorities and form the foundation for executing our strategy across our portfolio for the next three years.

We have seen great product development across all divisions, particularly in the fields of artificial intelligence, machine learning, and robotic process automation. The transformative technologies we work with across the enterprise support our core value proposition of combining deep domain knowledge with customer workflow expertise to deliver better outcomes, analytics, and productivity benefits to our customers. By incorporating elements of these technologies into our products, we can grow our leading market positions and customer relationships.

Key trends in our favor

Our strategy involves continuous innovation and enhancement of our expert solutions suite for professionals. Our centers of excellence and task forces help us anticipate and respond to market trends relating to regulation, customer needs, and technological changes.

The ongoing increase in regulatory intensity has seen new bodies and regulations introduced at an unprecedented rate. Data privacy rights and consumer protection are also topics which increasingly occupy our customers' time and resources. Our expert solutions are tailored to address and navigate these changes.

We have experienced shifting customer needs because of these trends along with the rise of the gig economy, which presents a natural market for our efficiency-enhancing and cost-cutting expert solutions.

Advanced technologies such as cloud computing are becoming more affordable and inevitably constitute the new frontier in interoperability and integration. As a result, our expert solutions must integrate with open platforms and ecosystems. This means a new customer experience in the markets we serve, where business to business (B2B) experiences have started to mirror the customer experiences commonly associated with business to consumers (B2C).

Accelerating our Value

GROW
expert solutions

ADVANCE
deep domain expertise

DRIVE
operational agility

Key Trends in our Favor

Ongoing Increase in
REGULATORY INTENSITY

Shifting
CUSTOMER NEEDS

Affordable
ADVANCED TECHNOLOGIES

Value creation model

Our value creation model is at the core of everything we do and guides our work on a day-to-day basis. It shows how our organizational business model uses resources and transforms them through business activities that create value for our stakeholders, with our strategy in the center. We strive to develop products that help protect people's health and prosperity and contribute to a safe and just society by providing deep insights and knowledge to professionals.

Expert solutions for tomorrow's society

For almost two centuries, Wolters Kluwer has delivered on its commitment to serve professionals in order to solve complex problems. We are recognized as a trusted partner that delivers deep impact when it matters most. This underpins everything we do and is reflected in our leading positions in the markets in which we operate. Our customers include 90% of U.S. academic medical centers, 93% of Fortune 500 companies, 100% of the top U.S. accounting firms, and 90% of the world's top banks.

Our areas of expertise combined with our investment in innovation help us create solutions that address tomorrow's challenges.

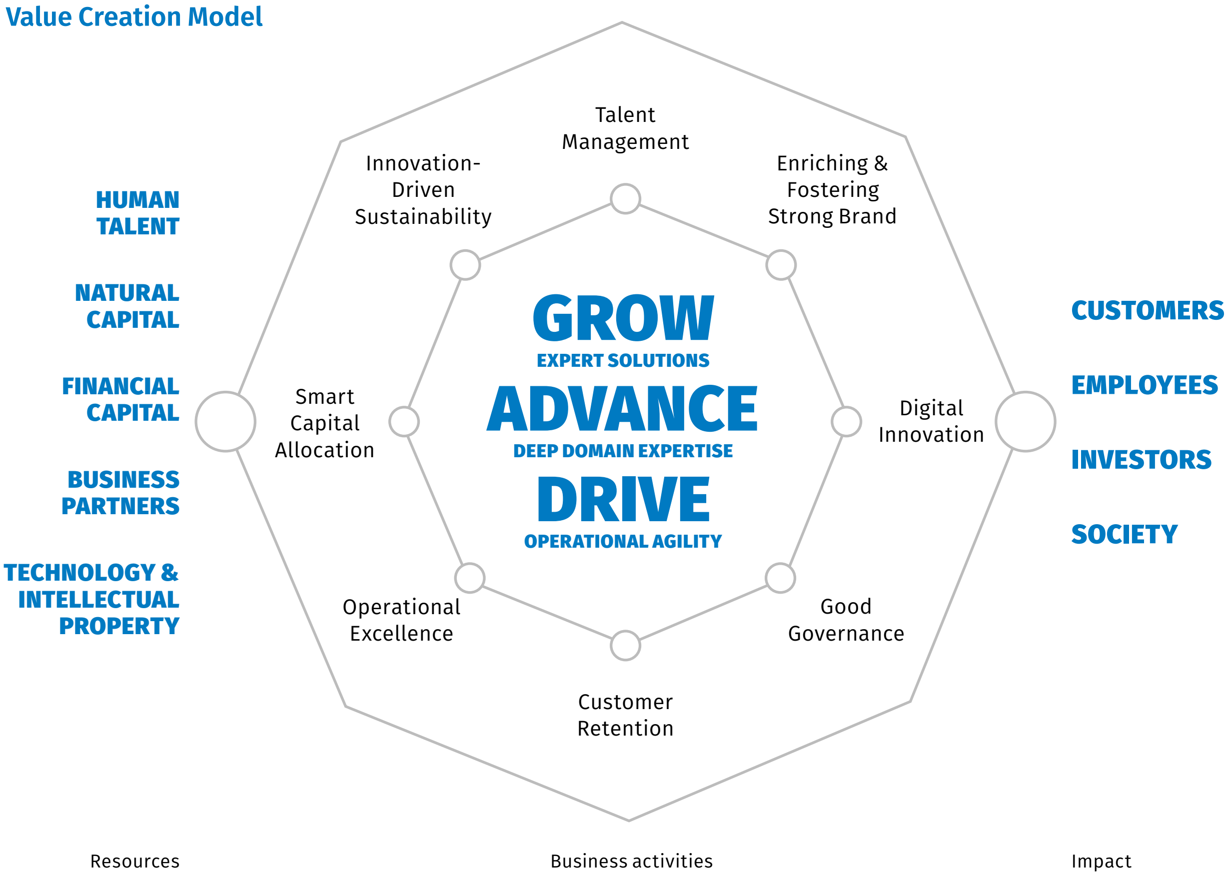
Healthcare

Access to healthcare for the general population is becoming unsustainable with U.S. healthcare spending rising from around 18% of GDP in 2016 to a projected 20% by 2025. Healthcare executives are faced with more regulatory pressures, rapidly advancing digital healthcare, and the delivery of patient-centered care outside of medical facilities. We incorporate artificial intelligence and apply smarter data analytics to make healthcare information actionable, bridging gaps to decrease care variation, improve patient outcomes, reduce error rates, and increase clinical and financial efficiency. Through our evidence-based solutions, we equip organizations with the tools to predict and manage patient conditions such as sepsis, diabetes, and congestive heart failure.

Tax and accounting

Technology's exponential advancement is impacting the very work tax and accounting professionals do for a living. In 2019, many will be tasked with staying on top of complex tax changes, getting clients on board with new technology, and a move towards international reporting standards. Our solutions integrate artificial intelligence, machine learning, and cognitive computing to empower accounting and audit firms, professionals, businesses, and governmental authorities to unify their finance processes, harness their data for confident decision-making, and reduce manual work.

Value Creation Model



Governance, risk, and compliance

In recent years, banks, credit unions, and savings and loans have cited increased anxiety in managing changing regulations and regulators' demand for growing datasets. They have seen a growth in competition and a need for deeper business insight from financial institutions. We predict that artificial intelligence will play a role in enabling more automated regulatory analysis and transaction-level reporting in the next few years. Our expert solutions help legal and finance professionals ensure compliance with regulatory and legal obligations, manage risk, increase efficiency, and produce improved business outcomes. Our products allow banks and other institutions to become highly competitive and have greater command of their commercial and supervisory environments.

Legal and regulatory

In the last decade, artificial intelligence in the legal industry has been used to manage and maximize efficiency in content discovery and research. Today, artificial intelligence is increasingly used as a strategy to identify threats and capitalize on opportunities helping professionals to increase productivity, predict outcomes, reduce risks, negotiate deals, and drive higher profitability. In the compliance arena, Industry 4.0 is the digital transformation of industrial environments and delivers predictive suggestions, driven by smart machines and big data. Wolters Kluwer leverages artificial intelligence to deliver information enriched with advanced technology to help professionals and businesses thrive in the complex and changing areas of legal and regulatory compliance.

Customer satisfaction

78% of Wolters Kluwer's total revenues are recurring, reflecting the importance we place on customer satisfaction and retention. Interaction with customers before, during, and after the innovation process helps the company to adjust and deliver its solutions to their exact needs. Customer satisfaction is also monitored by various programs, including measuring net promoter scores to ensure we engage with our customers on a frequent base. Understanding the customer journey and what customers think of us allows us to execute a robust enterprise-wide customer experience measurement program in tandem with analytics and data management. As a result, we can amplify the most important insights to inform our product development decisions.

Developing industry-leading solutions

At Wolters Kluwer, investing in our culture and engaging employees in creative processes allows us to empower physicians, nurses, lawyers, and audit, tax, finance, and regulatory professionals to make critical decisions with confidence. Both customers and employees play a crucial role in developing industry-leading solutions through collaborative activities such as our organization-wide innovation contests.

The Global Innovations Awards (GIA) is our organization's largest employee competition and sees 75% of winning ideas brought to life. Any one of our 18,600 employees can pitch an idea. In 2018, over 300 solutions were submitted. In 2014, a GIA entrant named Point of Care Advisor was developed and tested with medical practitioners and U.S. hospitals to help treat sepsis. The powerful clinical surveillance platform is now used by several large U.S. hospitals. In 2016, the game-changing CCH iQ was a GIA winner. This predictive intelligence tool brings clients impacted by tax and accounting events together with actionable content. The GIA initiative fosters innovation and brings forward cutting-edge ideas for new features and products that help align us with customers. This annual event is one of many innovation activities that are core to our business.

Diverse global workforce

We would not be able to provide solutions that protect people's health and prosperity and contribute to a safe and just society without our employees. We listen to employee feedback through our annual engagement survey. We work hard to maintain a company culture that attracts, develops, and retains high-performing, diverse talent. An important part of our culture involves developing our employees and promoting people from within. We employ competitive rewards and benefits benchmarked against local markets. We also invest in our people through formal talent management programs and company-sponsored learning.

Today, 50% of our workforce consists of women and 67% of our divisional CEO's are women. Additionally, 50% of our Executive Board and 43% of our Supervisory Board are made up of women. Our workforce represents different nationalities and cultures which enriche our work environment. We provide on-the-job, informal and formal learning tools, resources, and opportunities to build employees' skills and develop their careers.

Return on investment

2018 saw a milestone in organic revenue for Wolters Kluwer, with our recurring revenues up 5% organically. Our continued high customer retention rates are due to the passion and dedication of our employees and our customer relationships. We prioritize interacting with customers in every step of our innovation process before, during, and after developing solutions to match their exact needs.

A focus on predefined liquidity levels and smart investments have seen us grow return on invested capital, reinvesting part of our cash flow into growing the business organically. We invest between 8% and 10% of our total revenues into new and enhanced product development. This delivers on our promise to our shareholders, generating value for our customers as we empower them to provide better healthcare, improve the effectiveness of business and compliance operations, navigate change and complexity, and build smarter legal systems.

Good corporate citizen

Our company values and business principles set a framework for achieving the company's goals and for conducting business in an ethical manner. Our values propel us to put the customer at the center of everything we do, honor our commitment to continuous improvement and innovation, aim high and deliver results, and win as a team. These values serve as guidelines for our employees and are at the heart of the company's future success - representing the *One Wolters Kluwer* approach, the common bond across all Wolters Kluwer businesses and employees. We expect our employees and contractors worldwide to adhere to our business principles which reflect high ethical and professional standards. See more under *Corporate Governance*.

The power of purpose

Wolters Kluwer has a clear purpose that brings our customers and us together. We accomplish our mission of delivering deep impact when it matters most through protecting people's health and prosperity and contributing to a safe and just society.

Business Principles

Responsibilities towards
SOCIETY AT LARGE

Responsibilities towards
OUR EMPLOYEES

Responsibilities with respect to
CUSTOMERS AND OTHER BUSINESS PARTNERS

Employee responsibilities towards
ONE ANOTHER AND THE COMPANY

External recognition

In 2018, Wolters Kluwer continued to gain recognition for its work and the role our leaders play in their respective industries. We appreciate being recognized for helping our customers realize their potential and deliver impact to our stakeholders when it matters most.

Ranked on the Forbes 2018
AMERICA'S BEST EMPLOYERS LIST

CEO Nancy McKinstry included in Harvard Business Review's
BEST-PERFORMING CEOS IN THE WORLD FOR 2018

CEO Nancy McKinstry included again in Fortune's
MOST POWERFUL WOMEN INTERNATIONAL 2018

Ranked again in the leading pack on the
TRANSFORMERS 200
a study on the digital transformation readiness of established Dutch firms

Inclusion in
SUSTAINABILITY RANKINGS
FTSE4Good, STOXX Europe Sustainability, and EURO STOXX ESG Leaders 50

CCH Tagetik IFRS 17, Enablon, Cheetah, and CasebookConnect.com win
2018 SIIA CODIE AWARDS

Wolters Kluwer ranks #21 on
THE HEALTHCARE INFORMATICS 100
list of Top HIT Companies

Wolters Kluwer received
34 AWARDS
from the American Society of Healthcare Publication Editors for Editorial and Design Excellence

CHARTIS RISKTECH 100 REGULATORY REPORTING
Category Winner

ELM Solutions received the
GOLDEN BRIDGE GOLD AWARD
and the
SILVER STEVIE AWARD
for Customer Service Department of the Year.

Enablon was recognized as an industry leader in
THE FORRESTER WAVE
Governance, Risk and Compliance platforms

OUR CUSTOMERS

Every second of every day, our customers face decisive moments that impact the lives of millions of people and shape society for the future. As a global provider of professional information, software solutions and services, our work at Wolters Kluwer helps to protect people's health and prosperity and contribute to a safe and just society, while building better professionals in business.

Side-by-side with customers, Wolters Kluwer combines internal and external experts, to help shape the future of the profession. For nearly 15 years, the CCH Connections User Conference has welcomed tax and accounting professionals in North America to come together in an inspirational and educational event. The conference sees nearly 1,000 professionals spending time learning, sharing, and networking to help their firms grow, manage, and protect their business and their clients' businesses. The user conference is a place where tax and accounting professionals learn about key industry trends, market changes that may impact their business, self-development, and how to drive productivity.

70+
speakers

195+
sessions

1000+
professionals

21
Continuing Professional Education credits

Our Customers

Our customers look to us when they need to be right – for their clients, their patients, their businesses, and the communities they support. Our expert solutions deliver better outcomes, analytics, and improved productivity. Our ability to deliver deep domain expertise enriched with advanced technologies is the result of being very close to our customers coupled with a culture of innovation. We're recognized and valued for helping them realize their potential and deliver impact when it matters most.

Our Customers

Accounting Firms
Allied Health Personnel
Audit Professionals
Banks
Corporate Finance Professionals
Corporations
Financial Institutions
Corporate Legal Counsels
Environmental, Health & Safety Professionals
Government Agencies
Hedge & Mutual Funds
Hospitals
Human Resource Departments
Insurance Companies
Law Firms
Law Schools
Legal Professionals
Leasing Companies
Medical & Nursing Students
Notaries
Nurses
Payors
Pharmacists
Physicians
Risk & Compliance Professionals
Small Businesses
Tax Professionals
Universities

Wolters Kluwer serves

90%
of U.S. academic medical centers

93%
of Fortune 500 companies

88%
of Fortune 1000 companies

100%
of the top 100 U.S. accounting firms

90%
of the world's top banks

90%
of law firms of National Law Journal 250

100%
of Am-Law 200

100%
of Am-Law Global 100

80%
of U.S. community banks

Expert Solutions

Every second of every day, our customers face decisive moments that impact the lives of millions of people and shape society for the future. Our expert solutions – a combination of deep domain knowledge with specialized technology and services – deliver better outcomes, analytics, and improved productivity for our customers. We are recognized and valued for helping them realize their potential and deliver impact when it matters most.

The transformation of our portfolio from print to digital has been critical to the company's success and has put us in a position to focus on our accelerated move into an expert solutions provider. Given the solid foundation we have today, we will focus on accelerating our growth through expert solutions.

UPTODATE ADVANCED includes evidence-based algorithms developed to address clinical variability in over 60 common medical conditions. With UpToDate Pathways and Lab Interpretation, clinicians can arrive at the best decisions for their patients in view of contemporary evidence, clinical experience, and patient-specific factors.

EMMI programs enable healthcare institutions to scale their patient outreach activities and serve much larger patient populations. By empowering patients to participate in their care, Emmi programs help to improve patient knowledge and foster shared decision-making between patients and care teams, leading to improved outcomes.

POC ADVISOR helps hospitals and health systems improve patient safety through early detection and rapid and accurate treatment of patients with sepsis, which is often a deadly condition. POC Advisor provides clinicians with trusted medical evidence to empower confident decisions that improve clinical outcomes while lowering costs.

TEAMMATE is the global internal audit solution used by audit and accounting professionals in corporate and government audit organizations. Customers are finding added value through the popular new cloud-based TeamMate+ solution as it allows for greater mobility, flexibility, and collaboration.

Supporting all financial functions and simplifying complex processes from planning all the way through disclosure management, the **CCH TAGETIK** Finance Transformation Platform enables finance professionals to spend less time managing and controlling processes and more time focused on driving business results.

The innovative **CCH AXCESS IQ** solution allows users to analyze their CCH Axcess tax data to match tax legislation trigger events with their potentially impacted clients. Professionals can review their dashboard of intelligent insights and leverage automatically generated communications to engage clients with strategic counsel about recommended next steps.

The **ONESUMX** suite of integrated regulatory compliance solutions provides financial institutions with unparalleled capabilities to analyze, interpret, and address their everchanging global regulatory reporting and compliance obligations.

ELM Solutions' **PASSPORT**, **TYMETRIX360**, and **LEGALVIEW** solutions use advanced technology and artificial intelligence to enhance the legal operations workflow and help corporate legal and insurance claims departments better manage their legal spend and attain better outcomes.

M&A CLAUSE ANALYTICS is a workflow solution that combines artificial intelligence and expert attorney curation to improve quality, efficiency, and ease of preparing M&A agreements. It puts forth a model for each agreement based on a robust, statistically significant sample set of recent documents.

ENABLON software supports hundreds of global industry-leaders and millions of users to increase safety, manage environmental performance, minimize risks, and improve profitability and sustainability. Recognized for its best in class user experience, Enablon supports over 100 environmental, health, and safety and risk workflows.

EVISION is a global leader in industrial operational risk management software for high-risk and high-precision industries. Its solution allows customers to improve control over their operational processes, reducing risk, increasing safety, and delivering efficiencies.

KLEOS is cloud-based practice management software for lawyers. With 20,000 users and offered in 10 countries, Kleos leverages cloud and mobile technologies in a highly secure environment for managing legal documents, cases, and the workflow of the law firm.

OUR EMPLOYEES

Every day, our employees help our customers work more effectively and make critical decisions. We continuously strive for an inclusive company culture in which we attract, develop, and retain high-performing, productive, engaged, and diverse talent to deliver on our strategy.

In 2018, our entire organization celebrated Global Values Day with an interactive program of activities, across all divisions in 40 countries. The purpose of Global Values Day was to highlight how we live our values globally and locally every day. We acknowledge our company values by sharing how they shape our relationships with each other, and our customers, investors, and the communities in which we live and work.

Our Values

FOCUS ON CUSTOMER SUCCESS

Customers are at the center of everything we do

MAKE IT BETTER

We're committed to continuous improvement and innovation

AIM HIGH AND DELIVER

We're responsible for the right results

WIN AS A TEAM

We're stronger together

Our Employees

Our innovative and diverse workforce is essential to delivering expert solutions for our customers when it matters most.

Our employee engagement
Through our employee engagement survey, we heard Wolters Kluwer is a very good place to work. The 2018 engagement survey confirms employee engagement remains very strong and is above the norm for high-performing companies. For 2020, we strive to maintain the current favorable engagement score. Our employees continue to be optimistic about the future success of our company. The strength of our shared values and our leadership are positive drivers of our employee engagement. Our employees are also looking for even more opportunities to build skills and careers. We are also focusing on becoming more agile and better at responding to change.

Sustaining high engagement
Based on our engagement survey feedback, we continued to monitor our progress on actions taken and initiated additional actions for improvement. In 2018, we completed the second year of our new, single global performance management and learning approach that:

- Maintained strong employee alignment to our business strategy through our global management by objectives process for all employees;
- Continued creating opportunities for employee growth and development through on-demand foundational skill-building courses and resources; and
- Provided all managers with additional resources to increase the value and frequency of ongoing feedback, coaching, and development. In 2018, we introduced highly successful manager onboarding and transitioning to manager programs, and on-demand learning for managers.

To improve the Human Resources (HR) services we deliver to our employees, we rolled out the first phase of our new HR technologies to more than one-half of our population. For all U.S. employees, our new HR portal provides an easier and more streamlined way to get answers to HR questions. For employees outside the U.S., we improved our employee payroll experience in select countries.

Organizational learning and development
Developing skills and careers is an important focus for us and critical to employee engagement. To support formal learning, all employees have access to over 3,000 on-demand learning opportunities through our global Learning Management System (LMS). 23% of our employees have accessed our self-directed learning resources to deepen their skills, exceeding external benchmarks.

We also deploy assigned training to demonstrate our commitment to training requirements and our values. Our employees also demonstrate their commitment to learning through high completion rates on important topics such as our values, business principles, and other rules of conduct in our daily work through the annual compliance training, GDPR, and performance management training.

Supporting leadership and diversity
To strengthen our leadership pipeline, we continued our annual leadership talent review process to understand their skills, capabilities, and career aspirations. This process also includes ensuring succession plans are in place for our most business-critical roles. We expanded our broad range of leadership development programs to provide even more support for our leaders' ongoing development and growth.

As a global company, having a diverse workforce from different backgrounds, nationalities, age, expertise, and talent is of the utmost importance. We strive to reflect the diversity of our customers and the communities in which we live and work. We continue to focus on the development of an inclusive company culture. Our values and business principles articulate the importance we place on our diversity and believe it is one of the factors that differentiates us from many of our peers. We aim to create equal opportunities for all employees regardless of personal background, race, gender, nationality, age, sexual orientation, physical disability, or religion. No form of harassment or discrimination is tolerated.

Gender Diversity

% female	2018	2017
Supervisory Board members	43	43
Executive Board members	50	50
Divisional CEOs	67	67
Employees	48	48

Employee Engagement Score

results employee engagement survey	2018	2017
% Favorable engagement score*	76	76

* *Results are from the engagement category of the global engagement survey of all employees in 2018, and a shorter pulse survey administered to 20% of employees in 2017.*

Our Organization

Health

Diana Nole
CEO Health

Wolters Kluwer provides trusted clinical technology and evidence-based solutions that engage clinicians, patients, researchers, students, and the next generation of healthcare providers. With a focus on clinical effectiveness, research and learning, safety and surveillance, and interoperability and data intelligence, our proven solutions drive effective decision-making and consistent outcomes across the continuum of care.

Customers span a broad scope of hospitals and healthcare organizations, individual students and clinicians, medical libraries and schools, payors, life sciences, and retail pharmacies.

Portfolio includes Emmi Patient Engagement, Health Language, Lexicomp, Lippincott, Medi-Span, Ovid, POC Advisor, Sentri7, Simplifi 797, UpToDate, and UpToDate Advanced.

Tax & Accounting

Karen Abramson
CEO Tax & Accounting

Wolters Kluwer fuels global commerce by enabling professionals in tax and accounting firms, governing authorities, and businesses of all sizes to grow, manage and protect their business and their clients' businesses. Expert solutions – in compliance, collaboration, internal and external audit management, corporate performance management and firm management – integrate deep domain knowledge with workflows to ensure compliance, improved productivity, effective management, and strengthened client relationships.

Customers include accounting firms, corporate finance, tax and auditing departments, government agencies, corporations, libraries, and universities.

Portfolio includes A3 Software, ADDISON, ATX, CCH, CCH Axcess, CCH Axcess iQ, CCH Tagetik, CCH iFirm, CCH IntelliConnect, CCH ProSystem fx, CCH OneClick, CCH Integrator, Genya, Prosoft, TeamMate, and Twinfield.

Governance, Risk & Compliance

Richard Flynn
CEO Governance, Risk & Compliance

Wolters Kluwer helps legal and financial professionals ensure compliance with regulatory and legal obligations, manage risk, increase efficiency, and produce improved business outcomes. Our technology-enabled expert solutions range from legal compliance and enterprise-wide legal management to regulatory and operational compliance solutions that leverage workflow, analytics, and reporting capabilities.

Customers include corporations, small businesses, law firms, insurers, compliance professionals, and financial institutions - including banks, securities, and insurance firms.

Portfolio includes CASH Suite, ComplianceOne, CT Corporation, Passport, Tymetrix 360, Expere, GainsKeeper, Lien Solutions, OneSumX, and Vanceo.

Legal & Regulatory

Stacey Caywood
CEO Legal & Regulatory

Wolters Kluwer enables legal and compliance professionals to improve productivity and performance, mitigate risk, and solve complex problems with confidence. With expert information enriched with advanced technologies, we help professionals thrive in the complex and changing areas of legal and regulatory compliance. In the moments that matter most, professionals turn to us to serve their clients, and as they create more successful and sustainable businesses. Together, we support more transparent, just, and safe societies around the world.

Customers include law firms, corporate legal departments, corporations, environmental, health, and safety (EHS) professionals, operational risk managers, universities, and government agencies.

Portfolio includes Cheetah, ComplyTrack, effacts, Enablon, eVision, IPSOA, Iter, Jura, Kleos, LaLey, Lamyline, LEX, Leggi D'Italia, Legisway, Navigator, NotaioNext, Verifield and Wolters Kluwer Online.de.

Emerging & Developing Markets

Corinne Saunders
CEO Emerging & Developing Markets

The Wolters Kluwer Emerging & Developing Markets (EDM) group accelerates the company's strategic presence in fast-growing geographies – particularly India and China. EDM's mission is to service professionals in these markets with global expert solutions that combine deep domain knowledge and local expertise with specialized technology.

Global Business Services

Andres Sadler
CEO Global Business Services

Wolters Kluwer Global Business Services (GBS) is responsible for improving the quality and performance of Wolters Kluwer's technology infrastructure, managing key vendor relationships, increasing the efficiency of support functions, and driving operational excellence programs globally. GBS' mission is to support Wolters Kluwer's digital transformation and product innovation by strengthening the company's technology infrastructure and by delivering operational efficiencies.

Global Platform Organization

Dennis Cahill
EVP Global Platform Organization

The Wolters Kluwer Global Platform Organization (GPO) co-creates state-of-the-art digital solutions with our businesses around the world. The GPO mandate is to grow revenue in the company's digital products through innovation in, and adoption of, global platforms and tools to meet customer needs. It drives innovation in Wolters Kluwer through its user experience Center of Excellence, focusing on customer-centric product development, and its artificial intelligence Center of Excellence, applying advanced technologies for the next generation of expert solutions.

Corporate Office

The Wolters Kluwer Corporate Office sets the global strategic direction for the company and ensures good corporate governance. The Corporate Office's mission is to support and provide an enabling business and operating environment to help realize our strategy to deliver impact to our customers, employees, investors, and society alike.

Full list of management is available on www.wolterskluwer.com.

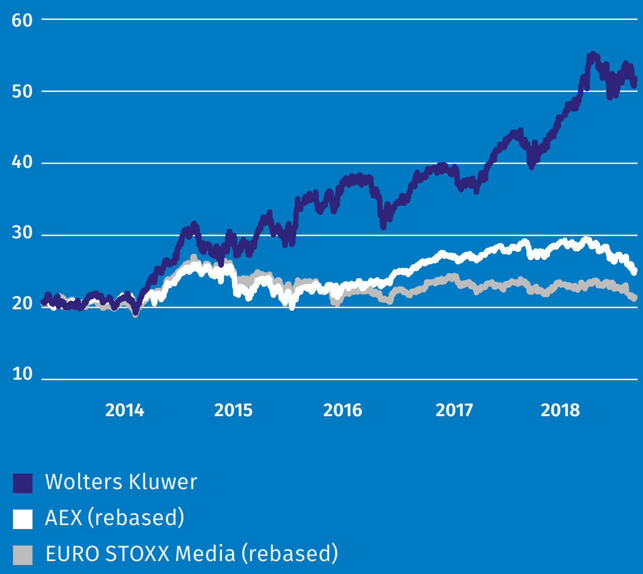
OUR INVESTORS

We strive to create long-term value for our shareholders by pursuing a strategy that supports dividends, share buybacks, and long-term capital appreciation.

Over the five-year period ending December 31, 2018, Wolters Kluwer shares have increased 149%.

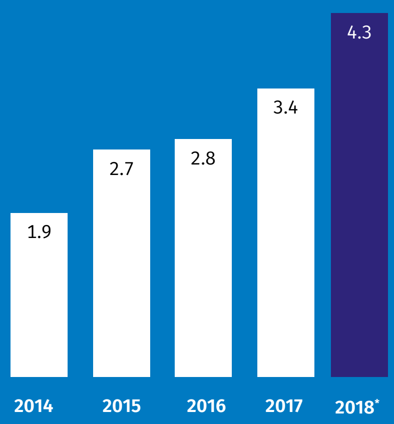
2014-2018

€



Organic revenue growth

%



* Based on IFRS 15

Annual investment in new and enhanced product development

8%-10%

of total revenues

Our Investors

Wolters Kluwer investors provide the financial capital that funds our business. We strive to create long-term value for our shareholders by pursuing a strategy that supports a reliable and growing dividend, allows for share buybacks when appropriate, and delivers profitable growth and capital appreciation over the long run. We compensate our bondholders and other lenders with interest that reflects the financial risks they take.

Shareholders

Equity investors provide financial resources that allow us to operate and invest in our business. We strive to create long-term value for our shareholders by pursuing a strategy that supports a reliable and growing dividend, allows for capital returns through share buybacks when appropriate, and that delivers profitable growth and capital appreciation over the long run.

Dividend policy and 2018 dividend

Dividend policy

For more than 30 years, Wolters Kluwer has increased or maintained its annual dividend per share in euros (or euro equivalent). In 2007, the company established a progressive dividend policy and, since 2011, all dividends are paid in cash. In 2015, we introduced an interim dividend payment, aligning cash distributions closer to our seasonal cash flow pattern.

Wolters Kluwer remains committed to a progressive dividend policy, under which we aim to increase the dividend per share in euros each year, independent of currency fluctuations. The payout ratio (dividend per share divided by adjusted earnings per share) can vary from year to year. Proposed annual increases in the dividend per share take into account our financial performance, market conditions, and our need for financial flexibility. The policy takes into consideration the characteristics of our business, our expectations for future cash flows, and our plans for organic investment in innovation and productivity or for acquisitions. We balance these factors with the objective of maintaining a strong balance sheet.

2018 Dividend

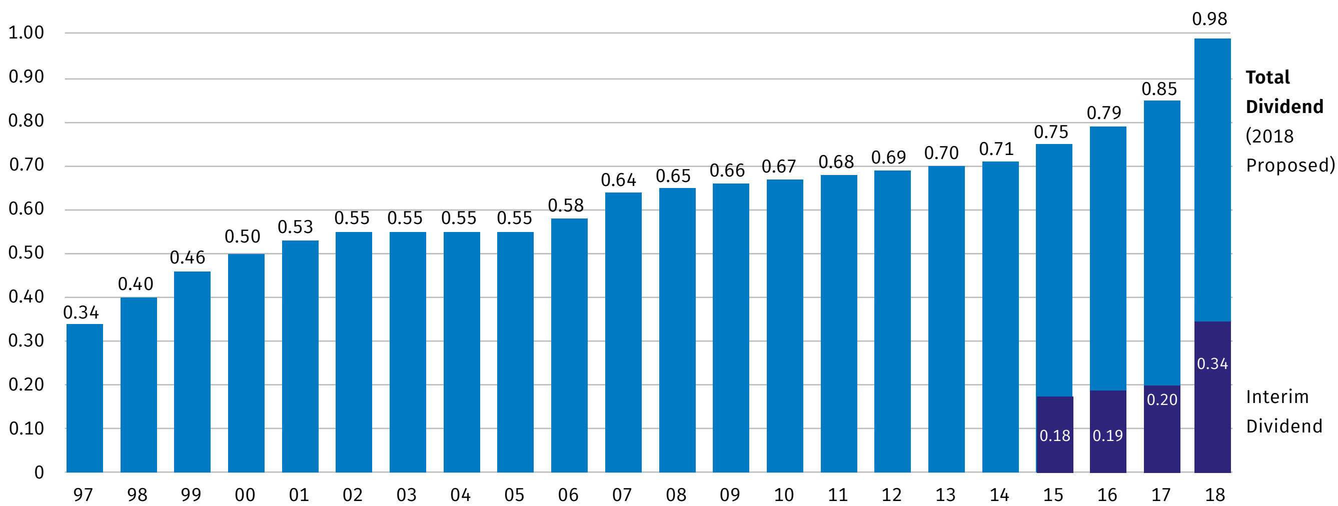
In view of our strategic priorities and expected capital allocation for the coming three years (2019-2021), we are proposing to increase the total dividend per share for financial year 2018 by 15%. We will therefore recommend a final dividend of €0.64 per share which will bring the total dividend to €0.98 per share (2017: €0.85). The 2018 dividend proposal is subject to approval by the Annual General Meeting of Shareholders in April 2019.

Shareholders can choose to reinvest both interim and final dividends by purchasing additional Wolters Kluwer shares through the Dividend Reinvestment Plan (DRIP) administered by ABN AMRO Bank N.V. We currently intend to maintain the interim distribution at 40% of prior year total dividend. This will result in a 2019 interim dividend of €0.39.

Dividend dates for 2019 are provided in *Additional Shareholder Information*.

Dividend per share

in euros



Share repurchases and cancellations 2016-2018

Year	**Shares repurchased** *million*	**Total consideration** *€ million*	**Average share price** *€*	**Treasury shares cancelled** *million*	**Treasury shares released for LTIP** *million*
2018	11.5	550	47.81	10.6	1.3
2017	7.8	300	38.62	11.6	1.4
2016	5.8	200	34.28	–	1.8

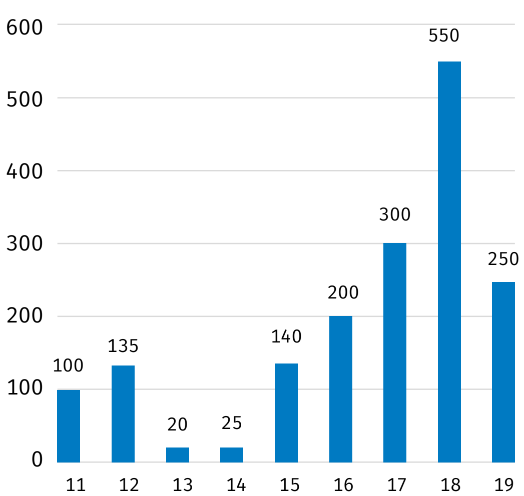
Share buyback programs

As a matter of policy since 2012, Wolters Kluwer will offset the dilution caused by our annual incentive share issuance with share repurchases (Anti-Dilution Policy). In addition, from time to time, when appropriate, we return capital to shareholders through further share buyback programs. Shares repurchased by the company are added to and held as treasury shares and are either cancelled or held to meet future obligations arising from share-based incentive plans.

During 2018, we repurchased 11.5 million shares for a total consideration of €550 million, including 1.3 million shares to offset incentive share issuance (2017: 1.4 million). We thereby concluded our 2016-2018 share buyback program which originally envisaged spending up to €200 million in each of the three years, including amounts required to offset incentive share issuance. This buyback program was later expanded to include additional repurchases intended to mitigate dilution caused by disposals made in 2017 and 2018.

Share buybacks completed (2011-2018) and announced (2019)

€ million



A summary of amounts repurchased and cancellations under this three-year program is shown above.

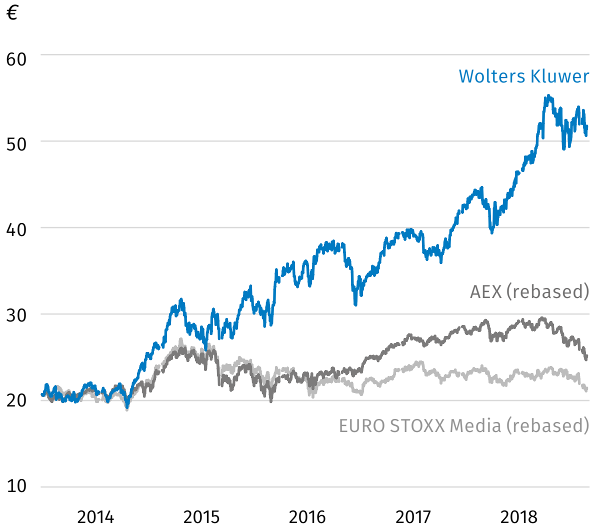
In October 2018, we cancelled 10.6 million of the shares held in treasury in consequence of the share buybacks during the year.

On February 20, 2019, we will announce our intention to repurchase shares for up to €250 million during 2019, including repurchases to offset incentive share issuance. This amount represents a third of our 2018 adjusted free cash flow. We will propose cancelling any or all shares that are not used for share-based incentive plans. Assuming global economic conditions do not deteriorate substantially, we believe this level of cash return leaves us with ample headroom to support our dividend plans, to sustain organic investment in innovation and productivity, and to make selective acquisitions. The share repurchases may be suspended, discontinued, or modified at any time.

For the period starting February 22, 2019, up to and including May 6, 2019, we have engaged a third party to execute €40 million in share buybacks on our behalf, within the limits of relevant laws and regulations (in particular Regulation (EU) 596/2014) and the company's Articles of Association. The maximum number of shares which may be acquired will not exceed the authorization granted by the General Meeting of Shareholders.

As of December 31, 2018, we held 8.6 million shares in treasury; at the 2019 Annual General Meeting of Shareholders, we will propose cancelling some or all of the shares held in treasury or to be acquired under the future share buyback programs.

Five-year share price performance 2014-2018



Share price performance

In 2018, Wolters Kluwer shares began the year at €43.48 and closed the year at €51.66, an increase of 19%. The shares significantly outperformed the Amsterdam AEX index (which declined 11% in 2018) and other leading European indices, such as the EURO STOXX 600 index (which declined 13%) and the EURO STOXX Media index (which fell 8% in 2018). Including reinvested dividends, total shareholder return in 2018 was 21%.

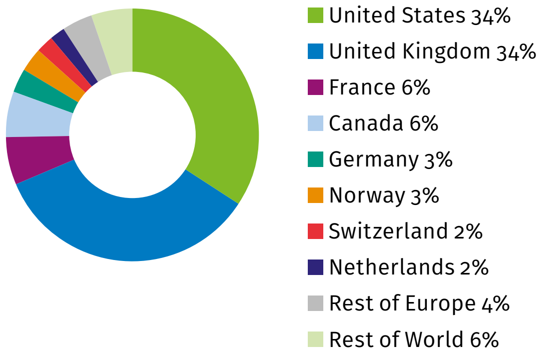
Over the five-year period ending December 31, 2018, Wolters Kluwer shares have appreciated by 149%, substantially outperforming the AEX index, which gained 21% over the same period. The company's shares have also beaten returns for the EURO STOXX 600 and the EURO STOXX Media index, which have increased 3% and 4%, respectively, over the same period.

Shareholder structure

Institutional investors own approximately 85% of the issued ordinary share capital in Wolters Kluwer. The remaining shares are held by retail investors, broker-dealers, or are held in treasury by Wolters Kluwer. Two thirds of the shares held by institutional investors are with firms that designate themselves as socially responsible (SRI) and nearly 15% are in core SRI or ESG funds. Approximately 23% of institutionally-held shares are held in passive or index funds, up from 15% three years ago.

Institutional ownership is spread around the world, with approximately 34% of institutionally-owned shares held in the United States and 34% in the United Kingdom.

Geographical distribution of Wolters Kluwer shares held by institutions



Source: Nasdaq Corporate Solutions, as of November 30, 2018

Shareholders who have notified the Dutch Authority for the Financial Markets (AFM) of a capital interest exceeding the 3% reporting threshold are shown below. Updates can be found on the AFM website (*www.afm.nl*).

Major shareholders: AFM notifications

Institution	Capital interest	Date of notification
Lazard Asset Management Company, LLC	5.09%	October 24, 2015
BlackRock, Inc.	5.02%	February 15, 2019
FIL Limited	4.93%	November 23, 2018
The Bank of New York Mellon Corp.	4.91%	July 20, 2018
Invesco Limited	3.28%	November 8, 2016
Mawer Investment Management Ltd.	3.05%	November 14, 2017

Source: AFM website, as of February 19, 2019

Debt investors

Our bondholders and other lenders provide debt capital in return for interest income which reflects the risks they take. The majority of Wolters Kluwer debt currently consists of Eurobonds held by fixed-income investors. As of December 31, 2018, Wolters Kluwer had five listed debt securities with a total nominal value of €1,886 million.

Moody's Investor Services and S&P Global Ratings regularly review our senior long-term debt. Maintaining investment grade credit ratings is a core policy of Wolters Kluwer.

Investor dialogue

We communicate with our shareholders and other investors through a comprehensive investor relations program that includes our full-year and half-year financial releases, our annual report, and other information published on our investor relations website. We host live webcast presentations of our half-year and full-year results, hold an Annual General Meeting of Shareholders, and organize periodic investor briefings. We engage through an active schedule of events throughout the year, meeting with investors on roadshows in key financial centers and at investor conferences. During 2018, we had over 200 meetings, engaging with over 400 investment professionals.

The Executive Board met with shareholders representing more than half of our share capital. Investor Relations is focused on helping the market understand our business, our strategy, and our financial performance. We aim to be responsive and proactive and welcome direct feedback from investors.

Wolters Kluwer is committed to a high degree of transparency in its financial reporting and strives to be open with its shareholders and the wider investment community. Wolters Kluwer is strict in its compliance with applicable rules and regulations on fair disclosure to shareholders. Presentations are posted publicly on the company's website at the same time as they are made available to analysts and investors. In adherence with fair disclosure rules, meetings and presentations do not take place during closed periods before the publication of annual and quarterly financial information. The company does not assess, comment upon, or correct, other than factually, any analyst report or valuation prior to publication. The company is committed to helping investors and analysts become better acquainted with Wolters Kluwer and its management, as well as to maintaining a long-term relationship of trust with the investment community at large.

Wolters Kluwer listed fixed-income issuances

Debt security	Due	Amount *in millions*	Listing	ISIN
4.200% private placement	December 2020	€250	Frankfurt	XS0522820801
2.875% senior bonds	March 2023	€700	Luxembourg	XS0907301260
2.500% senior bonds	May 2024	€400	Luxembourg	XS1067329570
1.500% senior bonds	March 2027	€500	Luxembourg	XS1575992596
6.748% senior bonds	August 2028	€36	Luxembourg	XS038422656

Credit ratings

Agency	Long term	Short term	Outlook	Date affirmed
Moody's	Baa1	–	Stable	April 5, 2018
S&P	BBB+	A-2	Stable	May 15, 2018

OUR SOCIETY

As a digital-first organization that provides expert solutions to professionals, we are present where critical decisions are made daily. Sustainability is at the heart of our strategy and drives the way we interact with our stakeholders. Our product impact portfolio highlights the sustainable impact our expert solutions have on customers and society.

We focus on the world's most critical areas, touching the lives of millions of people. Our work helps to protect people's health and prosperity and contributes to a safe and just society.

The Princess Máxima Center for Pediatric Oncology is a national initiative in the Netherlands created to improve the quality of oncology treatment and care for children. Since May 2018, when it opened, the center has brought together world class teams to determine the best possible treatment for individuals.

Wolters Kluwer provides the Princess Máxima Center for Pediatric Oncology with deep domain expertise in healthcare by offering two medical expert solutions, UpToDate and Lexicomp, and monetary support. The solutions offer medical professionals the most recent research and evidence in the healthcare domain. With this, Wolters Kluwer aims to empower medical professionals to make decisions with confidence and reduce variability to ensure patients benefit from the best knowledge and evidence.

Our Society

By helping our customers optimize the way they do business – using our products to provide better healthcare, navigate change, solve complex problems, and build better judicial and regulatory systems – Wolters Kluwer has a positive impact on society. Sustainability is at the heart of our strategy. We are committed to sustainability as part of our day-to-day business.

Sustainability strategy

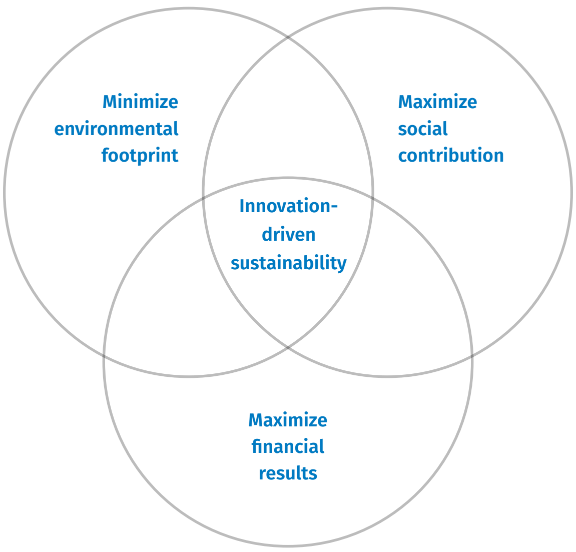
Our sustainability strategy is underpinned by our ambition to deliver economic, social, and environmental impact through our expert solutions. We continuously aim to minimize our environmental footprint and play a part in the circular economy. Sustainability is an important driver of long-term value creation for all our stakeholders and we strive to incorporate sustainability efforts into our business operations. Our product impact portfolio shows how our products impact society. Lastly, we strive to improve our operational efficiency and ensure a responsible supply chain through collaborations with our suppliers.

Delivering sustainable impact

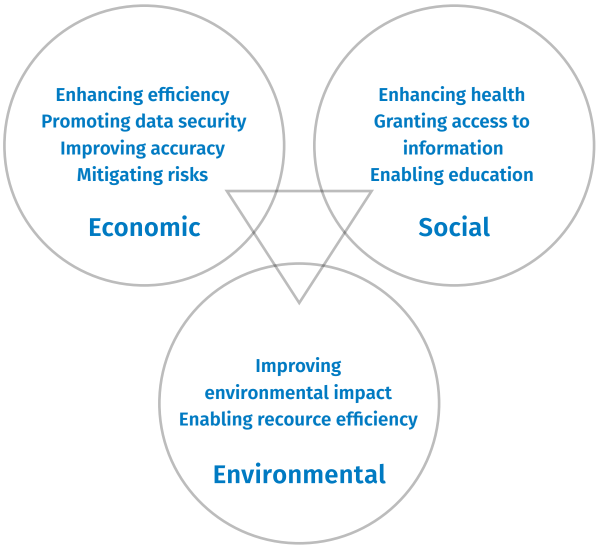
Wolters Kluwer is committed to the United Nations Sustainable Development Goals (SDGs), which address global economic, social, and environmental challenges the world faces. Through our value creation model, we especially contribute to three of the SDGs:

Goal 3: **GOOD HEALTH AND WELL-BEING**
Goal 9: **INDUSTRY, INNOVATION, AND INFRASTRUCTURE**
Goal 16: **PEACE, JUSTICE, AND STRONG INSTITUTIONS**

Sustainability Strategy



Product Impact Portfolio Criteria



Every second of every day, our customers face decisive moments that impact the lives of millions of people and shape society for the future. Our expert solutions – a combination of deep domain knowledge with advanced technology and services – deliver better outcomes, analytics, and improved productivity and solve complex problems for our customers. We are recognized and valued for helping them realize their potential and deliver impact when it matters most.

Our product impact portfolio helps us identify the impact our products make on customers and society. We have selected nine indicators around economic, social, and environmental topics, against which impact is measured. See *Our Customers* for showcases of our impactful expert solutions. The product impact portfolio can be found in our *Sustainability Data* on *www.wolterskluwer.com*.

Material topics

We continuously identify economic, social, and environmental topics that are relevant to our business success and are linked to the interests of our stakeholders. We do this through our annual materiality analysis. The results of our analysis highlight the topics that are most important to the company's business performance or substantially influence the assessments and decisions

ENVIRONMENTAL IMPACT

In 2018, we launched *Green Is Green*, a program with the combined goal to deliver both cost savings and environmental benefits. The program began to assess opportunities with the greatest potential to achieve environmental and financial benefits, while simultaneously piloting quick wins that will reduce our carbon dioxide emissions, landfill waste, and water waste. In 2019, the program will expand, focusing on implementing, encouraging, and sharing the most impactful initiatives identified in individual offices.

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of its stakeholders, driving value creation. We capture information from customers, business partners, employees, and investors to identify which topics are material according to each of these stakeholders. Based on this input, we revise and update our materiality analysis accordingly.

In 2018, we identified the following key material topics around which we align our efforts:

- Customer focus and relationship;
- Employee engagement and talent management;
- Smart capital allocation;
- Product development; and
- Product impact.

We communicate on the efforts supporting these material topics in the various sections of the *Report of the Executive Board*. The materiality analysis can be found in our *Sustainability Data* on *www.wolterskluwer.com*.

Resource efficient operations

To demonstrate our commitment to minimizing our environmental impact, we updated our Environmental Policy in line with our sustainability strategy and business operations. Our digital business and services, which is 88% of total revenues, is a circular business. Use of our digital products results in a more efficient use of resources as content is updated while the same product can continue to be used. In addition, we strive to reduce our environmental footprint and monitor the use of natural resources in our operations. With these initiatives, we contribute to the COP21 Paris agreement on limiting global warming.

Our resource-related sustainability ambitions are to:

- Implement high-opportunity environmental measures;
- Continue growing our expert solutions through innovation and accelerating our global platform and cloud-based integrated solutions;
- Improve processes and optimize office space to reduce consumption of energy and water, and to improve waste treatment and recycling;
- Use alternative energy sources to reduce the greenhouse gas production;
- Consolidate and outsource data centers to increase efficiency and reduce energy consumption; and
- Minimize business travel by promoting alternatives such as audio and video conferencing.

Responsible supply chain

We review our procurement process critically and strive to achieve an economically, environmentally, and socially responsible supply chain. We expect our suppliers to adhere to the standards described in our Supplier Code of Conduct, as well as to local laws and regulations, the articles of the United Nations Universal Declaration of Human Rights, and the core standards of the International Labor Organization.

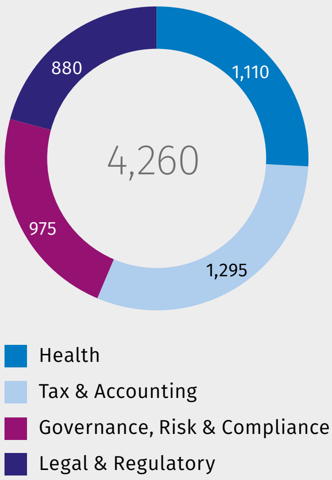
Existing and new suppliers that are managed through our central supplier database are invited to participate in a due diligence questionnaire to provide information on their efforts and policies on, among other topics, data security and data privacy, risk management, working standards, and environmental measures. As part of this due diligence, we request suppliers to sign our Supplier Code of Conduct or to confirm adherence to an equivalent standard. The due diligence and Supplier Code of Conduct help us to identify potential human rights and environmental issues in our supply chain and to fight corruption and bribery. Nearly 180 suppliers have signed the Wolters Kluwer Supplier Code of Conduct or have an equivalent standard. More than 90% of the suppliers we engaged with, responded to our due diligence questionnaire and provided information on their sustainability strategy and actions. In 2019, we intend to increase the number of suppliers that signs our Supplier Code of Conduct or have an equivalent standard to 220, and to continue to have a response rate of 90% to our due diligence questionnaire.

As a digital company, we collaborate with our data center suppliers to assure high data security and efficient energy management. All our major data center suppliers are certified in the information security management standard ISO/IEC 27001. We continue to require our major data center suppliers to be certified according to this standard. As our major data center suppliers operate on higher energy efficiency, we further reduce our environmental impact by outsourcing our data center activities.

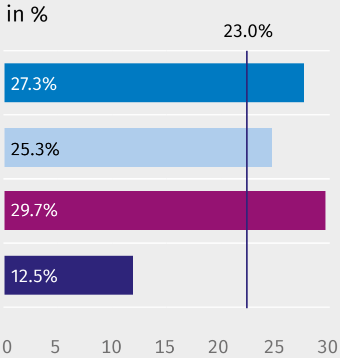
More information about our sustainability activities can be found in our *Sustainability Data* on *www.wolterskluwer.com*.

2018 Key Figures

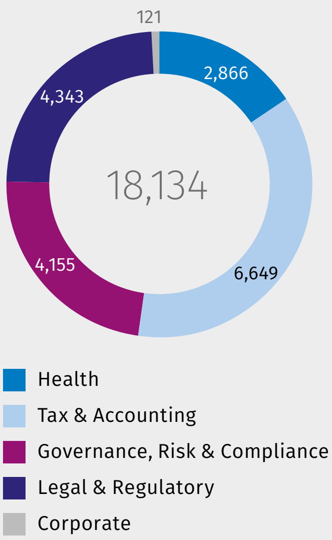
Total annual revenues
€ mln



Total adjusted operating profit margin
in %

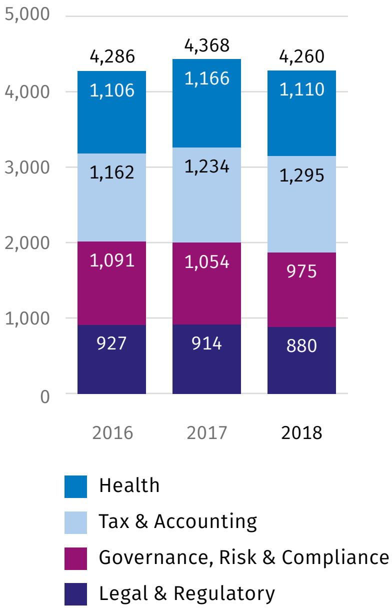


Total employees
full-time equivalent (FTE)

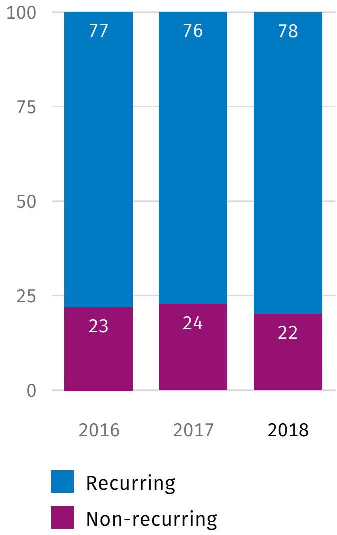


Revenues 2016-2018*

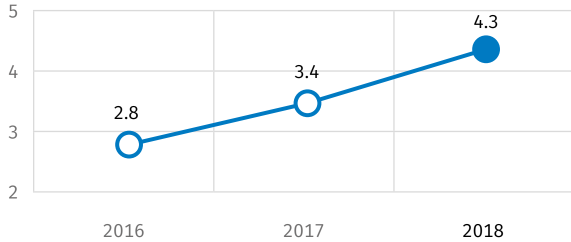
Revenues by division
€ mln



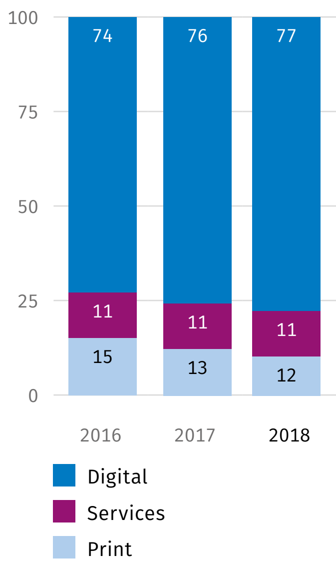
Revenues by type
in %



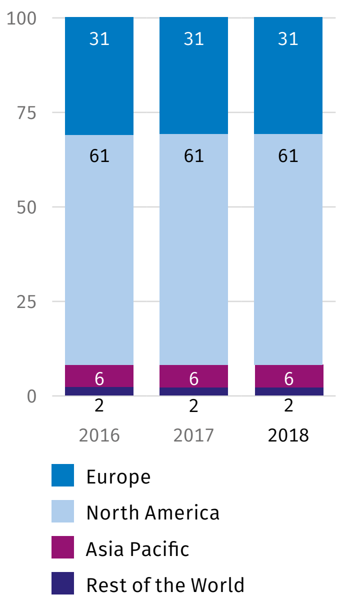
Organic revenue growth
in %



Revenues by media
in %



Revenues by geography
in %



* 2017 Restated for IFRS 15, except for organic revenue growth percentage. See *Note 1 – General and Basis of Preparation.*

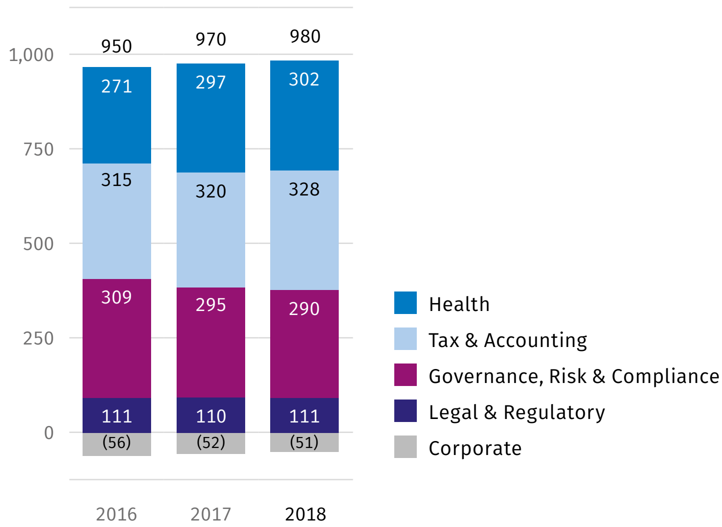
Key Performance Indicators*

		2018	2018 Guidance	2017
Adjusted operating profit margin	*in %*	23.0	22.5-23.0	22.2
Adjusted free cash flow	*in € million*	794	725-750	746
Return on invested capital	*in %*	10.9	10.0-10.5	10.0
Diluted adjusted EPS	*in €*	2.60	10%-15% growth	2.24

Figures and guidance for adjusted free cash flow and diluted adjusted EPS in constant currencies (€/$ 1.13). Guidance for EPS growth assumed that the announced share repurchases were equally spread over 2016-2018. Adjusted operating profit margin and ROIC in reported currencies.

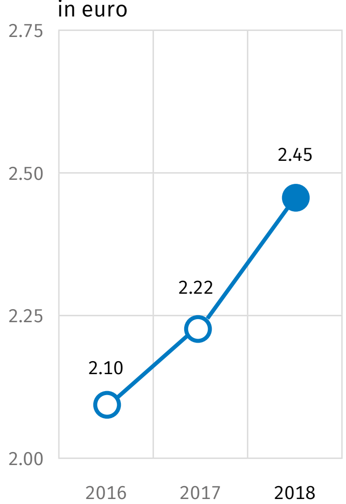
Adjusted operating profit by division

€ million



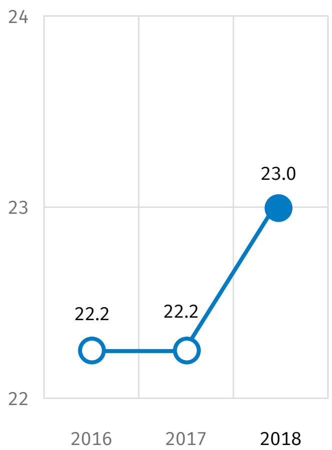
Diluted adjusted earnings per share

in euro



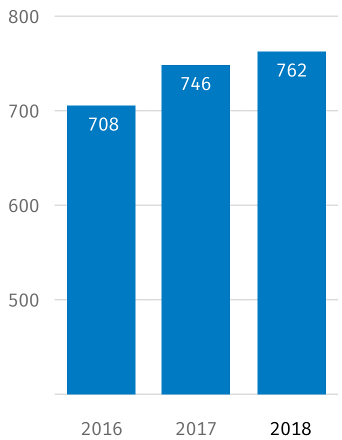
Adjusted operating profit margin

in %



Adjusted free cash flow

€ million



* 2017 Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Operational and Financial Review

Operational performance

Key Figures

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC
Revenues	4,260	4,368	(2)	
Operating profit	961	830	16	
Profit for the year	657	637	3	
Diluted EPS (€)	2.35	2.21	6	
Net cash from operating activities	934	940	(1)	
Business performance – benchmark figures				
Revenues	4,260	4,368	(2)	1
Adjusted operating profit	980	970	1	5
Adjusted operating profit margin	23.0%	22.2%		
Adjusted net profit	683	639	7	12
Diluted adjusted EPS (€)	2.45	2.22	10	16
Adjusted free cash flow	762	746	2	6
Net debt	1,994	2,069	(4)	
ROIC (%)	10.9	10.0		

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Benchmark adjusted figures are performance measures used by management.
*2017 restated for IFRS 15.

Highlights

- Revenues up 1% in constant currencies and up 4% organically.
  - Digital & services revenues up 6% organically (88% of total revenues).
  - Recurring revenues up 5% organically (78% of total revenues).
- Operating profit up 16%.
  - Including net book gains on disposals and one-time benefits.
- Adjusted operating profit margin up 80 basis points to 23.0%.
  - Excluding net positive one-time items, adjusted operating profit margin increased 30 basis points.
- Profit for the year up 3%, reflecting the increase in operating profit offset by higher income tax expense.
- Diluted EPS €2.35, up 6%.
- Diluted adjusted EPS €2.45, up 16% in constant currencies.
- Adjusted free cash flow €762 million, up 6% in constant currencies.
- Return on invested capital (ROIC) improved by 90 basis points to 10.9%.
- Balance sheet remains strong: net-debt-to-EBITDA 1.7x at year-end 2018.

Revenues

Group revenues declined 2% overall to €4,260 million due to the impact of currency movements, most importantly the U.S. dollar which averaged €/$ 1.18 in 2018 (2017: €/$ 1.13). In constant currencies, revenues increased by 1%. Excluding both the impact of exchange rate movements and the effect of acquisitions and disposals, organic growth was 4%. Had we continued to apply the IAS 18 accounting standard for revenue recognition, organic growth would have been 3% (2017: 3%).

	€ million	*%*
Revenues 2017*	4,368	
Organic change	181	4
Acquisitions	35	1
Divestments	(179)	(4)
Currency impact	(145)	(3)
Revenues 2018	4,260	(2)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Revenues from North America (61% of total revenues) grew 4% organically, with good momentum across all divisions in this region of the world. Revenues from Europe (31% of total revenues) also increased 4% organically, led by our Tax & Accounting and Governance, Risk & Compliance (GRC) divisions. Revenues from Asia Pacific and Rest of World (8% of total revenues) grew 7% organically, supported by strong performance by the Health division.

Revenues by type

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Digital and service subscription	2,793	2,806	0	3	6
Print subscription	209	234	(11)	(9)	(7)
Other recurring	288	292	(1)	4	5
Total recurring revenues	3,290	3,332	(1)	2	5
Print books	226	249	(10)	(8)	(6)
LS transactional	214	239	(10)	(6)	10
FS transactional	98	107	(8)	(3)	(3)
Other non-recurring	432	441	(2)	0	6
Total revenues	4,260	4,368	(2)	1	4

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*Restated for IFRS 15.

Recurring revenues, which make up 78% of total revenues and include subscriptions and other renewing revenue streams, increased 5% organically. Print book revenues declined 6% organically (2017: 3% decline). Legal Services (LS) transactional revenues rose 10% organically (2017: 8%), while Financial Services (FS) transactions fell 3% (2017: 0%). Other non-recurring revenues, which include software license and implementation fees, grew 6% organically, mainly reflecting 2017 new sales in Governance, Risk & Compliance and 2018 organic growth in software and services at CCH Tagetik in Tax & Accounting.

Operating profit

Operating profit rose 16% to €961 million (2017: €830 million) and included €159 million in net book gains (2017: €60 million) related to disposals completed in early 2018 (mainly ProVation Medical, Corsearch, and certain Swedish publishing assets). Operating profit included €14 million net positive one-time items (2017: €2 million net positive). We impaired our Brazilian business by €16 million, of which €7 million was included in adjusted operating profit. The rise in operating profit reflects an overall €21 million decline in amortization of acquired identifiable intangible assets to €166 million. The lower fair value changes of deferred considerations, being a release of €1 million (2017: €9 million charge), also explain the increase in operating profit in 2018.

Adjusted operating profit was €980 million, up 5% in constant currencies. The adjusted operating profit margin was 23.0% (2017: 22.2%) and included €23 million of net positive one-time items (2017: €2 million net positive). Excluding such one-time items, the adjusted operating profit margin would have increased by 30 basis points compared to prior year. The one-time items had a net positive impact in Health, Legal & Regulatory, and Corporate, and a negative impact in Tax & Accounting. Also included in adjusted operating profit were €30 million of restructuring costs (2017: €33 million). These expenses were higher than we had planned at the outset of 2018 as we brought forward several efficiency initiatives in the fourth quarter.

Divisional performance

All four divisions delivered positive organic revenue growth, with Tax & Accounting and Legal & Regulatory improving on the prior year. Adjusted operating profit margins increased in all divisions, except Tax & Accounting.

Divisional summary

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Revenues					
Health	1,110	1,166	(5)	(1)	5
Tax & Accounting	1,295	1,234	5	9	7
Governance, Risk & Compliance	975	1,054	(7)	(3)	4
Legal & Regulatory	880	914	(4)	(3)	1
Total revenues	4,260	4,368	(2)	1	4
Adjusted operating profit					
Health	302	297	2	6	14
Tax & Accounting	328	320	3	6	6
Governance, Risk & Compliance	290	295	(2)	3	7
Legal & Regulatory	111	110	1	1	10
Corporate	(51)	(52)	(1)	1	1
Total adjusted operating profit	980	970	1	5	10

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*Restated for IFRS 15.

Health

- Clinical Solutions grew 9% organically, led by UpToDate.
- Health Learning, Research & Practice grew 1% organically.
- Margin up 180 basis points, mainly due to one-time benefits and the ongoing shift in business mix.

Health

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Revenues	1,110	1,166	(5)	(1)	5
Adjusted operating profit	302	297	2	6	14
Adjusted operating profit margin	27.3%	25.5%			
Operating profit	340	251	36		
Net capital expenditure	36	48			
Ultimo FTEs	2,866	3,162			

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*Restated for IFRS 15.

Wolters Kluwer Health revenues declined 1% in constant currencies, due to net disposal activity. In March 2018, we divested ProVation Medical and reduced and deconsolidated our stake in Medicom. On March 21, 2018, we completed the acquisition of Firecracker, an adaptive learning and study-planning tool for medical students. Excluding the impact of currency and the effect of net disposal activity, organic revenue growth was 5%. Adjusted operating profit increased 6% in constant currencies, resulting in an adjusted operating profit margin of 27.3%. Included in adjusted operating profit was a net positive €10 million in one-time items, mainly relating to the release of sales tax accruals. Excluding these items, the adjusted operating profit margin would have increased by 80 basis points compared to prior year, driven by the ongoing mix shift towards Clinical Solutions, cost efficiencies, and favorable timing of sales and marketing and product investment. Operating profit increased to €340 million, including a €75 million net book gain related to the aforementioned disposals.

Clinical Solutions (50% of divisional revenues) grew 9% organically. During 2018, we integrated our clinical decision support, drug information, and patient engagement units and reorganized sales and marketing by customer segment. This has enabled us to start cross-selling across a range of solutions that support medical decision-making along the continuum of care. The core UpToDate solution enjoyed strong renewals and added new customers globally. The new UpToDate Advanced module was launched in the U.S., offering clinicians patient-specific, guided pathways. Our drug information solutions delivered mid-single-digit organic growth for the year. In patient engagement, Emmi revenue trends improved in the second half following the realignment of sales and marketing.

Our clinical software group saw positive organic growth, with softness at Health Language more than offset by positive momentum in the Sentri7 surveillance system and the POC Advisor clinical intelligence solution for Sepsis.

Health Learning, Research & Practice (50% of divisional revenues) recorded 1% organic growth for the full year. Digital revenues increased 3% organically, but this was partly offset by declines in print. In medical research, we saw good organic growth in Ovid online subscriptions and in open access journals, but continued weakness in print journal subscriptions, advertising, and reprints. In Education and Practice content, double-digit organic growth in digital learning and practice solutions for nurses (notably PrepU, vSim, and Lippincott Nursing Advisor) was offset by a 7% organic decline in print books (2017: 3% decline) and further softness in continuing medical education.

Tax & Accounting

- Organic growth 7%, driven by software globally.
- Corporate Performance Solutions grew 19% organically, led by CCH Tagetik.
- Margin was impacted by one-time items and increased restructuring.

Tax & Accounting

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Revenues	1,295	1,234	5	9	7
Adjusted operating profit	328	320	3	6	6
Adjusted operating profit margin	25.3%	25.9%			
Operating profit	254	240	6		
Net capital expenditure	71	70			
Ultimo FTEs	6,649	6,738			

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*2017 restated for IFRS 15

Wolters Kluwer Tax & Accounting revenues rose 9% in constant currencies, including the effect of a full twelve months of CCH Tagetik (acquired April 2017) and Adsolut (acquired September 2017). Excluding the effect of currency and acquisitions, organic growth was 7%. Pro forma for IAS 18, 2018 organic growth would have been 5%, marking an acceleration on the prior year (2017: 4%), primarily due to CCH Tagetik. Adjusted operating profit included a €6 million real estate gain which was more than offset by a €7 million impairment of internally developed software in our Brazilian unit. Excluding these two one-time items, the adjusted operating profit margin would have declined by 30 basis points compared to prior year, due to higher restructuring costs and margin dilution from CCH Tagetik. Operating profit included a further €9 million impairment of acquired identifiable intangible assets relating to the Brazilian business unit.

North America Professional Tax & Accounting (51% of divisional revenues) grew 6% organically, driven by software products, including our U.S. cloud-based professional tax software suite, CCH Axcess, and our integrated audit solution, CCH ProSystem fx Engagement. In 2018, the U.S. group launched two innovations to its cloud platform: CCH Axcess iQ, a new module that deploys artificial intelligence to help customers respond efficiently to changes in tax regulations, and CCH Financial Prep, a tool that leverages robotic process automation (RPA) to automate trial balances for audit preparation. Research & Learning recorded a modest decline, as a successful year in printed books was offset by ongoing softness in other information products.

Europe Professional Tax & Accounting (29% of divisional revenues) delivered 7% organic growth, with good growth in all countries and double-digit growth at Twinfield and Basecone. The European group continued to build out and launch hybrid and cloud collaboration tools. Recent product introductions, such as Genya OneClick in Italy and A3 Innuva in Spain, were well-received.

Asia Pacific & ROW Professional Tax & Accounting (7% of divisional revenues). In Asia Pacific, we saw continued strong organic growth in China and India, but weakness in Australia where print decline outweighed growth in digital products such as CCH iFirm and CCH Integrator. Our Brazilian business remained challenged.

Corporate Performance Solutions (13% of divisional revenues), which comprises CCH Tagetik and TeamMate, grew 19% organically. CCH Tagetik, our corporate performance management solution, stepped up investment in sales and marketing, drove new and expanded customer relationships, and delivered double-digit organic growth with its on-premise and cloud solutions and services. TeamMate recorded single-digit organic growth, as it continued the roll-out of a cloud and hybrid-cloud version of its audit solution.

Governance, Risk & Compliance

- Legal Services grew 5% organically, buoyed by transactional volumes.
- Financial Services grew 3% organically, absorbing weak mortgage origination volumes.
- Margin increased 170 basis points, reflecting operational efficiency programs.

Governance, Risk & Compliance

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Revenues	975	1,054	(7)	(3)	4
Adjusted operating profit	290	295	(2)	3	7
Adjusted operating profit margin	29.7%	28.0%			
Operating profit	308	299	3		
Net capital expenditure	65	54			
Ultimo FTEs	4,155	4,187			

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*2017 restated for IFRS 15.

Wolters Kluwer Governance, Risk & Compliance (GRC) revenues declined 3% in constant currencies, reflecting divestments made over the past two years (Transport Services in June 2017 and Corsearch in January 2018). Excluding the impact of currency and the effect of net disposal activity, organic revenue growth was 4%. Pro forma for IAS 18, 2018 organic growth would have been 1% (2017: 4%), reflecting the challenging comparable in fourth quarter software license sales. The adjusted operating profit margin increased by 170 basis points, driven by an operational efficiency initiative and the divestment of lower margin businesses. Operating profit, which included disposal gains in both 2017 (€52 million) and 2018 (€57 million), increased 3%.

Recurring revenues, which account for 58% of divisional revenues, grew 3% organically. Transactional revenues rose 6% overall, with Legal Services up 10%, but Financial Services transactions down 3%. Other non-recurring revenues, which include license and implementation revenues for software such as Passport and OneSumX, increased 4%, reflecting 2017 license sales recognized over the contract period.

Legal Services (57% of divisional revenues) delivered 5% organic growth. CT, the leading provider of legal representation and compliance services, delivered accelerated organic growth of 5%, reflecting continued growth in service subscriptions and strong demand for search and filing transactions from law firm customers. Enterprise Legal Management (ELM), which provides legal spend and matter management software and analytics to corporations, recorded 6% organic growth, supported by strong new sales and the successful launch of LegalView Bill Analyzer.

Financial Services (43% of divisional revenues) recorded 3% organic growth, as steady growth in recurring software maintenance revenues and the recognition of prior year new software license sales helped offset a 3% decline in transactional revenues. Finance, Risk & Reporting, which provides the OneSumX regulatory compliance and reporting software, recorded 7% organic growth, driven by the recognition of software license sales made in the prior year. Despite a challenged commercial lending market, Wolters Kluwer Lien Solutions exhibited robust transactional revenue growth driven by customer wins and product innovation. Our Compliance Solutions group saw modest decline as it absorbed a double-digit drop in mortgage origination volumes with steady growth in software subscription and maintenance revenues.

Legal & Regulatory

- Organic growth turned positive (+1%) due to ongoing mix shift and portfolio changes.
- The Legal & Regulatory Software group grew 13% organically.
- Margin increase reflects one-time benefits.

Legal & Regulatory

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Revenues	880	914	(4)	(3)	1
Adjusted operating profit	111	110	1	1	10
Adjusted operating profit margin	12.5%	12.0%			
Operating profit	110	92	20		
Net capital expenditure	40	38			
Ultimo FTEs	4,343	4,110			

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.
*2017 restated for IFRS 15.

Wolters Kluwer Legal & Regulatory revenues declined 3% in constant currencies, reflecting the net effect of disposals (certain U.K. and Swedish assets sold in September 2017 and January 2018, respectively) and acquisitions (Legisway and eVision acquired in September and October 2018, respectively). Excluding the impact of currency and net disposal activity, organic revenue growth was 1%, marking an improvement on the prior year (2017: 1% decline). Adjusted operating profit included total one-time benefits of €10 million reflecting a reversal of accruals relating to certain legal matters. Excluding these one-time items, the adjusted operating profit margin would have declined by 30 basis points compared to prior year due to the disposal of higher-margin businesses. Operating profit included a book gain of €27 million on the 2018 divestment (2017: divestment gain of €10 million).

Legal & Regulatory Information Solutions (90% of divisional revenues) recorded broadly stable organic growth (2017: 1% decline). Digital information solutions grew by 3% organically, driven by improved renewal rates and product innovation. Digital growth was, as expected, partly offset by the ongoing decline in print subscriptions and books. We continued to invest to transform our information products. In Europe, we launched One Fiscale, the first module of a next-generation legal research suite for Italy. We continued to drive savings in editorial and production and back-office functions to fund wage increases and investment. Our U.S. Legal & Regulatory business delivered a second consecutive year of positive organic growth, overcoming a challenging 2017 comparable. The U.S. unit launched several product innovations in 2018, including RBSource RegReview, a solution that allows securities attorneys to automatically check for changes in SEC forms since the last filing date.

Legal & Regulatory Software (10% of divisional revenues) includes Enablon, eVision, and our centralized Legal Software unit. In aggregate, this group delivered 13% organic growth. Enablon's environmental, health and safety and operational risk management solutions achieved double-digit organic growth, driven by growth in cloud subscriptions. In October 2018, we acquired eVision, adding to our existing position in operational risk management and strengthening our position in the energy and pharmaceuticals industries. Our Legal Software unit also delivered double-digit organic growth, supported by cloud-based practice management tools for law firms (Kleos) and corporate legal departments (effacts). In September, we completed the acquisition of Legisway, a provider of corporate contract management software based in France.

Corporate expenses

Corporate expenses increased 1% at constant currencies. Underlying cost increases were partly offset by net positive one-time items of €5 million relating to the release of accruals for legal matters. Underlying cost increases were largely due to an ongoing three-year investment to transform our Human Resources systems and due to programs implemented for General Data Protection Regulation (GDPR) compliance.

Corporate

€ million, unless otherwise stated	2018	2017*	Δ	Δ CC	Δ OG
Adjusted operating profit	(51)	(52)	(1)	1	1
Operating profit	(51)	(52)	0		
Net capital expenditure	2	0			
Ultimo FTEs	121	118			

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth.

Financial position

Balance sheet

Non-current assets, mainly consisting of goodwill and acquired identifiable intangible assets, increased by €236 million to €6,055 million in 2018, mainly due to the impact from capital expenditures, acquisitions, and the strengthening of the U.S. dollar, partly offset by amortization, impairment, and depreciation during the year.

Total equity increased by €35 million to €2,267 million mainly due to exchange differences on translation of foreign operations and profit for the year, partly offset by the share buyback and dividend payments. During 2018, we repurchased 11.5 million shares for a total consideration of €550 million, including 1.3 million shares to offset incentive share issuance (2017: 1.4 million). We thereby concluded our 2016-2018 share buyback program which originally envisaged spending up to €200 million in each of the three years, including amounts required to offset incentive share issuance. The program was later expanded to include additional repurchases intended to mitigate dilution caused by disposals made in 2017 and 2018.

In October 2018, we cancelled 10.6 million of the shares held in treasury in consequence of the share buybacks during the year. As of December 31, 2018, we held 8.6 million shares in treasury. In 2018, the total weighted average number of shares was 276.7 million (2017: 285.1 million).

Net debt and leverage

Net debt at December 31, 2018, amounted to €1,994 million (2017: €2,069 million). The year-end 2018 net-debt-to-EBITDA ratio was 1.7 (2017: 1.8).

Balance sheet

€ million, unless otherwise stated	2018	2017*	Variance
Non-current assets	6,055	5,819	236
Working capital	(1,072)	(974)	(98)
Total equity	2,267	2,232	35
Net debt	1,994	2,069	(75)
Net-debt-to-EBITDA ratio	1.7	1.8	(0.1)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Working capital

Operating working capital amounted to €(1,075) million, compared to €(970) million in 2017, an increase of €105 million. This increase includes the autonomous movements and the strengthening of the U.S. dollar. Non-operating working capital decreased to €(780) million, compared to €(1,024) million in 2017, mainly due to the repayment of the short-term bond of €750 million, partly offset by an increase in bank overdrafts and by the divestment of the net assets classified as held for sale.

Working capital

€ million	2018	2017*	Variance
Inventories	75	95	(20)
Contract assets	99	105	(6)
Trade receivables	1,018	955	63
Operating accounts receivable	252	226	26
Deferred income	(1,592)	(1,486)	(106)
Other contract liabilities	(45)	(43)	(2)
Trade and other payables	(397)	(333)	(64)
Operating current liabilities	(485)	(489)	4
Operating working capital	(1,075)	(970)	(105)
Cash and cash equivalents	783	1,020	(237)
Non-operating working capital	(780)	(1,024)	244
Total	(1,072)	(974)	(98)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Other developments

Financing results

Financing results amounted to a cost of €72 million (2017: €108 million cost) including the financing component of employee benefits of €3 million (2017: €5 million). The lower financing results mainly reflect lower interest costs following the redemption of the €750 million, 6.375% senior Eurobond, in April 2018. Adjusted net financing costs decreased to €70 million (2017: €109 million).

Taxation

Profit before tax increased 23% to €891 million (2017: €726 million). The effective tax rate increased to 26.3% (2017: 12.2%), the prior year having benefitted from a one-time, non-cash revaluation of our U.S. deferred tax position in consequence of the lower U.S. corporate tax rate per January 1, 2018. The 2018 effective tax rate was impacted by taxable gains on the divestments of Corsearch and ProVation Medical.

Adjusted profit before tax was €912 million (2017: €865 million), up 6% overall and up 10% in constant currencies. The benchmark tax rate on adjusted profit before tax was 25.1% (2017: 25.9%). This tax rate was at the lower end of our expectation for 2018 due to a favorable impact of tax credits and deferred tax movements. As a result, adjusted net profit increased 7% overall and 12% in constant currencies to €683 million (2017: €639 million).

Earnings per Share

Total profit for the year increased 3% to €657 million (2017: €637 million) and diluted earnings per share increased 6% to €2.35 (2017: €2.21).

Diluted adjusted EPS increased 10% overall and 16% in constant currencies to €2.45 (2017: €2.22), reflecting the increase in adjusted net profit and a 3% reduction in the diluted weighted average number of shares outstanding to 278.8 million (2017: 287.7 million).

Return on invested capital (ROIC)

In 2018, the ROIC was 10.9% (2017: 10.0%).

Cash flow

The net cash outflow for 2018 was €581 million (2017: net cash inflow of €471 million) because the cash used in financing activities (redemption of Eurobond, dividend payments, and share buybacks) outweighed the net cash inflow from operating activities in 2018.

Adjusted operating cash flow was €1,016 million, up 4% overall (2017: €974 million) and up 7% in constant currencies. Cash conversion was 104% (2017: 100%) and reflected stronger than expected working capital inflows in the fourth quarter.

Net capital expenditure was €214 million (2017: €210 million) and primarily relates to the development of new and enhanced products and technology platforms. Capital expenditure included a €9 million benefit (2017: €13 million) related to real estate disposals. Excluding this benefit, capital expenditure was 5.2% of revenue (2017: 5.1%). Depreciation, amortization, and impairments of internally developed products and other assets increased to €220 million (2017: €209 million), or 5.2% of total revenue (2017: 4.8%).

Adjusted free cash flow was €762 million (2017: €746 million), up 2% overall and up 6% in constant currencies, better than expected due to the favorable working capital movement. Corporate income tax paid increased to €206 million (2017: €156 million) mainly due to tax payments on 2018 disposals. Adjusted free cash flow excludes a €34 million cash tax payment related to these disposals. Paid financing costs were €96 million, ahead of the prior year (2017: €87 million), and included the final coupon payment on the 6.375% senior Eurobond redeemed in April 2018 as well as the first coupon payment on the 1.5% Eurobond issued in March 2017. Net cash use of restructuring provisions amounted to €5 million, reflecting restructuring additions of €17 million and appropriations of €22 million in relation to ongoing and new efficiency initiatives.

Dividends paid to shareholders during 2018 amounted to €277 million (2017: €232 million) and included the 2017 final dividend and the 2018 interim dividend, and dividend paid to non-controlling interests.

A total of €550 million (2017: €302 million) of free cash flow was deployed towards share buybacks during the year.

Cash flow

€ million, unless otherwise stated	2018	2017*	Variance
Net cash flow from operating activities	934	940	(6)
Net cash used in investing activities	(83)	(409)	326
Net cash used in financing activities	(1,432)	(60)	(1,372)
Adjusted operating cash flow	1,016	974	42
Capital expenditure	(214)	(210)	(4)
Adjusted free cash flow	762	746	16
Diluted adjusted free cash flow per share (€)	2.73	2.59	0.14
Cash conversion ratio (%)	104	100	

* Restated for IFRS 15.

Acquisitions and divestments

Total acquisition spending, net of cash acquired and including costs, was €170 million (2017: €316 million). The main acquisitions were in the Legal & Regulatory division and included eVision, a world leader in operational risk management software, and Legisway, a contract management tool for corporate law departments. The Health division acquired Firecracker, an adaptive learning and study-planning solution for medical students. Deferred payments on prior year deals, including earnouts, amounted to €12 million (2017: €12 million).

Divestment proceeds, net of cash disposed and transaction costs, were €304 million (2017: €83 million), and relate primarily to the divestments of ProVation Medical, Corsearch, and certain Swedish publishing assets.

Leverage and financial policy

Wolters Kluwer uses its cash flow to invest in the business organically and through acquisitions, to maintain optimal leverage, and provide returns to shareholders. We regularly assess our financial position and evaluate the appropriate level of debt in view of our expectations for cash flow, investment plans, interest rates, and capital market conditions.

While we may temporarily deviate from our leverage target at times, we continue to believe that, in the longer run, a net-debt-to-EBITDA ratio of around 2.5 remains appropriate for our business given the high proportion of recurring revenues and resilient cash flow.

Net debt at December 31, 2018, stood at €1,994 million, a decrease of €75 million (year-end 2017 €2,069 million). The net-debt-to-EBITDA ratio at year end 2018 was 1.7 (year-end 2017: 1.8).

2019 Full-Year Outlook

Our guidance for full-year 2019, provided in the table below, incorporates IFRS 16 lease accounting (See *Note 1 – General and Basis of Preparation*). We expect to deliver another year of solid organic growth, supported by all four divisions, and an improvement in adjusted operating profit margin, supported by Tax & Accounting and Governance, Risk & Compliance. Due to phasing of revenues and costs and the effect of one-time items recorded in 2018, the first half 2019 adjusted operating profit margin is expected to decline modestly.

Our guidance is based on constant exchange rates. In 2018, Wolters Kluwer generated more than 60% of its revenues and adjusted operating profit in North America. As a rule of thumb, based on our 2018 currency profile, each 1 U.S. cent move in the average €/$ exchange rate for the year causes an opposite change of approximately 1.5 euro cents in diluted adjusted EPS.

Restructuring costs are included in adjusted operating profit. We currently expect to incur restructuring costs of €10 million-€20 million in 2019 (2018: €30 million). We expect adjusted net financing costs of approximately €65 million in constant currencies, including approximately €10 million in IFRS 16 lease interest charges and excluding the impact of exchange rate movements on currency hedging and intercompany balances. Following the adoption of new tax legislation in the Netherlands in late 2018, we expect the benchmark effective tax rate to be in the range of 24.5%-25.5% for 2019. Capital expenditure (excluding cash payments on lease contracts) is expected to remain in the range of 5%-6% of total revenues (2018: 5.2%, excluding the sale of real estate). We expect the cash conversion ratio to be between 95%-100% in 2019 (2018: 103% restated for IFRS 16). Our guidance assumes no additional significant change to the scope of operations. We may make further acquisitions or disposals which can be dilutive to margins and earnings in the near term.

2019 Outlook by division

Health: We expect organic growth to be in line with 2018. We expect the adjusted operating profit margin to decline, due to the absence of prior year one-time benefits and increased investment in sales and marketing.

Tax & Accounting: We expect organic growth to moderate from 2018 levels due to a challenging comparable. We expect the adjusted operating profit margin to improve on the back of lower restructuring costs and the absence of prior year net one-time charges.

Governance, Risk & Compliance: We expect transactional revenue trends to moderate and recurring revenues to show improved organic growth. We expect the adjusted operating profit margin to see further improvement due to efficiency initiatives.

Legal & Regulatory: We expect organic growth to be in line with 2018. We expect the adjusted operating profit margin to decline due to an absence of prior year one-time benefits, higher investments, and a full 12-month inclusion of eVision.

Full-year 2019 outlook

Performance indicators		2019 Guidance	2018 (Restated for IFRS 16)
Adjusted operating profit margin	*in %*	23.0-23.5	23.1
Adjusted free cash flow	*in € million*	750-775	762
ROIC	*in %*	10.5-11.5	10.6
Diluted adjusted EPS	*in €*	Around 10% growth	2.45

Guidance for adjusted operating profit margin and ROIC is in reported currencies and assumes a 2019 average U.S. dollar rate of approximately €/$ 1.14. Guidance for adjusted free cash flow and earnings per share is in constant currencies (€/$ 1.18). Guidance for adjusted EPS includes the estimated effect of the announced up to €250 million share buyback planned for 2019. 2018 comparatives are in reported currencies and restated for IFRS 16.

Corporate Governance and Risk Management

Corporate Governance

Wolters Kluwer N.V., a publicly listed company organized under Dutch law, is the parent company of the Wolters Kluwer group. The corporate governance structure of the company is based on the company's Articles of Association, the Dutch Civil Code, the Dutch Corporate Governance Code (the 'Corporate Governance Code'), and all applicable laws and regulations. The Executive Board and the Supervisory Board are responsible for the corporate governance structure.

This Corporate Governance chapter comprises the corporate governance statement as specified in section 2a of the Decree with respect to the contents of the annual management (Besluit inhoud bestuursverslag). An outline of the broad corporate governance structure will be provided in this chapter. Wolters Kluwer complies with all Principles and Best Practice Provisions of the Corporate Governance Code, unless stipulated otherwise in this chapter. An explanation on the company's corporate governance structure and the compliance with the Corporate Governance Code was included as separate agenda item for discussion at the Annual General Meeting of Shareholders of April 20, 2018. Potential future material corporate developments might justify deviations from the Corporate Governance Code at the moment of occurrence. The Corporate Governance Code is available on www.mccg.nl.

Executive Board

The Executive Board is entrusted with the management of the company and is responsible for achieving the company's aims, the strategy and associated risk profile, the development of results, and sustainability. The Executive Board focuses on long-term value creation, taking into account the company's stakeholders. The members of the Executive Board are appointed by the General Meeting of Shareholders. The full procedure for appointment and dismissal of members of the Executive Board is explained in article 15 of the company's Articles of Association. The Executive Board currently consists of Ms. Nancy McKinstry (CEO and Chairman of the Executive Board) and Mr. Kevin Entricken (CFO and member of the Executive Board). The responsibilities of the Executive Board are set out in the By-Laws of the Executive Board, which are published on *www.wolterskluwer.com*.

Remuneration

The remuneration policy for the Executive Board was adopted by the Annual General Meeting of Shareholders in 2004 and most recently amended in 2011. The Supervisory Board is responsible for the execution of the remuneration policy, based on the advice of the Selection and Remuneration Committee. Detailed information about the remuneration policy can be found in the *Remuneration Report*. In line with Dutch legislation, the execution of the remuneration policy in 2018 will be put on the agenda for discussion as a separate agenda item at the Annual General Meeting of Shareholders of April 18, 2019.

Under the Long-Term Incentive Plan (LTIP), Executive Board members can earn ordinary shares after a period of three years from the date of the conditional award of shares. Earning of the ordinary shares is subject to clear and objective three-year performance criteria established in advance. The Executive Board members are not required to retain the shares for a period of five years, as recommended in Best Practice Provision 3.1.2 (vi) of the Corporate Governance Code. Wolters Kluwer sees no reason to require the Executive Board members to hold their ordinary shares for five years, because under the LTIP, conditional awards by the Supervisory Board recur on an annual basis and, as such, the Executive Board members will always have a strong incentive to pursue the long-term interests of the company.

Term of appointment

In line with the Corporate Governance Code, as a policy, future appointments of Executive Board members will take place for a period of four years. Mr. Entricken was therefore appointed for an initial period of four years during the Annual General Meeting of Shareholders on

April 24, 2013. At the Annual General Meeting of Shareholders of April 20, 2017, Mr. Entricken was reappointed for a second four-year term. The existing contract with Ms. McKinstry, who was appointed before the introduction of the first Dutch Corporate Governance Code and has an employment contract for an indefinite period, will be honored.

Severance arrangements
With respect to future Executive Board appointments, the company will, as a policy, comply with Best Practice Provision 3.2.3 of the Corporate Governance Code regarding the maximum severance remuneration in the event of dismissal. In line with this Best Practice Provision, the contract with Mr. Entricken contains a severance payment of one year's base salary. However, the company will honor the existing contract with Ms. McKinstry who was appointed before the introduction of the first Dutch Corporate Governance Code.

Change of control
The employment contracts of the Executive Board members and a small group of senior executives contain stipulations with respect to a change of control of the company. According to these stipulations, in case of a change of control, the relevant persons will receive 100% of the number of conditional rights on shares awarded to them with respect to pending Long-Term Incentive Plans of which the performance period has not yet been ended. In addition, they are entitled to a cash severance payment if their employment agreement would end following a change of control.

Supervisory Board
Wolters Kluwer has a two-tier board structure. The Executive Board members are responsible for the day-to-day operations of the company. The role of the Supervisory Board is to supervise the policies of the Executive Board and the general affairs of the company and its enterprise, taking into account the relevant interests of the company's stakeholders, and to advise the Executive Board. The supervision includes the effectiveness of the company's internal risk management and control systems and the integrity and quality of the financial reporting. The Supervisory Board also has due regard for sustainability issues. The By-Laws of the Supervisory Board include a list of Executive Board resolutions that must be approved by the Supervisory Board. These resolutions include transactions in which there are conflicts of interest with Executive Board members that are of material significance for the company or the Executive Board member, acquisitions or divestments of which the value is at least equal to 1% of the consolidated revenues of the company, the issuance of new shares or granting of rights to subscribe for shares, and the issue of bonds or other external financing of which the value exceeds 2.5% of annual consolidated revenues. The responsibilities of the Supervisory Board are set out in the By-Laws of the Supervisory Board, which are published on *www.wolterskluwer.com*.

Appointment and composition
The General Meeting of Shareholders appoints the members of the Supervisory Board. The full procedure of appointment and dismissal of members of the Supervisory Board is explained in article 21 of the company's Articles of Association. The Supervisory Board currently consists of Mr. Frans Cremers (Chairman), Mr. René Hooft Graafland (Vice-Chairman), Mr. Bruno Angelici, Ms. Jeanette Horan, Mr. Ben Noteboom, Ms. Fidelma Russo, and Ms. Ann Ziegler. In 2019, the third and final term of Mr. Angelici and the first term of Mr. Noteboom will expire. Mr. Noteboom will not be available for reappointment. The Supervisory Board is very pleased to propose to the Annual General Meeting of Shareholders the appointment of Mr. Bertrand Bodson and Mr. Chris Vogelzang. The composition of the Supervisory Board shall always be such that the members are able to act critically and independently of one another, the Executive Board, and any particular interests. As a policy, the Supervisory Board in principle aims at having all its members independent from the company, which currently is the case. The independence of Supervisory Board members is monitored on an ongoing basis, based on the criteria of independence as set out in Best Practice Provisions 2.1.7 and 2.1.8 of the Corporate Governance Code and Clause 1.5 of the Supervisory Board By-Laws.

The number of supervisory board memberships of all Supervisory Board members is limited to such extent that the proper performance of their duties is assured. The number of Board memberships of all Supervisory Board members is currently in compliance with the maximum number of Board seats allowed under Dutch law.

Provision of information
Wolters Kluwer considers it important that the Supervisory Board members are well-informed about the business and operations of the company. The Chairman of the Supervisory Board, the CEO, and the Company Secretary monitor, on an ongoing basis, that the Supervisory Board receives adequate information. In addition, the CEO sends written updates to the Supervisory Board about important events. The Chairman of the Supervisory Board and the CEO hold several meetings and calls per year outside of formal meetings, to discuss the course of events at the company.

The Supervisory Board also has direct contact with layers of management below Executive Board level. To this end, operating managers, including divisional CEOs, are regularly invited to present to the Supervisory Board. These presentations can relate to the operations in general and to business development. In addition, the company facilitates visits to business units and individual meetings with staff and line managers. Furthermore, various staff members attend the Audit Committee meetings.

Committees of the Supervisory Board
The Supervisory Board has two standing committees: The Audit Committee and the Selection and Remuneration Committee. The responsibilities of these committees can be found in the Terms of Reference Audit Committee, and the Terms of Reference Selection and Remuneration Committee, which are published on *www.wolterskluwer.com*. A summary of the main activities of these committees, as well as the composition, can be found in the *Report of the Supervisory Board*.

Remuneration
The General Meeting of Shareholders determines the remuneration of the Supervisory Board members. The remuneration does not depend on the results of the company. The Supervisory Board members do not receive shares or stock options by way of remuneration, nor shall they be granted loans. The remuneration of the Supervisory Board members was increased most recently by resolution of the General Meeting of Shareholders in its meeting held on April 19, 2018.

Diversity
The company's diversity policy for the Supervisory Board, Executive Board, and Division CEOs is published on the company website *www.wolterskluwer.com* as Annex to the Supervisory Board By-Laws. Elements of diversity include nationality, gender, age, and expertise. It is the aim of the company to have a representation of at least 30% male and at least 30% female, both in the Supervisory Board, the Executive Board, and at the division CEO level. Currently, 43% of the Supervisory Board members are female, 50% of the Executive Board members are female, and 67% of the division CEO's are female. The composition of the Supervisory Board also comprises expertise within the broad information industry as well as specific market segments in which the company operates. Five nationalities are represented on the Supervisory Board. As such, the composition of the Executive Board and Supervisory Board is in line with the diversity policy and Dutch law.

Insider Dealing Policy
The members of the Executive Board and Supervisory Board are bound to the Wolters Kluwer Insider Dealing Policy and are not allowed to trade in Wolters Kluwer securities during closed periods. These periods begin either on the first business day of the quarter, or 30 calendar days prior to the publication of Wolters Kluwer's annual results, half-year results, and three and nine-month trading updates, whichever is earlier. The day after the announcement of these results or updates, the Board members can trade again, with prior approval of the securities compliance officer which will be granted if they do not have inside information at that point in time.

Value creation and culture
The company drives a culture of long-term value creation, which is also reflected in our company values and business principles (code of conduct). The business principles apply to all Wolters Kluwer managers, employees, and temporary hired staff world-wide. They are not voluntary, nor can they be applied selectively. Reference is made to the *Deliver Deep Impact* section, included in the *Report of the Executive Board* for more information about our company values, business principles, and value creation model. An explanation of Wolters Kluwer's new strategy, *Accelerating Our Value*, is also included in the *Deliver Deep Impact* section.

Our annual online compliance training creates awareness of our company values, business principles, and our other rules of conduct. As of December 31, 2018, 99% of our active employees globally have been trained in and acknowledged compliance with the company values and business principles, and most of the other global corporate policies. The annual compliance training program aims at:

- Enhancing our employees' knowledge and understanding of our values and rules of conduct;
- Improving the way employees perform their duties safely, correctly, and efficiently;
- Providing the employees insights to recognize various risks and take appropriate actions;
- Raising awareness on topics such as anti-bribery and anti-corruption, fair competing, reporting issues (whistleblowing), data privacy, IT security, and fraud & cyber risks; and
- Improving data security at Wolters Kluwer (including customer and employee data).

It is the company's ongoing target to have at least 90% of our active employees worldwide follow and complete an online compliance training each year.

Risk management

The Executive Board is responsible for identifying and managing the risks associated with the company's strategy and activities and is supervised by the Supervisory Board. The Audit Committee undertakes preparatory work for the Supervisory Board in this area. Wolters Kluwer has implemented internal risk management and control systems which are embedded in the operations of the businesses to identify significant risks to which the company is exposed, and to enable the effective management of those risks. The aim of the systems is to provide a reasonable level of assurance on the reliability of financial reporting. These systems can never provide absolute assurance regarding the achievement of the company's objectives or the reliability of the financial reporting, or entirely prevent material errors, losses, fraud, and violation of applicable laws and/or regulations. For a detailed description of the risks and the internal risk management and control systems, reference is made to *Risk Management*.

Sustainability

The Executive Board and Supervisory Board are committed to Wolters Kluwer's sustainability strategy. Under supervision of the CEO and Chairman of the Executive Board, the Senior Vice President, General Counsel/Company Secretary, is responsible for the company's sustainability strategy and our Corporate Sustainability team. To communicate the goals and progress achieved, additional sustainability-related non-financial information is included in the Annual Report. In addition, a dedicated section on the company's website shows the ongoing sustainability activities and accomplishments. We recognize the importance of aligning and adjusting the various sustainability efforts every year.

Good corporate governance is the foundation for building a successful business with sustainable impact. As a provider of governance-related expert solutions, we want to lead by example. It is essential for all our stakeholders that we demonstrate how we do this and how we regard the role of corporate governance within our overall sustainability strategy. Wolters Kluwer has therefore developed several policies and principles. These policies cover a wide range of domains to ensure the continuous compliance with high business standards.

Non-financial information statement

Corporate Governance, the *Report of the Executive Board,* and *Risk Management* contain all non-financial information specified in the Non-Financial Information Decree (Besluit bekendmaking niet-financiële informatie) and in section 2:391(1) of the Dutch Civil Code, and as such comprise the consolidated “non-financial information statement” in accordance with that decree and law.

The company aims at achieving long-term business success while making a positive impact on society. The risk profile of the company with respect to environmental, social, employee, and human rights-related matters, is considered relatively low, due to the markets we operate in, the types of products and services we deliver, our highly qualified employees, and the customers and suppliers we deal with. The strategy and business model of the company, aimed at long-term value creation from which our various stakeholders benefit, are explained in the *Report of the Executive Board*. In addition to our company values and business principles, Wolters Kluwer has several policies in place committing the company to environmental, social and employee-related matters, respect for human rights, and anti-corruption and anti-bribery matters. These policies include our Environmental Policy and our Human Rights Policy, which are extended to our supply chain via our Supplier Code of Conduct. We are also guided by international guidelines such as the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the United Nations Guiding Principles on Business and Human Rights (UNGP), and the principles of the United Nations Global Compact.

As a member of different communities and society at large, Wolters Kluwer maintains regular contact with stakeholders including investors, Environmental, Social, and Governance (ESG) analysts and rating agencies, government offices, the media, Civil Society Organizations (CSOs), and educational and research institutions. Wolters Kluwer understands its responsibility to support underserved communities and recognizes the opportunities with them.

Historically, our publishing business used large amounts of paper, which had an impact on the environment. As part of its strategy, Wolters Kluwer has been actively focusing on an increase of revenues from digital products and services, reducing paper use. For our remaining printed products, the company increasingly uses certified paper to reduce the negative impact. As stated in the Environmental Policy, Wolters Kluwer aims to minimize the impact of its activities on the environment and to comply with the applicable environmental laws in the countries in which it is active. For more information about our activities on environmental and social matters, reference is made to the *Our Society* section, included in the *Report of the Executive Board*.

Wolters Kluwer is an equal opportunity employer, focusing on talent development and growth. For more information about our employee-related matters, reference is made in the *Our Employees* section, included in the *Report of the Executive Board*.

Our Human Rights Policy supports our ambitions with respect to the protection of human rights. The policy describes the human rights issues which are most relevant for the company. Wolters Kluwer supports and respects human rights and strives to ensure that its activities will not infringe upon them.

Due to the global character of our business, and different cultures our suppliers and customers operate in, we could potentially be exposed to corruption and bribery. This potential risk, together with mitigating actions, is explained in *Risk Management*. The business principles aim at preventing bribery by prohibiting employees, either directly or indirectly, to offer, promise, demand or accept bribes to obtain or retain business. Also, we have set clear restrictions on gifts and hospitality. All employees are made aware of these restrictions through the annual compliance training, and new hires upon their onboarding at Wolters Kluwer.

The company has set non-financial key performance indicators relevant for the business, including revenues from digital products as a percentage of total revenues, diversity, responsible supply chain (supplier code of conduct), the global compliance training completion rate, and our material topics, as described in this Annual Report. For more information on sustainability efforts of Wolters Kluwer, which includes topics referred to in this statement on non-financial information, see the sustainability section on our website *www.wolterskluwer.com*.

Shareholders and the General Meeting of Shareholders

At least once a year, a General Meeting of Shareholders will be held. The agenda of the Annual General Meeting of Shareholders shall in each case contain the report of the Executive Board, the report of the Supervisory Board, the execution of the remuneration policy, the adoption of the financial statements, and the proposal to distribute dividends or other distributions. Resolutions to release the members of the Executive Board and Supervisory Board from liability for their respective duties shall be voted on separately. Shareholders who alone or jointly represent at least half a percent (0.5%) of the issued capital of Wolters Kluwer shall have the right to request the Executive Board or Supervisory Board to put items on the agenda of a General Meeting of Shareholders, provided that such requests are made in writing at least 60 days before a General Meeting of Shareholders.

Voting at the Annual General Meeting of Shareholders

In 2018, Wolters Kluwer again took active steps to try to reach a high percentage of shareholders present or represented at the Annual General Meeting of Shareholders. These steps included making standard proxy forms and voting instruction forms available online, enabling shareholders to give voting instructions electronically prior to the meeting, and actively contacting larger shareholders to inquire if they intended to vote during the Annual General Meeting of Shareholders. As a result, shareholders with voting rights for approximately 73% of the issued capital of the company were present or represented at the Annual General Meeting of Shareholders in 2018.

Amendment Articles of Association

A resolution to amend the Articles of Association may only be passed by the General Meeting of Shareholders at the proposal of the Executive Board subject to the approval of the Supervisory Board. The most recent amendment of the Articles of Association took place in 2016.

Issuance of shares

The Articles of Association of the company determine that shares shall be issued at the proposal of the Executive Board and by virtue of a resolution of the General Meeting of Shareholders, subject to designation of the Executive Board by the General Meeting of Shareholders. At the Annual General Meeting of Shareholders of April 19, 2018, the Executive Board was granted the authority for a period of 18 months to issue new shares, with exclusion of pre-emptive rights, subject to approval of the Supervisory Board. The authorization is limited to a maximum of 10% of the issued capital on the date of the meeting.

Acquisition of shares in the company

Acquisition of shares in the company (share buybacks) may only be effected if the General Meeting of Shareholders has authorized the Executive Board for the purpose, and while respecting the restrictions imposed by the Articles of Associations of the company. At the Annual General Meeting of Shareholders of April 19, 2018, the authorization to acquire shares in the company was granted to the Executive Board for a period of 18 months. The authorization is limited to a maximum of 10% of the issued capital on the date of the meeting. On December 31, 2018, Wolters Kluwer N.V. had 8,552,915 shares in the company (3.06% interest).

Preference shares

Wolters Kluwer N.V. and the Wolters Kluwer Preference Shares Foundation (the Foundation) have concluded an agreement based on which preference shares can be taken by the Foundation. This option on preference shares is at present a measure that could be considered as a potential protection at Wolters Kluwer against exercising influence by a third party on the policy of the company without the consent of the Executive Board and Supervisory Board, including events that could threaten the strategy, continuity, independence, identity, or coherence between the activities of the company. The Foundation is entitled to exercise the option on preference shares in such a way that the number of preference shares taken will be no more than 100% of the number of issued and outstanding ordinary shares at the time of exercise. Among others by the exercise of the option on the preference shares by the Foundation, the Executive Board and the Supervisory Board will have the possibility to determine their position with respect to, for example, a party making a bid on the shares of Wolters Kluwer and its plans, or with respect to a third party that otherwise wishes to exercise decisive influence, and enables the Boards to examine and implement alternatives. All members of the Board of the Foundation are independent from the company. See *Report of the Wolters Kluwer Preference Shares Foundation* for more information.

Information pursuant to Decree Clause 10 Take-over Directive

The information specified in both clause 10 of the Takeover Directive and the Decree, which came into force on December 31, 2006 (Decree Clause 10 Take-over Directive), can be found in this chapter and in the *Our Investors* section.

Legal structure

The ultimate parent company of the Wolters Kluwer group is Wolters Kluwer N.V. In 2002, Wolters Kluwer N.V. abolished the voluntary application of the structure regime (structuurregime). As a consequence, the structure regime became applicable to Wolters Kluwer Holding Nederland B.V., which is the parent company of Dutch operating subsidiaries. Wolters Kluwer International Holding B.V. is the direct or indirect parent company of the operating subsidiaries outside of the Netherlands.

Risk Management

This section provides an overview of Wolters Kluwer's approach to risk management, the main risks facing the company and the organization, as well as processes and actions to identify, assess, and mitigate these risks.

Introduction

The Executive Board is responsible for overseeing risk management and internal controls within Wolters Kluwer. The company has implemented internal risk management and control processes, which are largely integrated into the operations of the businesses. The aim is to timely identify significant risks to which the company is exposed, to enable the effective management of those risks, and to provide a reasonable level of assurance on the reliability of the financial reporting of the Wolters Kluwer group. The Executive Board reviews an annual assessment that includes a review of pertinent risks, mitigating actions, and the design and effectiveness of the internal risk management and control systems, taking into consideration the company's risk appetite and the observations and reports of the internal auditor and the Corporate Risk Committee. The internal risk management and control systems cannot provide absolute assurance regarding the achievement of the company's objectives or the reliability of the financial reporting, or entirely prevent material errors, losses, fraud, and violation of applicable laws and regulations.

Managing risks is integrated into the conduct of business of our divisions and operating entities, supported by several staff functions. The Executive Board is informed about risks as part of the regular planning and reporting cycles on divisional and operational entity levels, which include annual Vision & Strategy Plans (long-term strategic plans), annual budgets, and quarterly and monthly financial and operational reports. During the monthly division meetings, material risks at each of the divisions, including the Global Business Services organization and Global Platform Organization, are part of the discussion between the Executive Board and division management. The Corporate Risk Committee, consisting of representatives of various functional departments, meets periodically and monitors material risks and remediating actions with a focus on company-wide, non-business specific risks. The Committee also oversees the mitigation of certain risks that emerge and require a centralized approach.

Wolters Kluwer's company values stipulate the core values of our company. The business principles are the company-wide rules each of our employees worldwide is expected to adhere to. The company values and the business principles form the basis of other global policies, which provide more detailed rules and guidelines for specific domains. To stress the importance of compliance with the company values and business principles, as well as other global corporate policies and applicable laws, and to encourage and ensure adherence, the company has deployed several initiatives. A company-wide management certification process requires management of each of the divisions and operating entities, to sign a Letter of Representation on a quarterly basis. In these letters, the executives confirm that they comply with all applicable policies, laws, and procedures. In addition, all Wolters Kluwer employees are required to complete compliance training at least once per year. This training program is based on our company values, business principles, and global corporate policies. The program aims to raise awareness on ethics, values, and legal requirements, and includes topics such as anti-bribery and anti-corruption, fair competition, data privacy, IT security, fraud, and cyber risks. In addition, the program requires participants to acknowledge adherence to the described content.

To underpin the importance of integrity and to create a culture in which employees are comfortable to speak up and report any issues, Wolters Kluwer implemented SpeakUp, a global reporting system with 24/7 availability and available in 22 languages. Via SpeakUp, employees can report any potential concerns, including suspected breaches of policies, laws, or regulations, to the Wolters Kluwer Ethics & Compliance Committee. SpeakUp operates in conjunction with the global SpeakUp Policy. The implementation of SpeakUp contributes to a culture of transparency and long-term value creation at Wolters Kluwer.

The company has an Internal Control Framework for financial reporting (ICF), based on the COSO (Committee of Sponsoring Organizations of the Treadway Commission) 2013 framework, which is designed to provide reasonable assurance that the results of the business are accurately reflected in its internal and external financial reporting.

The ICF is deployed by internal control officers in the corporate office, Global Business Services organization, Global Platform Organization, and the main operating entities. An annual risk assessment program for financial and IT general control risks determines the scope and controls to be tested. As part of that scope, key controls are tested annually. The results of testing are reported to management, the Audit Committee, internal auditors, and external auditors on a quarterly basis. Where needed, remedial action plans are designed and implemented to address significant risks as derived from internal control testing, and internal and external audits.

Internal auditing is an independent and objective assurance and consulting activity that is guided by a philosophy of adding value to improve the operations of Wolters Kluwer. It assists in accomplishing its objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's governance, risk management, and internal controls. The global Internal Audit department works according to an audit plan which is discussed with the external auditors, the Executive Board, and the Audit Committee. The plan is approved by the Executive Board and the Supervisory Board. The audit plan is based on risk assessments and focuses on strategy execution, financial reporting risks, and operational risks including IT-related risks.

The global Risk Management department facilitates risk prevention, protection, and response programs via procurement of insurance, claims and incident management, business continuity management, loss control programs, and other initiatives to mitigate specific risks. The Internal Audit, Internal Control, Group Accounting & Reporting, Legal, Treasury, Tax, and Risk Management departments provide quarterly reports to the Audit Committee and the Executive Board.

Risk categories and risk appetite

Wolters Kluwer broadly classifies risks into the following categories: strategic and operational, legal and compliance, financial, and financial reporting. The following risk overview outlines the main risks the company has assessed up to the date of this Annual Report. It is not the intention to provide an exhaustive description of all possible risks. There may be risks that are not known yet or the company has not yet fully assessed. It is also possible that existing risks have been assessed as not significant, which could in the future develop into a material exposure for the company and have a significant adverse impact on its business. The company's risk management and internal control systems have been designed to identify, mitigate, and respond to risks in a timely manner. However, full assurance cannot be attained.

To achieve its strategic goals, Wolters Kluwer is prepared to take duly balanced risks in certain strategic areas, such as acquisitions, expansion in high-growth countries, and the launch of new innovative products. With respect to other risk categories, the approach of the company towards risks could be qualified as conservative, with compliance and financial reporting risks as the most conservative categories. The company carefully weighs risks against potential rewards. Actions to prevent and mitigate risks and uncertainties are summarized for each of the individual risks in the table on the next pages.

STRATEGIC & OPERATIONAL RISKS

Risk description and impact	Mitigation
Economy and markets Global and regional economic conditions may have a negative effect on several products. The impact of these conditions on the overall portfolio will depend on the severity of the economic issue, the countries affected, and potential government responses. Our more cyclical products may be especially sensitive to economic conditions. These include training activities, advertising, books, and lending and corporate formation-related transactions.	The company made further progress in shifting its portfolio towards digital and high-growth businesses. Global presence continued to drive geographic diversification of the company's revenue base. Recurring revenues represent 78% of the company's consolidated revenues, further reinforcing the company's resiliency. During the year, we continued to reshape the business through strategic acquisitions and divestments. The company monitors relevant political and macroeconomic issues (including Brexit) in terms of risks and opportunities. At this moment Brexit is not believed to have a direct material impact on Wolters Kluwer's business.
Products The decline of revenues coming from our legacy print business, including books and print-based subscriptions, may further accelerate.	The company mitigates the decline of print-related revenues through migration plans (upgrading customers from print to digital products), customer retention management, and upselling opportunities. The company will continue assessing opportunities to optimize the portfolio, including the divestment of legacy businesses and the acquisition of businesses which contribute to the execution of our strategy.
Changes in underlying customer dynamics may affect our business and could lead to price compression.	The company also continues to invest in product development and expand its offerings in innovative digital expert solutions and services to support pricing levels and growth. Execution of the new three-year strategy *Accelerating Our Value* further contributes to optimizing Wolters Kluwer's product portfolio and driving long-term value creation.
Competition Wolters Kluwer faces competitive challenges from existing and new competitors, including free availability of some sources of information.	The company mitigates competitive risks by maintaining a diverse customer base, building strong customer relationships, and launching new innovative products that apply advanced technologies to meet evolving customer needs. To support product innovation, the company continues to invest 8%-10% of revenues annually in product development. Ongoing innovation in content enrichment helps secure the value propositions of information-based products as the company explores new revenue drivers, such as search optimization programs and distribution partnerships.

Risk description and impact	Mitigation
Demographic and macroeconomic trends Technological, cultural, or demographic trends might affect current business models. These developments could for example include disruptive technologies, such as the impact of artificial intelligence on the activities of professionals. In addition, new generations of professional customers might expect a different approach and different tools and solutions to support them in their daily activities.	The company actively monitors relevant trends in the markets it operates in and technological, cultural, or demographic trends which might affect its business in the future. The company ensures to have a strong understanding of evolving customer needs by closely monitoring net promotor scores, actively engaging via customer advisory boards, and hosting and participating in leading industry conferences. Further, we continue to integrate advanced technologies throughout the company via our technology Centers of Excellence, innovation incentive programs such as the Global Innovation Awards, and division-specific initiatives. Deep understanding of our customers, enabled by strong advanced technology capabilities, continues to allow the company to transform its portfolio of information, software solutions, and services and enhance its expert solutions, ensuring alignment with longer-term trends. In addition, maintaining a diverse workforce, with good understanding of current and future customer needs, also contributes to safeguarding future value creation by the company.
Mergers and acquisitions Risks with respect to acquisitions primarily relate to the integration of the acquired companies, changing economic circumstances, customer retention, competitive dynamics, retaining key personnel, and realization of projected sales and synergies.	When acquiring new businesses, Wolters Kluwer conducts broad-based due diligence using internal and external expertise. Besides indemnities and warranties, the company also assesses whether risks can be mitigated through deal structures, such as earn-out agreements to retain management and to assure alignment between the purchase price and the performance of the acquired company. Wolters Kluwer has strict strategic and financial criteria for acquiring new businesses and is very selective in its investment decisions. Generally, acquisitions are expected to be accretive to adjusted earnings per share in year one and cover the company's weighted average cost of capital within three to five years. Wolters Kluwer's internal corporate carve out & integration team has developed post-merger integration plans and an acquisition integration plan is agreed to by the Executive Board prior to completing an acquisition. Such plans are actively managed and monitored after completion.
Divestments Execution of the company's strategy is also supported by the divestment of non-core activities. The ability to successfully divest operations can depend on economic and market circumstances, competitive dynamics, contractual obligations, shared costs within the group, the ability of the business to operate stand-alone, retention of key personnel, the buyer's ability to realize synergies, and other factors.	To mitigate risks related to material divestments, the company usually carries out a vendor due diligence and engages external experts for such due diligence and execution of the transaction.

Risk description and impact	Mitigation
IT and cybersecurity Wolters Kluwer is exposed to IT-related risks and cyber threats that could affect our IT infrastructure and system availability, applications, and company and customer data.	Wolters Kluwer takes active steps to reduce information technology cyber risks by continually improving cybersecurity measures. In 2018 (and building on a 2016 established governance model to secure execution of plans, management attention, and accountability at various levels), Wolters Kluwer continued to progress to higher maturity and transformation of cybersecurity in a globally managed program. The company performs a continuous assessment against existing industry compliance programs, i.e. SOC 2 and ISO. Company efforts are focused on the following categories: • Application security; • Infrastructure security; • Endpoint security; • Global vulnerability management; • Policy and standard management; and • Compliance and assurance. The company's business units and our Global Business Services organization are continually working to bolster business continuity and enterprise incident management plans, strengthening IT disaster recovery and cyber incident response and reporting plans to mitigate impact. A worldwide training program consisting of policy education and an online security module was rolled out to all employees. Finally, we have been updating and normalizing Business Units' local policies/standards with global policies and expanded our annual IT and cybersecurity training with the launch of three simulated situational trainings to improve awareness. IT General Controls forms an integral part of Wolters Kluwer's Internal Control Framework and is aligned with the Global Information Security Policy. Controls over data and security programs are periodically tested to ensure personal data is adequately protected. The company will continue to strengthen its security and incident response plans throughout 2019. IT and cybersecurity are standing Corporate Risk Committee agenda items.

Risk description and impact	Mitigation
Supply chain, technological developments, and projects Our businesses could be adversely affected by the dependency on our supply chain, including but not limited to parties delivering outsourced and offshored data center services, software development, and maintenance activities, including back-office transactions processing. Implementing new technology-related initiatives for delivering Wolters Kluwer's products and services, as well as achieving cost efficiencies through technology/IT sourcing initiatives, is inherently complex and is subjected to many execution risks during the development and implementation phases.	To manage supply chain risks, obligations are expected to be governed by strong selection criteria when choosing outside partners, and by detailed operating and service agreements with these outside providers and solid monitoring of these agreements. Additionally, oversight boards and program management teams monitor the progress and performance of vendors during the term of these agreements. Loss prevention programs are also increasingly focused on supply chain. Also, centrally managed suppliers are requested to participate in a due diligence questionnaire and sign the Wolters Kluwer Supplier Code of Conduct or provide an equivalent standard. In the Supplier Code of Conduct Wolters Kluwer encourages its suppliers to implement management systems and Wolters Kluwer may verify compliance with the standards in the Wolters Kluwer Supplier Code of Conduct by carrying out an audit. A roadmap for consolidation and simplification of IT infrastructure and for implementing more service capabilities to support customers in the cloud has been set over the past years. This includes vendor consolidation, preferred partnerships, and de-risking of the vendor portfolio. In addition, the company has refined the strategy for IT back-office operations to ensure more effective management of all back-office systems. The company strives to continuously improve and streamline its IT environment and infrastructure. In 2018 we started the implementation of our procurement-hub, a transformational change to our sourcing and procurement operations. This includes implementation of a sourcing and procurement-wide enterprise solution and streamlined processes to further centralize our supplier onboarding and third-party risk management activities. The enterprise solution is a single instance allowing the monitoring and management of procurement activities centrally. The Corporate Quality Assurance team aims to improve the success of large change initiatives by providing assurance that the key projects/programs can move to the next stage of development or implementation, and by transferring lessons learned from one project/program to another. This group also supports standardization of change methodologies and frameworks.
People and organization The success of the company is highly dependent on its ability to attract and retain the appropriate level of talent.	The company ensures its ability to attract and retain the appropriate level of talent through a combination of competitive rewards, including market-based remuneration; pay for performance with incentives where possible, aligned with individual and company achievements; benefits benchmarked against local markets; and career development opportunities within the company. Through formal talent management programs that incorporate career progression tools, succession planning, company-sponsored learning programs, and consistently applied performance evaluation systems, the company supports the ongoing development and retention of employees thereby mitigating the excessive loss of personnel. Additionally, we measure our recruiting efficiencies and turnover patterns in all segments of our workforce to monitor and respond to any attraction or retention trends. The company periodically performs surveys of the global workforce, to ensure management maintains a current view of employee engagement and insights for how to continuously improve it.

Risk description and impact	Mitigation
Fraud In the conduct of its business, the company may be exposed to internal or external fraudulent or related criminal actions.	Measures to mitigate risks related to fraud and cybercrime include reviews that ensure adherence to the Wolters Kluwer Internal Control Framework, strict policies on segregation of duties, risk-based internal audits, risk assessment activities, staff training, and information sharing. The Corporate Risk Committee examines potential exposure to fraudulent activities and is continually implementing measures to address this. Wolters Kluwer has been improving processes and procedures to mitigate risk and prompt employee awareness across the organization. The SpeakUp misconduct reporting system contributes to fraud prevention and detection. In addition to technical activities undertaken by Information Security functions, the company issued fraud alerts and conducted anti-fraud/anti-cybercrime workshops and training sessions within at-risk businesses and functions, using case studies and best practices to further raise global fraud awareness and reduce social engineering risks. Fraud is a standing Corporate Risk Committee agenda topic.
Property damage and business interruption The company could be exposed to damages to its tangible assets (i.e. facilities, IT systems, hardware) which could cause business interruption.	To mitigate specifically against property damage and business interruption risks, the company has implemented a centralized worldwide risk control and business continuity management program. Accompanied by insurers, company risk managers perform regular loss control visits at key operating company and supplier locations working with our operating companies to cost-effectively implement recommendations for continued improvement. Wolters Kluwer established a multi-disciplinary Global Incident Management Program to strengthen its ability to manage crises and incidents, irrespective of the type. Mitigation of information security risks are described under the risk category IT and cybersecurity. Incident management is a standing agenda topic of the Corporate Risk Committee and incidents are reported quarterly to the Audit Committee.
Brand and reputation With the increasing prominence of the Wolters Kluwer brand, the company potentially becomes more vulnerable for brand or reputation risks.	The Global Brand Organization oversees the brand strategy and implementation. The Global Branding & Communications team works closely with other corporate functions and the businesses to monitor and control brand and reputational risks. In 2018, we introduced a new brand purpose, *deliver impact when it matters most*, that expresses the core of our value proposition and explains why we exist, where we fit, and what we contribute to our stakeholders. To strengthen our ability to manage crises and incidents, which could affect the company's reputation, Wolters Kluwer's Global Incident Management Program enhances the coordination among all our divisional and functional teams. This includes procedures to manage crises and incidents. The procedures ensure we are prepared and organized to respond to a potential crisis in a timely, accurate, and relevant manner. In 2018, certain relevant teams have been trained on crisis preparedness.

LEGAL & COMPLIANCE RISKS

Risk description and impact	Mitigation
Regulatory compliance The company can be exposed to non-compliance with laws, regulations, or internal policies. Non-compliance could result in fines, restrictions on business, third-party claims, and reputational damage.	Compliance is an integral part of Wolters Kluwer's Internal Control Framework which includes quarterly Letters of Representation, annual internal control testing, and regular internal audits. Furthermore, pertinent training programs are provided to all employees to create awareness about compliance subjects, mitigate compliance-related risks, and reinforce tone at the top. The training programs provide employees with knowledge to recognize potential violations or non-compliance with laws, regulations, or internal policies, so that non-compliance can be avoided. In 2017, we implemented SpeakUp, a global reporting system allowing employees to report on any suspected non-compliance on a confidential basis and if desired, anonymously. In January 2018, the company appointed a Chief Compliance Officer, who coordinates and optimizes the company's compliance program and initiatives. To further formalize and strengthen the company's compliance efforts, the Executive Board approved the Charter of the Ethics & Compliance Committee in 2018. We evaluate whether legislative changes, new products, or business acquisitions require additional compliance efforts. Wolters Kluwer continued to implement a cross-functional enterprise-wide compliance program for the General Data Protection Regulation (GDPR), which became effective on May 25, 2018. Wolters Kluwer established a Privacy Office with the mission to embed data privacy in its culture, processes, and day-to-day business operations. We established the Data Privacy Commitments, that guide our company-wide approach and express the value we attach to protecting the personal information of our customers, employees, and other stakeholders. Further, the Privacy Office organized a GDPR awareness training for all European Union-based and other selected employees to make them aware of their responsibilities and new ways of working related to GDPR. GDPR and data privacy training will be part of Wolters Kluwer's Annual Compliance Training Program.
Corruption and bribery Wolters Kluwer businesses operate worldwide, which brings a high variety of business cultures and practices. In addition, our customers include governmental and semi-governmental organizations. These are factors which could potentially contribute to the risk of being exposed to corruption and bribery.	Wolters Kluwer's policies prohibit employees, either directly or indirectly, from offering, promising, demanding, or accepting bribes to obtain or retain business. The company has restrictions on accepting and offering gifts and hospitality. All employees globally are made aware of these rules through annual compliance training while new employees receive training upon their onboarding at Wolters Kluwer. The company generally requires the same compliance with laws from its suppliers through the Wolters Kluwer Supplier Code of Conduct. With our global misconduct reporting system SpeakUp, we encourage our employees to report any suspected act of corruption or bribery in their own language and if desired, anonymously.
Contractual compliance The company could be exposed to claims by its contractual counterparties based on alleged non-compliance of contractual terms, such as the number of users agreed upon (available licenses), price commitments, or services to be delivered.	The company manages contractual risks by negotiating contracts with attention to risk transfer clauses, representations, and warranties and covenants. For part of its contracts, the company uses contract management systems to monitor material contractual rights and obligations, and software tools to track the use of software for which licenses are required.

Risk description and impact	Mitigation
Intellectual property protection Intellectual property rights could be challenged, limited, invalidated, circumvented, or infringed. Technological developments make it increasingly difficult to protect intellectual property rights. Changes in legislation could have an impact on the ability to protect intellectual property rights.	Wolters Kluwer actively protects its intellectual property rights to safeguard its portfolio of information, software solutions, and services. The company relies on trademark, copyright, patent, and other intellectual property laws to establish and protect its proprietary rights to these products and services. We monitor legislative developments with respect to intellectual property rights. In 2018, we centralized our trademarks database to provide more expert protection and monitoring of our intellectual property and support the company's global trademark strategy.
Third-party claims The company may be exposed to litigation, administrative actions, and other claims by third parties, including claims relating to products, services (including software or SaaS offerings), informational content provided or published by the company, and employee and vendor relations. Such claims may be based on legal theories such as alleged negligence, product liability, breach of contract, or infringement of third-party intellectual property rights.	Wolters Kluwer manages these risks by striving to produce high quality products, services, and content, and by generally including disclaimers and limitations of liability in its contracts. Furthermore, the company expects its employees to strictly comply with intellectual property laws and regulations. The company's insurance program may cover certain types of claims exposures. The company manages a range of insurable risks by arranging for insurance coverage for first-party and third-party liability exposures.
Legislative developments As a global information, software solutions, and services provider, changes in laws, legislation, or (temporary) trade restrictions could impact the company's business in certain jurisdictions. Certain countries could impose restrictions on ownership of publishing activities by foreign companies.	The company monitors legislative developments and regulatory changes, including trade restrictions, to assess potential impacts on its business. Where necessary, the company partners with local companies to facilitate compliance with applicable laws.

FINANCIAL RISKS

Risk description and impact	Mitigation
Treasury Fluctuations in exchange and interest rates affect Wolters Kluwer's results.	It is the company's goal to mitigate the effects of currency and interest rate movements on net profit, equity, and cash flow. Whenever possible, the company tries to do this by creating natural hedges, by matching the currency profile of income and expenses and of assets and liabilities. When natural hedges are not present, Wolters Kluwer strives to realize the same effect with the aid of derivative financial instruments. For this purpose, hedging ranges have been identified and policies and governance are in place, including authorization procedures and limits. The company only purchases or holds derivative financial instruments with the aim of mitigating risks and most of these instruments qualify for hedge accounting as defined in IFRS 9. The company does not purchase or hold derivative financial instruments for speculative purposes. More disclosure and detailed information on financial risks and policies is provided in *Note 28 – Financial Risk Management*. The Treasury Policy on market (currency and interest), liquidity, and credit risks is reviewed by the Audit Committee, with quarterly reporting by the Treasury Committee to the Audit Committee on the status of these financial risks.
Post-employment benefits The company maintains a number of post-employment benefit programs globally. Generally, these programs are defined contribution plans. In some countries we have defined benefit plans, the largest of which is an active plan in the Netherlands, and next in size are the frozen or closed plans in the United States, the United Kingdom, Canada, Belgium, and Australia. For most of the active plans, the company as well as employees make investments for the future benefit of participants. For the frozen or closed plans, the company continues to ensure they are properly funded to provide the committed level of benefits to participants. From a risk point of view, funding requirements are influenced by interest rates and the investment returns on the assets invested in each respective plan, which are influenced by financial markets and economic conditions.	Our approach to managing risks to the company includes ongoing evaluation of all plans to ensure we are market competitive with designs that minimize risk and volatility. As a result, we have taken steps, such as moving our closed retiree medical plan in the United States to a private exchange, which eliminated the liability and the financial risk of the program, developing exit strategies for frozen or closed defined benefit plans starting with the United States where we have reduced the number of participants and therefore the company's liability through a cost-effective lump sum distribution initiative. We are also closely managing our investment strategy to see stronger asset returns with hedging parameters to manage downside risk. To support our agenda to fulfill our commitments to participants in the most efficient way for the company, we partner with independent expert advisors on market competitive plan design, plan performance monitoring, and defining investment and hedging strategies for all of our plans. The accounting for post-employment benefit plans is based on annual actuarial calculations in line with IAS 19.

Taxes Changes in operational taxes and corporate income tax rates, laws and regulations could adversely affect the company's financial results, tax assets, and liabilities.	Next to corporate income taxes, most taxes are either transactional or employee-related and are levied from the legal entities in the relevant jurisdictions. Wolters Kluwer maintains a liability for certain contingencies in line with IFRS. The adequacy of this liability is judged on a regular basis in consultation with external advisors. Reference is made to *Note 21 – Tax Assets and Liabilities* for additional information about corporate income tax and related risks. As a leader in Tax & Accounting products, the company takes its responsibility as a corporate citizen seriously. The company reviews its Tax Principles annually and updates them where necessary. The most recent update took place in 2016. These principles are published on *www.wolterskluwer.com*.

FINANCIAL REPORTING RISKS

Risk description and impact	Mitigation
Misstatements, accounting estimates and judgments, and reliability of systems The processes and systems supporting the financial reporting may be susceptible to unintentional misstatements or manipulation. The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates, and assumptions. The estimates and underlying assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from those estimates.	The company mitigates these risks by maintaining an Internal Control Framework for financial reporting as described in the introduction to this section. In addition, senior executives in the divisional and operating companies and senior corporate staff members provide signed Letters of Representation quarterly in which they certify compliance with laws and policies. Independent internal audits are also carried out to ensure compliance with policies and procedures and ensure that existing controls provide adequate protection against actual risks. In addition, employees and senior executives are expected to report any suspected non-compliance in financial reporting via the global misconduct reporting system SpeakUp.

Sensitivity analysis

Fluctuations in exchange, discount, interest, and tax rates affect Wolters Kluwer's results. The following information illustrates the sensitivity to a change in certain assumptions for Wolters Kluwer's adjusted operating profit and diluted adjusted EPS:

Potential impact	**Adjusted operating profit** *€ millions*	**Diluted adjusted EPS** *€ cents*
1% decline of the U.S. dollar against the euro	(8)	(2)
1% decrease in discount rate in determining the gross service costs for the post-employment benefit plans	(6)	(2)
1% increase in interest rate assuming same mix of variable and fixed gross debt	n.a.	0
1% increase in the benchmark tax rate on adjusted net profit	n.a.	(3)

Statements by the Executive Board

The Executive Board is responsible for the preparation of the financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code. The financial statements consist of the consolidated financial statements and the company's financial statements. The responsibility of the Executive Board includes selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

The Executive Board is also responsible for the preparation of the *Report of the Executive Board* (which for this statement includes *Corporate Governance* and *Risk Management*) that is included in the 2018 Annual Report. The Report of the Executive Board and the Financial Statements are prepared in accordance with Part 9 of Book 2 of the Dutch Civil Code. The Executive Board endeavors to present a fair review of the situation of the business at balance sheet date and of the course of affairs in the year under review. Such an overview contains a selection of some of the main developments in the financial year and can never be exhaustive.

The company has identified the main risks it faces, including financial reporting risks. These risks can be found in *Risk Management*. In line with the Dutch Corporate Governance Code and the Dutch Act on financial supervision (Wet op het financieel toezicht), the company has not provided an exhaustive list of all possible risks. Furthermore, developments that are currently unknown to the Executive Board or considered to be unlikely may change the future risk profile of the company.

As explained in *Risk Management*, the company must have internal risk management and control systems that are suitable for the company. The design of the company's internal risk management and control systems (including the Internal Control Framework for financial reporting) has been described in *Risk Management*. The objective of these systems is to manage, rather than eliminate, the risk of failure to achieve business objectives and the risk of material errors to the financial reporting. Accordingly, these systems can only provide reasonable, but not absolute, assurance against material losses or material errors.

As required by provision 1.4.3 of the Dutch Corporate Governance Code and Section 5:25c(2)(c) of the Dutch Act on financial supervision (Wet op het financieel toezicht) and on the basis of the foregoing and the explanations contained in *Risk Management*, the Executive Board confirms that to its knowledge:

- There have been no material failings in the effectiveness of the company's internal risk management and control systems;
- The company's internal risk management and control systems provide reasonable assurance that the financial reporting over 2018 does not contain any errors of material importance;
- There is a reasonable expectation that the company will be able to continue in operation and meet its liabilities for at least twelve months, therefore it is appropriate to adopt the going concern basis in preparing the financial reporting;
- There are no material risks or uncertainties that could reasonably be expected to have a material adverse effect on the continuity of the company's enterprise in the coming twelve months;
- The 2018 Financial Statements give a true and fair view of the assets, liabilities, financial position, and profit or loss of the company and the undertakings included in the consolidation taken as a whole; and
- The *Report of the Executive Board* includes a fair review of the situation at the balance sheet date, the course of affairs during the financial year of the company, and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks that the company faces.

Alphen aan den Rijn, February 19, 2019

Executive Board
Nancy McKinstry
CEO and Chairman of the Executive Board
Kevin Entricken
CFO and member of the Executive Board

Executive Board and Supervisory Board

Executive Board

Nancy McKinstry

American, 1959, Chief Executive Officer and Chairman of the Executive Board since September 2003, and member of the Executive Board since June 2001.

As CEO and Chairman of the Executive Board, Ms. McKinstry is responsible for division performance, Global Strategy, Business Development, Technology, Global Business Services, Communications, Human Resources, Corporate Governance, and Sustainability.

Kevin Entricken

American, 1965, Chief Financial Officer and member of the Executive Board since May 2013.

As CFO and member of the Executive Board, Mr. Entricken is responsible for Group Accounting & Reporting, Business Analysis & Control, Internal Audit, Internal Controls, Investor Relations, Mergers & Acquisitions, Taxation, Treasury, Risk Management, Real Estate, and Legal Affairs.

Profiles of the members of the Executive Board and Supervisory Board are available on www.wolterskluwer.com.

Supervisory Board

Frans Cremers

Dutch, 1952, Chairman of the Supervisory Board, and Chairman of the Selection and Remuneration Committee dealing with selection and appointment matters. Appointed in 2017, and current term until 2021.

Position:
Former CFO and member of the Executive Board of VNU N.V.

Supervisory directorships and other positions:
- Member of the Board of Directors of Stichting Preferente Aandelen Philips, Stichting Preferente Aandelen Heijmans and Stichting Preferente Aandelen B KPN
- Investigator appointed by the Enterprise Section of the Amsterdam Court of Appeal in relation to the policy and course of events in the matter of SNS Reaal N.V. and SNS Bank N.V.

René Hooft Graafland

Dutch, 1955, Vice-Chairman of the Supervisory Board, and Chairman of the Audit Committee. Appointed in 2012, and current term until 2020.

Position:
Former CFO and member of the Executive Board of Heineken N.V.

Supervisory directorships and other positions:
- Member of the Supervisory Board of Royal Ahold Delhaize N.V.
- Member of the Supervisory Board of Royal Friesland Campina N.V.
- Chairman of the Board of Stichting African Parks Foundation
- Chairman of the Carré Foundation
- Chairman of the Board of Stichting Nationaal Fonds 4 en 5 mei
- Member of the Dutch Monitoring Committee Corporate Governance

Bruno Angelici

French, 1947, member of the Audit Committee. Appointed in 2007, current final term until 2019.

Position:
Former Executive Vice President, Europe, Japan, Asia Pacific, Latin America, Middle East, and Africa of AstraZeneca Plc.

Supervisory directorships and other positions:
- Chairman of the Board (Non-Executive Director) of Vectura Group plc (United Kingdom)
- Member of the Board (Non-Executive Director) of Smiths Group plc (United Kingdom)

Jeanette Horan

British, 1955, Chairman of the Selection and Remuneration Committee dealing with remuneration matters. Appointed in 2016, and current term until 2020.

Position:
Former Chief Information Officer at IBM

Supervisory directorships and other positions:
Member of the Board (Non-Executive Director) of Nokia (Finland)

Ben Noteboom

Dutch, 1958, member of the Audit Committee. Appointed in 2015, and current term until 2019.

Position:
Former CEO and Chairman of the Executive Board of Randstad Holding N.V.

Supervisory directorships and other positions:
- Member of the Supervisory Board of Royal Ahold Delhaize N.V.
- Member of the Supervisory Board of AEGON N.V.
- Chairman of the Supervisory Board of Royal Vopak N.V.
- Member of the Board of VUmc Cancer Center Amsterdam
- Chairman Stichting Prioriteit Ordina Groep

Fidelma Russo

Irish and American, 1963, member of the Audit Committee. Appointed in 2016, and current term until 2020.

Position:
EVP and Chief Technology Officer at Iron Mountain Inc.

Supervisory directorships and other positions:
- Member of the Board of NCWIT, National Center for Women & Information Technology (United States)
- Member of Massachusetts Technology Leadership Council (United States)

Ann Ziegler

American, 1958, member of the Selection and Remuneration Committee. Appointed in 2017, and current term until 2021.

Position:
Former Senior Vice President, Chief Financial Officer, and Executive Committee member of CDW Corporation

Supervisory directorships and other positions:
- Member of the Board (Non-Executive Director) of Groupon Inc. (United States)
- Member of the Board (Non-Executive Director) of Hanesbrands Inc. (United States)
- Member of the Board (Non-Executive Director) of US Foods (United States)

Report of the Supervisory Board

Supervisory Board Report

The Supervisory Board of Wolters Kluwer is responsible for supervising the Executive Board in setting and achieving the company's strategy, targets, and policies, as well as the general course of affairs of the company. The Supervisory Board also assists the Executive Board with advice.

Meetings

The Supervisory Board held seven scheduled meetings in 2018. Six meetings were partly held without the members of the Executive Board being present. Mr. Cremers, Mr. Hooft Graafland, and Ms. Ziegler attended all meetings. The other Members were excused for one meeting. In addition to the scheduled meetings, there was one scheduled conference call between the Executive Board and the Chairmen of the Supervisory Board and the Audit Committee. The Chairman of the Supervisory Board had regular contact with the Chairman of the Executive Board.

Financial statements

The Executive Board submitted the 2018 Financial Statements to the Supervisory Board. The Supervisory Board also took notice of the report and the statement by Deloitte Accountants B.V. (as referred to in Article 27, paragraph 3 of the company's Articles of Association), which the Supervisory Board discussed with Deloitte. The members of the Supervisory Board signed the 2018 Financial Statements, pursuant to their statutory obligation under clause 2:101 (2) of the Dutch Civil Code. The Supervisory Board proposes to the shareholders that they adopt these Financial Statements at the Annual General Meeting of Shareholders of April 18, 2019, see *2018 Financial Statements*.

Evaluations

The Supervisory Board discussed its own functioning, as well as the functioning of the Executive Board and the performance of the individual members of both Boards. These discussions were partly held without the members of the Executive Board being present. The composition of the Supervisory Board, the Audit Committee, and the Selection and Remuneration Committee was also discussed in the absence of the Executive Board. In line with corporate governance best practices, an external advisor is engaged every three years to assist in the Supervisory Board evaluation. In the second half of 2017 and early 2018 the members of the Supervisory Board and Executive Board were interviewed by the external advisor. The outcome of this assessment was presented to and discussed with the Supervisory Board in February 2018. Overall, the outcome of the evaluation was positive. The composition of the Supervisory Board represents the relevant skill sets and areas of expertise. The Supervisory Board meetings take place in an open and transparent atmosphere with each of the members actively participating. Further optimization could be achieved by continuing the efforts to gain more in-depth insight into the various Wolters Kluwer businesses and the competition, and by ensuring a good balance between presentations and open discussion. During 2018, the Supervisory Board worked towards implementation of these recommendations. In addition to the formal evaluation process, as a standard practice, the Chairman of the Supervisory Board gives feedback to the Chairman of the Executive Board after every Supervisory Board meeting.

Strategy

The Supervisory Board was kept informed of the successful execution of the 2016-2018 strategy, *Growing Our Value*. In addition, the Supervisory Board was closely involved in the development of the strategy for 2019-2021, *Accelerating Our Value*. Initial discussions with the Supervisory Board on the development of this strategy started in the first half of 2018. The Supervisory Board members shared their views and gave advice to the Executive Board on the strategy, considering the various stakeholders of the company and long-term growth ambitions.

The divisional CEOs presented their Vision & Strategy Plans for 2019-2021 to the Supervisory Board. This enabled the Supervisory Board to obtain a good view on the opportunities and challenges for each of the divisions and support the Executive Board in making the right strategic choices and investment decisions for each business and developing the corporate strategy for 2019-2021. The Supervisory Board considers it important to meet each of the Division CEOs periodically and get an update from them on the performance, key trends, strategy, and developments.

The Supervisory Board is supportive of the new strategy, *Accelerating Our Value*, which will accelerate the transformation of the company towards a global organization which grows expert solutions, advances deep domain expertise, and drives operational agility. This will contribute to long-term value creation for the company.

In 2018, the Supervisory Board visited the Clinical Effectiveness business in Boston. During that visit, presentations were given by the CEO of the Health Division, as well as the CEO and other managers of the Clinical Effectiveness business, which includes UpToDate. Furthermore, the Supervisory Board met with customers of the Health business in Boston and exchanged thoughts on the market and business with them in the presence of Wolters Kluwer Health management. The Supervisory Board appreciated the opportunity to receive a performance update and develop a deeper understanding of the Clinical Effectiveness business and the needs of the medical professionals it serves.

The Supervisory Board was also informed about the innovation activities within Wolters Kluwer. 2018 was the eighth consecutive year in which Wolters Kluwer rewarded promising new internal business initiatives via the Global Innovation Awards. Another event which contributes to innovation is the #CodeGames, organized by the TAA division. Continuing focus on innovation and investment in new and enhanced products are an important means of driving long-term value creation as well as an increased culture of innovation at Wolters Kluwer.

In line with standard practice, management of the Wolters Kluwer Global Business Services organization and Global Platform Organization gave presentations, updating the Supervisory Board on the company's technology strategy and execution thereof.

In relation to the strategy, the Supervisory Board also considers it important to be aware of the main developments with respect to competition and the markets in which the company operates. Towards that end, an overview of the most important developments with respect to traditional and new competitors is discussed during each Supervisory Board meeting.

Acquisitions and divestments

The Executive Board kept the Supervisory Board informed about all pending acquisition activity. The Supervisory Board approved the acquisition of eVision. Division management and members of the business development team gave presentations about this acquisition, which enabled the Supervisory Board to directly question the leaders of the responsible management team and thoroughly assess the acquisition. The Supervisory Board also discussed the performance and value creation of previous acquisitions, taking into consideration Wolters Kluwer's financial and strategic criteria for acquisitions.

The Supervisory Board was kept closely informed about the divestments, including the completion of the divestment of Corsearch and ProVation Medical, which had been approved by the Supervisory Board in 2017.

Corporate governance, sustainability, and risk management

The Supervisory Board was kept informed about developments with respect to corporate governance and sustainability. The Supervisory Board and Audit Committee discussed risk management, including the risk profile of the company and risk appetite per risk category, as well as the assessment of internal risk management and control systems. The Audit Committee and Supervisory Board discussed the ongoing actions the company takes to further improve the internal risk management and control systems, including IT security and cybersecurity. In relation to the General Data Protection Regulation which became effective in May 2018, the Supervisory Board invited the corporate privacy officer to present the program with respect to data privacy and data protection. For more information, see *Risk Management*.

The Supervisory Board took note of the continuous progress of the sustainability initiatives in 2018, and the inclusion of additional sustainability-related non-financial information in the Annual Report. These efforts aim to contribute to long-term value creation for all stakeholders.

Talent management and organizational developments

Each year, the outcome of the annual talent reviews is discussed by the Supervisory Board. Diversity at Board and senior management levels are elements which are taken into consideration as part of that discussion. Furthermore, as a standing topic during each Supervisory Board meeting, the Supervisory Board is informed about organizational developments, including appointments at senior positions within the company.

During the year, the Supervisory Board also met with various executives and managers who gave presentations, which enabled the Board to get a good view on the available talent within the organization.

The Supervisory Board was also updated on the results of Wolters Kluwer's employee engagement survey, which measures important topics such as engagement, alignment, agility, development, and other components driving engagement, and supporting a culture aimed at long-term value creation.

Finance

The Supervisory Board carefully observes the financing of the company including the balance sheet and available headroom. The Supervisory Board also closely monitors the development of the net-debt-to-EBITDA ratio. The Supervisory Board approved the additional share buybacks to mitigate the dilution to earnings per share resulting from divestments as announced in 2018. These additional share buybacks came on top of the €600 million share buyback over the period 2016-2018, which was announced in February 2016. The Supervisory Board also discussed the financial strategy for 2019-2021, linked to the corporate strategy for that period. Other financial subjects discussed included the budget, the financial outlook, the achievement of financial targets, the year-end and interim dividend, the outcome of the annual impairment test, and annual and interim financial results.

Investor Relations

The Supervisory Board was well informed about Investor Relations, which is a standing agenda item during the Supervisory Board meetings. Updates included share price developments, communication with shareholders, shareholders' views on acquisitions, analyst research, and the composition of the shareholder base. The Supervisory Board also carefully reviewed and approved the Annual Report and press releases regarding the full-year and half-year results, and the three- and nine-month trading updates.

Audit Committee

The Audit Committee met four times in 2018, during the preparation of the full-year and half-year results, and around the three- and nine-month trading updates. In addition, there was one scheduled conference call in December. The Audit Committee currently consists of Mr. Hooft Graafland (Chairman), Mr. Angelici, Mr. Noteboom, and Ms. Russo. Mr. Hooft Graafland and Mr. Noteboom attended all meetings. Mr. Angelici was excused for one meeting and Ms. Russo was excused for two meetings (of which one due to travel delays caused by a cancelled flight). The meetings of the Audit Committee were held in the presence of the Executive Board members, the external auditor, the internal auditor, and other corporate staff members. During 2018, as routine agenda items, the Audit Committee had three discussions with the external auditors, and two discussions with the head of internal audit, without the members of the Executive Board being present. In addition, the chairman of the Committee met with the external auditor and the head of internal audit in preparation of the Committee meetings. After every meeting, the Chairman of the Committee reports back to the full Supervisory Board. The main items discussed during the Audit Committee meetings include the financial results of the company, status updates on internal audit and internal controls, the progress on the implementation of new IFRS standards (specifically IFRS 9, 15, and 16), pensions, tax planning, impairment testing, the Treasury Policy, the financing of the company, risk management, cybersecurity, hedging, claims, incident management, the quarterly reports of the external auditor, and their full-year report on the audit.

The Audit Committee has reviewed the proposed audit scope and approach, the audit fees, and the independence of the external auditor, and has approved the non-audit services provided by the external auditor. The Auditor Independence Policy is published on *www.wolterskluwer.com*.

Based on a recommendation of the Audit Committee and supported by the Executive Board, it was proposed to the Annual General Meeting of Shareholders which was held on April 19, 2018, to reappoint Deloitte Accountants B.V. as the external auditor for a term of four years, for the financial reporting years 2019 up to and including 2022. This proposal was adopted by the meeting. The Supervisory Board reserves the right to submit the appointment of the external auditor to the General Meeting of Shareholders before the lapse of the four-year period if this is deemed necessary by the Supervisory Board.

Selection and Remuneration Committee

The Selection and Remuneration Committee met five times in 2018. The Committee has the following composition: Ms. Horan (who chairs the remuneration-related discussions), Mr. Cremers (who chairs the selection and nomination-related discussions), and Ms. Ziegler. All members attended all meetings. After every meeting, the Chairmen of the Committee report back to the full Supervisory Board. The resolutions regarding appointments and remuneration were taken by the full Supervisory Board, based on recommendations from the Committee.

The Committee has discussed the remuneration policy for the Executive Board, including the base salary, new conditional awards of performance shares under the Long-Term Incentive Plan, and targets for the Short-Term Incentive Plan. Furthermore, the Committee is carefully reviewing the implementation of the new European Shareholders Directive, which will become effective in 2019. For more information about the remuneration policy of the Executive Board and the execution thereof, see *Remuneration Report* and *Note 36 – Remuneration of the Executive Board and Supervisory Board*.

The Supervisory Board, based on a recommendation of the Selection and Remuneration Committee, also reviewed its own remuneration. Taking into consideration the responsibilities of Supervisory Board members, remuneration levels at other Dutch listed (AEX) companies, and the international composition of the Supervisory Board, it was proposed to the Annual General Meeting of Shareholders on April 19, 2018, to increase the Supervisory Board remuneration. This proposal was adopted. The Supervisory Board resolved not to propose amendments to its remuneration in 2019.

The Selection and Remuneration Committee discussed the composition of the Supervisory Board, which resulted in the nominations set out below.

Supervisory Board composition

In 2019, the third and final term of Mr. Angelici will expire. Furthermore, the first term of Mr. Noteboom will expire. He has decided to resign from the Supervisory Board to be able to spend more time on other business activities.

The Supervisory Board is pleased to nominate Mr. Bertrand Bodson and Mr. Chris Vogelzang for appointment as new Supervisory Board members. Mr. Bodson gathered in-depth digital and managerial experience at leading global companies. In addition, his experience in the pharma sector is particularly useful with a view on the Wolters Kluwer Health division. Mr. Vogelzang gathered extensive managerial experience in the global financial services industry and digital transformations. The Supervisory Board believes the experience of both gentlemen will provide valuable additional insights to the Supervisory Board of Wolters Kluwer. The nomination of Mr. Bertrand Bodson and Mr. Chris Vogelzang will be on the agenda of the Annual General Meeting of Shareholders which will be held on April 18, 2019.

The composition of the Supervisory Board (both in the current composition and in the new composition after the 2019 Annual General Meeting of Shareholders) is in line with the profile and the company's diversity policy, reflecting a diverse composition with respect to expertise, nationality, gender, and age. Five nationalities are represented on the Supervisory Board, with different talents and relevant areas of expertise. Three out of the seven Supervisory Board members are female, which means a female representation of 43%, which is in line with Dutch governance standards. The profile, competences matrix, and diversity policy are included in the By-Laws of the Supervisory Board, published on *www.wolterskluwer.com*.

All Supervisory Board members comply with the Dutch law regarding the maximum number of supervisory board memberships. Furthermore, all members of the Supervisory Board are independent from the company within the meaning of best practice provisions 2.1.7, 2.1.8, and 2.1.9 of the Dutch Corporate Governance Code. For more information on each Supervisory Board member in accordance with the Dutch Corporate Governance Code, see *Executive Board and Supervisory Board* and *Corporate Governance*.

The Supervisory Board would like to thank the Executive Board and all employees worldwide for their highly appreciated efforts in the past year.

Alphen aan den Rijn, February 19, 2019

Supervisory Board
Frans Cremers, Chairman
René Hooft Graafland, Vice-Chairman
Bruno Angelici
Jeanette Horan
Ben Noteboom
Fidelma Russo
Ann Ziegler

Remuneration Report

During the Annual General Meeting of Shareholders of April 21, 2004, the remuneration policy for members of the Executive Board was adopted and the Long-Term Incentive Plan approved. Amendments to the remuneration policy and the Long-Term Incentive Plan were approved during the Annual General Meetings of Shareholders in 2007 and 2011. In line with Dutch legislation, the execution of the remuneration policy will be put on the agenda for discussion as a separate agenda item at the Annual General Meeting of Shareholders of April 18, 2019.

Remuneration policy

The goals of Executive Board remuneration are to align individual and company performance, strengthen long-term commitment to the company, and attract and retain the best executive management talent.

The remuneration of Executive Board members is based on surveys and analyses by an internationally recognized firm specializing in executive compensation. Because Wolters Kluwer is a global organization, remuneration is benchmarked individually against surveys from European and U.S. companies, taking into consideration geographic locations where Executive Board members might be recruited to and where new members might be recruited from in the future.

Composition of remuneration

Remuneration for the Executive Board consists of three elements: a base salary, a Short-Term Incentive Plan (STIP) on which a cash performance-based incentive payout can be earned, and a Long-Term Incentive Plan (LTIP) on which performance shares can be earned. The base salary of individual Executive Board members is determined annually by the Supervisory Board, based on recommendations from its Selection and Remuneration Committee. Both the short-term and long-term incentives vary according to performance. Variable elements of the remuneration package make up the largest portion of the Executive Board's total compensation, reflecting the philosophy that Executive Board compensation should be linked to shareholder value and performance. Because of the applicable performance criteria and the fact that the LTIP is based on the performance over a three-year period, the remuneration policy contributes to the long-term objectives of the company. The STIP targets are annually determined by the Supervisory Board and largely reflect the key performance indicators that the company reports about in its annual results, which are important measures of the success of the execution of the company's strategy aimed at long-term value creation. As such, the remuneration is directly linked to performance and the company's long-term growth, value creation, and profitability.

Additionally, Ms. McKinstry and Mr. Entricken participate in health and wellness programs as well as the defined contribution retirement savings plan of Wolters Kluwer United States.

Governance and contracts

The Selection and Remuneration Committee engaged an outside compensation advisor to provide recommendations and information on market practices for compensation structure and levels. The Committee had extensive discussions, supported by its external advisor, to review the composition and key drivers of remuneration. In accordance with the Dutch Corporate Governance Code, the Selection and Remuneration Committee and Supervisory Board carried out scenario analyses when they determined the level and structure of the Executive Board's remuneration. The Committee has also taken into consideration to which extent the variable remuneration might expose the company to risks, taking into consideration the overall risk profile and risk appetite of the company, as described in *Risk Management*. The Committee believes that the remuneration policy provides management with good incentives to create long-term value, without increasing the overall risk profile of the company. According to Dutch law, the Supervisory Board has the authority to adjust variable remuneration if the payout based on achievement of targets would in its view be unacceptable based on reasonability and fairness criteria. In addition, variable remuneration could be reclaimed after payout took place, to the extent the payout was based on incorrect information with respect to achieving the targets.

In line with the Dutch Corporate Governance Code, the Selection and Remuneration Committee has taken notice of the views of the members of the Executive Board with respect to the amount and structure of their remuneration.

The pay-ratio, obtained by dividing the total 2018 remuneration for the CEO by the average of the total 2018 remuneration of all employees worldwide, is 84 (2017: 82). For this purpose, the total CEO remuneration is based on the remuneration costs as stated in *Note 36 – Remuneration of the Executive Board and Supervisory Board*, minus tax-related costs. The average employee remuneration is obtained by dividing the 2018 total personnel expenses as stated in *Note 12 – Personnel Expenses* (after subtracting the CEO's remuneration), by the reported average number of FTEs (minus one). As such, both the total CEO remuneration (minus tax-related costs) and the average total remuneration of all employees (minus the CEO's remuneration) are based on IFRS standards.

In line with the Dutch Corporate Governance Code, as a policy, future appointments of Executive Board members will take place for a period of four years. In 2017, Mr. Entricken was reappointed for a second four-year term. The existing contract of Ms. McKinstry, who was appointed before the introduction of the first Dutch Corporate Governance Code and has an employment contract for an indefinite period, will be honored. Periods of notice vary between 45 days and 180 days.

With respect to future Executive Board appointments, the company will, as a policy, comply with the Best Practice Provision of the Dutch Corporate Governance Code regarding the maximum severance remuneration in the event of dismissal. In line with this Best Practice Provision, the contract with Mr. Entricken contains a severance payment of one year's base salary. However, the company will honor the existing contract with Ms. McKinstry who was appointed before the introduction of the first Dutch Corporate Governance Code.

The contracts of the Executive Board members contain stipulations with respect to a change of control of the company. According to these stipulations, in case of a change of control, the Executive Board members will receive 100% of the number of conditional rights on shares awarded to them with respect to pending Long-Term Incentive Plans of which the performance period has not yet ended. In addition, they are entitled to a cash severance payment if their employment agreement would end following a change of control.

Executive Board remuneration 2018 and 2019

Fixed and variable compensation and other considerations for the Executive Board members in 2018 are detailed in *Note 36 – Remuneration of the Executive Board and Supervisory Board*.

In 2018, the Executive Board members received a regular base salary increase of 2.7%. For 2019, the Supervisory Board approved an increase in base salary for the Executive Board members of 2.5%, which is in line with the overall budgeted 2019 salary increase for Wolters Kluwer executives globally.

Short-Term Incentive Plan

The Wolters Kluwer STIP grants Executive Board members a cash performance-based incentive payout if specific targets are met. The Supervisory Board determines the targets on an annual basis. Payout only takes place after verification by the external auditor of the financial statements of the company, including the financial performance indicators on which the financial STIP targets are based.

The STIP payout for performance in 2018 (payout in 2019) for the members of the Executive Board was based on the achievement of targets with respect to revenue performance (33.3%), adjusted net profit (33.3%), adjusted free cash flow (28.3%), and a sustainability-related target being revenues from digital products as a percentage of total revenues (5%). The Supervisory Board selected this target because the use of digital products reduces paper consumption and increases productivity, which contributes to an improved sustainability performance for Wolters Kluwer and its customers and is in line with the company's strategic focus on digital expert solutions. The achieved percentages, earned based on performance in 2018 and payable in March 2019, will be 144.17% of base salary for Ms. McKinstry and 114.17% of base salary for Mr. Entricken. The chart on page 74 shows performance against target for each of the STIP measures in 2018.

Since these STIP payments are related to 2018 performance, the costs are included in the total remuneration costs for 2018 as shown in *Note 36 – Remuneration of the Executive Board and Supervisory Board*.

For 2019, the Supervisory Board has approved the same target payout percentages for the Executive Board members as for 2018: 125% of the base salary for the CEO and 95% of the base salary for the CFO. The maximum achievable payouts will be 175% for the CEO and 145% for the CFO. These maximum amounts would only be payable if the actual performance for all individual measures exceeds 110% of target. There is no payout for individual measures with results below 90% of target. These payout percentages were determined through market benchmarking and have remained unchanged for the CEO and CFO level since 2007.

For 2019, the Supervisory Board has approved the same measures as for 2018: revenue performance (33.3%), adjusted net profit (33.3%), adjusted free cash flow (28.3%), and revenues from digital products as a percentage of total revenues (5%).

Long-Term Incentive Plan

The Long-Term Incentive Plan aligns the organization and its management with the strategic goals of the company, thus rewarding the creation of shareholder value. The plan uses performance shares, and at the beginning of a three-year period a conditional award of shares is established. The total number of shares that the Executive Board members will actually receive at the end of the three-year performance period depends on the achievement of predetermined performance conditions.

As approved by the Annual General Meeting of Shareholders in 2011, for 50% of the value of shares conditionally awarded at the beginning of a three-year period, the payout at the end of the performance period depends on Wolters Kluwer's Total Shareholder Return (TSR) compared to a group of peer companies (TSR Related Shares). For the other 50% of the value of the shares conditionally awarded at the beginning of a three-year performance period, the payout at the end of the performance period will depend on a target based on diluted earnings per share (EPS) performance (EPS Related Shares). Payout of the performance shares at the end of the three-year performance period will only take place after verification by the external auditor of the achievement of the TSR and EPS targets.

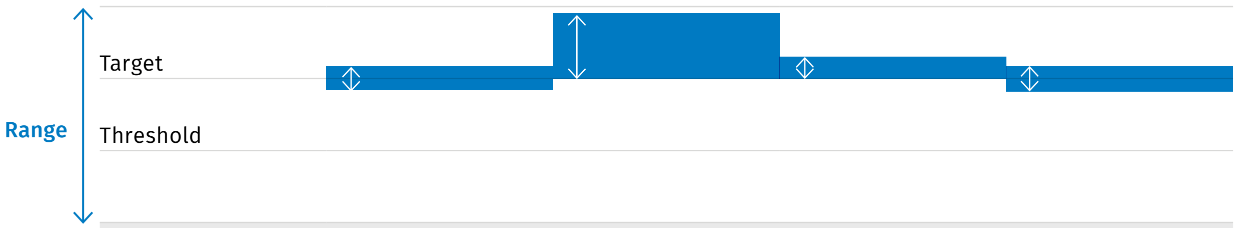
TSR peer group and incentive zones

TSR is calculated as the share price appreciation over a three-year period including dividend reinvestment. By using a three-year performance period, there is a clear relation between remuneration and long-term value creation. As a policy, the company uses a 60-day average of the share price at the beginning and the end of each three-year performance period to reduce the influence of potential volatility in the stock markets around year-end.

At the beginning of 2018, the TSR peer group consisted of the following companies: Arnoldo Mondadori, Axel Springer, Daily Mail & General, Dun & Bradstreet, Grupo PRISA, Informa, John Wiley & Sons, Lagardère, McClatchy, Pearson, RELX, S&P Global, Thomson Reuters, Trinity Mirror, and UBM. Due to a merger between Informa and UBM, the listing of UBM ended in June 2018. The Supervisory Board has carefully reviewed the criteria for selecting new TSR peer group companies and resolved to add News Corp as new TSR peer group company, replacing UBM from the moment of its delisting. The peer group is consistent with the peer group at the launch of the plan in 2004, except for companies that have been replaced because their shares are no longer publicly traded.

The Executive Board can earn 0-150% of the number of conditionally awarded TSR Related Shares at the end of the three-year performance period depending on Wolters Kluwer's TSR performance compared to the peer group (TSR Ranking). As approved in the 2007 Annual General Meeting of Shareholders, there will be no payout for the Executive Board members with respect to TSR Related Shares if Wolters Kluwer ends below the eighth position in the TSR Ranking, 150% for first or second position, 125% for third or fourth position, 100% for fifth or sixth position, and 75% payout for seventh or eighth position. These incentive zones are in line with best practice recommendations for the governance of long-term incentive plans.

2018 Short-Term Incentive Target Performance



Measure	Revenues *in millions of euros*	Adjusted free cash flow *in millions of euros*	Adjusted net profit *in millions of euros*	% Revenues from digital products
Weighting	33.33%	28.33%	33.33%	5.0%

TSR performance 2015-17 and 2016-18

For the three-year performance period 2015-17, Wolters Kluwer reached the second position in the TSR Ranking. As a result, in 2018, the Executive Board members received 150% of the number of conditional rights on TSR Related Shares that were awarded to them in 2015.

For the three-year performance period 2016-18, Wolters Kluwer reached the third position in the TSR Ranking. As a result, in 2019, the Executive Board members will receive 125% of the number of conditional rights on TSR Related Shares that were awarded to them in 2016.

EPS Targets and payout schedules

With respect to the EPS Related Shares, the Executive Board members can earn 0-150% of the number of conditionally awarded EPS Related Shares, depending on Wolters Kluwer's EPS performance over the three-year performance period. For calculation purposes, the definition of diluted EPS as disclosed in the Annual Reports of Wolters Kluwer will be used, the definition of which is similar to basic earnings per share (the profit or loss attributable to the ordinary shareholders of the company, divided by the weighted average number of ordinary shares outstanding during the period), except that the weighted average number of ordinary shares is adjusted for the effects of all dilutive potential ordinary shares. Using EPS as a performance measure for LTIP leads to a strong alignment between the successful execution of the strategy to generate long-term shareholder value and management compensation.

At the end of the three-year performance period, the Executive Board members will receive 100% of the number of conditionally awarded EPS Related Shares if the performance over the three-year period is on target. There will be no payout if the performance over the three-year period is less than 50% of the target. In case of overachievement of the target, the Executive Board members can earn up to a maximum of 150% of the conditionally awarded shares. The Supervisory Board determines the exact targets for the EPS Related Shares for each three-year performance period. The targets will be based on the EPS performance in constant currencies, to exclude benefits or disadvantages based on currency effects over which the Executive Board has no control.

EPS performance 2015-17 and 2016-18

The EPS target that was set for the 2015-17 performance period was based on a Compound Annual Growth Rate (CAGR) for EPS of 5.1% (calculated based on 2014 EPS after adjustment for certain tax-related one-off effects, as agreed upon at the time of target setting). The company outperformed the target. Due to this outperformance, in 2018, the Executive Board members received 150% of the number of conditional rights on EPS Related Shares that were awarded to them in 2015.

The EPS target that was set for the 2016-18 performance period was based on a Compound Annual Growth Rate (CAGR) for EPS of 11.6%. The company outperformed the target. Due to the outperformance, the Executive Board members will receive 150% of the number of conditional rights on EPS Related Shares that were awarded to them in 2016.

Conditional share awards

The conditional share awards for the Executive Board members are determined by the comparable market information from European and U.S. companies. The actual number of conditional rights on shares awarded over the performance periods 2017-19 and 2018-20 can be found in *Note 36 – Remuneration of the Executive Board and Supervisory Board*.

As explained above, shares are conditionally awarded at the beginning of a three-year performance period. The 2007 Annual General Meeting of Shareholders also approved the proposal to determine awards of conditional rights on shares for the Executive Board on a fixed percentage of base salary determined by individual benchmarking. For the 2019-21 performance period, these percentages are determined to be 285% for the CEO, and 175% for the CFO. These percentages are determined through a benchmarking process and have remained unchanged for the CEO and CFO level since 2007.

The number of shares conditionally awarded at the start of the performance period is computed by dividing the amount, as calculated above, by the fair value of a conditionally awarded share at the start of the performance period. The actual amount granted can vary from year to year, depending upon benchmark salary reviews. Because the fair value of TSR Related Shares can be different from the fair value of EPS Related Shares, the number of conditionally awarded TSR Related Shares can deviate from the number of conditionally awarded EPS Related Shares.

Senior management remuneration

Senior management remuneration consists of a base salary, STIP, and LTIP. The senior management STIP is based on the achievement of specific objective targets that are linked to creating value for shareholders, such as revenue performance and profit. The LTIP targets and payout schedule of senior management are similar to the LTIP targets and payout schedule for the Executive Board.

Alphen aan den Rijn, February 19, 2019

Supervisory Board

2018 Financial Statements

Consolidated Financial Statements

Consolidated Statement of Profit or Loss

in millions of euros, unless otherwise stated, for the year ended December 31		2018	2017 restated*
Revenues	*Note 5*	4,260	4,368
Cost of sales		1,297	1,331
Gross profit	*Note 5*	2,963	3,037
Sales costs	*Note 9*	753	807
General and administrative costs	*Note 10*	1,405	1,447
Total operating expenses	*Note 5*	2,158	2,254
Other operating income and (expense)	*Note 11*	156	47
Operating profit	*Note 5*	961	830
Financing results	*Note 14*	(72)	(108)
Share of profit of equity-accounted investees, net of tax	*Note 19*	2	4
Profit before tax		891	726
Income tax expense	*Note 15*	(234)	(89)
Profit for the year		657	637
Attributable to:			
– Owners of the company		657	636
– Non-controlling interests	*Note 16*	0	1
Profit for the year		657	637
Earnings per share (EPS) (€)			
Basic EPS	*Note 6*	2.37	2.23
Diluted EPS	*Note 6*	2.35	2.21

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Comprehensive Income

in millions of euros, for the year ended December 31		2018	2017 restated*
Comprehensive income			
Profit for the year		657	637
Other comprehensive income			
Items that are or may be reclassified subsequently to the statement of profit or loss:			
Exchange differences on translation of foreign operations		134	(496)
Exchange differences on translation of equity-accounted investees		1	(1)
Reclassification of foreign exchange differences on loss of control	*Note 7*	–	0
Cost of hedging – changes in fair value		(4)	–
Net gains/(losses) on hedges of net investments in foreign operations		(8)	24
Effective portion of changes in fair value of cash flow hedges		23	(14)
Net change in fair value of cash flow hedges reclassified to the statement of profit or loss	*Note 14*	(10)	14
Tax on other comprehensive income		0	0
Items that will not be reclassified to the statement of profit or loss:			
Remeasurements on defined benefit plans	*Note 29*	12	27
Tax on other comprehensive income	*Note 21*	(4)	(14)
Other comprehensive income for the year, net of tax		144	(460)
Total comprehensive income for the year		801	177
Attributable to:			
– Owners of the company		801	175
– Non-controlling interests		0	2
Total		801	177

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Cash Flows

in millions of euros, for the year ended December 31		2018		2017 restated*	
Cash flows from operating activities					
Profit for the year		657		637	
Adjustments for:					
Financing results	*Note 14*	72		108	
Share of profit of equity-accounted investees, net of tax	*Note 19*	(2)		(4)	
Income tax expense	*Note 15*	234		89	
Amortization, impairments, and depreciation	*Note 13*	395		396	
Additions to provisions	*Note 30*	19		25	
Release of provisions	*Note 30*	0		0	
Fair value changes of contingent considerations	*Note 11*	(1)		9	
Book (profit)/loss on divestments of operations	*Note 7*	(163)		(74)	
Share-based payments	*Note 32*	22		23	
Autonomous movements in working capital		30		5	
Paid financing costs		(96)		(87)	
Paid corporate income tax	*Note 21*	(206)		(156)	
Appropriation of provisions	*Note 30*	(22)		(27)	
Additional defined benefit plan contributions		(5)		(6)	
Other		0		2	
Net cash from operating activities			934		940
Cash flows from investing activities					
Capital expenditure		(214)		(210)	
Acquisition spending, net of cash acquired	*Note 7*	(166)		(313)	
Receipts from divestments, net of cash disposed	*Note 7*	307		94	
Dividends received	*Note 19*	1		1	
Cash from settlement of derivatives		(11)		19	
Net cash used in investing activities			(83)		(409)
Cash flows from financing activities					
Repayment of loans		(752)		(18)	
Proceeds from new loans		147		497	
Collateral received/(paid)	*Note 28*	–		(5)	
Repurchased shares	*Note 31*	(550)		(302)	
Dividends paid		(277)		(232)	
Net cash used in financing activities			(1,432)		(60)
Net cash flow			(581)		471

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Cash Flows (continued)

in millions of euros, for the year ended December 31		2018	2017 restated*
Net cash flow		(581)	471
Cash and cash equivalents less bank overdrafts at January 1		751	389
Foreign exchange differences on cash and cash equivalents and bank overdrafts		9	(109)
		760	280
Cash and cash equivalents less bank overdrafts at December 31	*Note 25*	179	751
Add: Bank overdrafts at December 31	*Note 25*	604	288
Less: Cash included in assets classified as held for sale at December 31	*Note 8*	–	(19)
Cash and cash equivalents at December 31	*Note 25*	783	1,020

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Financial Position

in millions of euros, at December 31		2018	2017 restated*	January 1, 2017 restated*
Non-current assets				
Goodwill and intangible assets	*Note 17*	5,785	5,581	6,113
Property, plant, and equipment	*Note 18*	94	101	126
Investments in equity-accounted investees	*Note 19*	15	11	10
Financial assets	*Note 20*	36	16	30
Contract assets	*Note 23*	19	17	17
Deferred tax assets	*Note 21*	106	93	109
Total non-current assets		6,055	5,819	6,405
Current assets				
Inventories	*Note 22*	75	95	118
Contract assets	*Note 23*	99	105	90
Trade receivables	*Note 23*	1,018	955	1,058
Other receivables	*Note 24*	265	227	200
Income tax receivable	*Note 21*	35	9	18
Cash and cash equivalents	*Note 25*	783	1,020	940
Assets classified as held for sale	*Note 8*	–	247	–
Total current assets		2,275	2,658	2,424
Current liabilities				
Deferred income	*Note 23*	1,592	1,486	1,589
Other contract liabilities	*Note 23*	45	43	45
Trade and other payables		397	333	413
Income tax payable	*Note 21*	26	12	23
Short-term provisions	*Note 30*	20	22	26
Short-term bonds	*Note 27*	–	750	–
Borrowings and bank overdrafts	*Note 27*	748	288	556
Other current liabilities	*Note 26*	519	618	628
Liabilities classified as held for sale	*Note 8*	–	80	–
Total current liabilities		3,347	3,632	3,280
Working capital		(1,072)	(974)	(856)
Capital employed		4,983	4,845	5,549

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Financial Position (continued)

in millions of euros, at December 31		2018		2017 restated*		January 1, 2017 restated*
Non-current liabilities						
Long-term debt:						
Bonds		1,628		1,627		1,878
Private placements		407		396		410
Other long-term debt		26		17		26
Total long-term debt	*Note 27*		2,061		2,040	2,314
Deferred and other tax liabilities	*Note 21*	509		421		479
Employee benefits	*Note 29*	143		150		191
Provisions	*Note 30*	3		2		1
Total non-current liabilities			2,716		2,613	2,985
Equity						
Issued share capital	*Note 31*	34		35		36
Share premium reserve		87		87		87
Legal reserves		148		(14)		458
Other reserves		1,998		2,120		1,978
Equity attributable to the owners of the company	*Note 45*		2,267		2,228	2,559
Non-controlling interests	*Note 16*		0		4	5
Total equity			2,267		2,232	2,564
Total financing			4,983		4,845	5,549

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Consolidated Statement of Changes in Total Equity

in millions of euros			Legal reserves			Other reserves				
	Issued share capital	Share premium reserve	Legal reserve participations	Hedge reserve	Translation reserve	Treasury shares	Retained earnings	Shareholders' equity	Non-controlling interests	Total equity
Balance at December 31, 2016, as originally reported	36	87	72	(138)	524	(406)	2,446	2,621	5	2,626
Change in accounting policy (IFRS 15)							(62)	(62)	–	(62)
Restated balance at January 1, 2017	36	87	72	(138)	524	(406)	2,384	2,559	5	2,564
Profit for the year*							636	636	1	637
Other comprehensive income*				24	(498)		13	(461)	1	(460)
Total comprehensive income/(loss) for the year*				24	(498)		649	175	2	177
Transactions with owners of the company, recognized directly in equity:										
Share-based payments							23	23		23
Cancellation of shares	(1)					358	(357)	0		0
Release LTIP shares						51	(51)	0		0
Cash dividend 2016							(172)	(172)	(3)	(175)
Interim cash dividend 2017							(57)	(57)		(57)
Repurchased shares						(300)		(300)		(300)
Other movements			2				(2)	0		0
Balance at December 31, 2017	35	87	74	(114)	26	(297)	2,417	2,228	4	2,232
Change in accounting policy (IFRS 9)							(9)	(9)	–	(9)
Restated balance at January 1, 2018	35	87	74	(114)	26	(297)	2,408	2,219	4	2,223
Profit for the year							657	657	0	657
Other comprehensive income				1	135		8	144	0	144
Total comprehensive income/(loss) for the year				1	135		665	801	0	801
Transactions with owners of the company, recognized directly in equity:										
Share-based payments							22	22		22
Cancellation of shares	(1)					419	(418)	0		0
Release LTIP shares						55	(55)	0		0
Cash dividend 2017							(181)	(181)	(2)	(183)
Interim cash dividend 2018							(94)	(94)		(94)
Repurchased shares						(500)		(500)		(500)
Other movements			26				(26)	0	(2)	(2)
Balance at December 31, 2018	34	87	100	(113)	161	(323)	2,321	2,267	0	2,267

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Notes to the Consolidated Financial Statements

Note 1 – General and Basis of Preparation

General

Reporting entity
Wolters Kluwer N.V. ('the company') with its subsidiaries (together referred to as 'the group', and individually as 'group entities') is a global leader in professional information, software solutions, and services for the health, tax and accounting, finance, risk and compliance, and legal sectors. We help our customers make critical decisions every day by providing expert solutions that combine deep domain knowledge with specialized technology and services.

The group maintains operations across North America, Europe, Asia Pacific, and other regions (referred to as 'Rest of the World'). The company's ordinary shares are quoted on Euronext Amsterdam (WKL) and are included in the AEX and Euronext 100 indices.

The registered office of Wolters Kluwer N.V. is located at Zuidpoolsingel 2, Alphen aan den Rijn, the Netherlands, with its statutory seat in Amsterdam and a registration with the Dutch Commercial Register under number 33.202.517.

Statement of compliance
The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and its interpretations, prevailing as of December 31, 2018, as endorsed for use in the European Union by the European Commission.

These financial statements were authorized for issuance by the Executive Board and Supervisory Board on February 19, 2019. The adoption of the financial statements and the adoption of the dividend are reserved for the shareholders in the Annual General Meeting of Shareholders on April 18, 2019.

Consolidated financial statements
The consolidated financial statements of the company at and for the year ended December 31, 2018, comprise the company and its subsidiaries and the group's interest in associates and joint arrangements. The significant accounting policies applied in the preparation of these consolidated financial statements are set out in *Note 2 - Significant Accounting Policies*. The group entities have consistently applied these policies.

A list of participations has been filed with the Chamber of Commerce in The Hague, the Netherlands, and is available from the company upon request.

Basis of preparation

Basis of measurement
The consolidated financial statements have been prepared under historical cost except for the following material items in the statement of financial position:
- Financial assets and financial liabilities (including derivative financial instruments) recognized at fair value or amortized cost;
- Assets and liabilities held for sale;
- Deferred contingent considerations;
- Share-based payments; and
- Net defined employee benefit assets/liabilities.

Functional and presentation currency
The consolidated financial statements are presented in euros, which is the company's functional and presentation currency. Unless otherwise indicated, the financial information is in euros and has been rounded to the nearest million.

Use of estimates and judgments
The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates, and assumptions that affect the application of policies and reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of income and expense. The estimates and underlying assumptions are based on historical

experience and other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or the period of the revision and future periods if the revision affects both current and future periods. Judgments made by management in the application of IFRS that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are discussed in *Note 3 - Accounting Estimates and Judgments*.

Going concern

The Executive Board and Supervisory Board have assessed, during the preparation of the consolidated financial statements of the group, the going concern assumptions. The Executive Board and Supervisory Board believe that no events or conditions give rise to doubt about the ability of the group to continue in operation in the next reporting period. This conclusion is drawn based on knowledge of the group, the estimated economic outlook and related identified risks and uncertainties. Furthermore, the conclusion is based on a review of the strategic plan and budget, including expected development in liquidity and capital, as well as current credit facilities available, including contractual and expected maturities and covenants. Consequently, it has been concluded that it is reasonable to apply the going concern concept as the underlying assumption for the financial statements.

Comparatives

IFRS 9 was retrospectively adopted on January 1, 2018, applying the practical expedient not to restate comparative information. Therefore, the reclassifications and the adjustments arising from IFRS 9 are reflected in the opening equity in the consolidated statement of financial position at January 1, 2018.

IFRS 15 was retrospectively adopted on January 1, 2018, with the use of certain practical expedients, whereby the prior year's financial statements have been restated.

During the year 2018, the group transferred self-developed software assets from inventory to other intangible assets for an amount of €30 million.

Where necessary, certain reclassifications have been made to the prior-year financial information and the related notes to conform to the current year presentation and to improve insights. These have had no impact on the shareholders' equity and profit for the year.

Effect of new accounting standards

Except for the EU endorsed amendments below, the group has consistently applied the accounting policies set out in *Note 2 - Significant Accounting Policies*, to all periods presented in these consolidated financial statements.

The group has applied the following standards and other amendments for the first time for the annual reporting period commencing January 1, 2018:

- IFRS 9 Financial Instruments;
- IFRS 15 Revenue from Contracts with Customers;
- Classification and Measurement of Share-based Payment Transactions – Amendments to IFRS 2;
- Annual Improvements 2014-2016 cycle;
- Transfers to Investment Property – Amendments to IAS 40; and
- Interpretation 22 Foreign Currency Transactions and Advance Consideration.

Apart from IFRS 9 and IFRS 15, the other amendments listed above did not have any impact on the amounts recognized in prior periods and are not expected to significantly affect the current or future periods. The effect of IFRS 9 and IFRS 15 is summarized on the following page:

Changes in the Consolidated Statement of Financial Position

in millions of euros impacted accounts only	December 31, 2016	IFRS 15	January 1, 2017 restated	December 31, 2017	IFRS 15	December 31, 2017	IFRS 9	January 1, 2018 restated
Non-current assets								
Financial assets	30	–	30	16	–	16	–	16
Non-current contract assets	–	17	17	–	17	17	–	17
Current assets								
Contract assets	53	37	90	69	36	105	(2)	103
Trade and other receivables	1,322	(64)	1,258	1,243	(61)	1,182	(9)	1,173
Current liabilities								
Deferred income	1,555	34	1,589	1,412	74	1,486	–	1,486
Other contract liabilities	1	44	45	2	41	43	–	43
Trade and other payables	413	–	413	333	–	333	–	333
Non-current liabilities								
Deferred and other tax liabilities	505	(26)	479	451	(30)	421	(2)	419
Equity								
Equity attributable to the owners of the company	2,621	(62)	2,559	2,321	(93)	2,228	(9)	2,219

IFRS 9 Financial Instruments

IFRS 9 addresses the classification, measurement and derecognition of financial assets and financial liabilities, and introduces new rules for hedge accounting and a new impairment model for financial assets.

The adoption of the new standard on January 1, 2018, had the following impact on equity:

Equity attributable to owners of the company at December 31, 2017 – IAS 39	**2,228**
Increase in provision for trade receivables and contract assets	(11)
Impact on deferred tax liabilities	2
Adjustment to retained earnings from adoption of IFRS 9, net of tax	(9)
Equity attributable to owners of the company at January 1, 2018 – IFRS 9	**2,219**

(i) Recognition, classification, and measurement of financial instruments

The group has assessed which business models apply to the financial instruments at the date of initial application and has designated the financial assets and financial liabilities into the appropriate IFRS 9 measurement categories based on the facts and circumstances at that date. As per January 1, 2018, there were no significant classification and measurement adjustments. The financial assets and liabilities are either classified and measured at fair value through profit or loss or at amortized cost.

A further breakdown of our financial assets and liabilities and measurement under the current policies can be found in *Note 27 – Long-term Debt* and *Note 28 – Financial Risk Management*.

(ii) Impairment of financial assets

The impact of the new accounting methodology for determining the impairment provision for trade receivables and contract assets resulted in an increase of the provision for impairment of trade receivables and unbilled revenue. The increase of the provision from €56 million at December 31, 2017, under IAS 39 Financial Instruments Recognition and Measurement to €67 million at January 1, 2018, under IFRS 9 Financial Instruments (an increase by €9 million, net of tax), is reported in the group's total equity at January 1, 2018, as a change in accounting policy.

The new policy for determining the provision for impairment is based on the group's historical average of three years of write-offs, which is used as a proxy for expected losses on trade receivables with similar characteristics and credit profile. Trade receivables longer than one year overdue and specific risk trade receivables with no reasonable expectation of recovery are impaired and hence provided for in full, unless reliable supporting information to determine otherwise is available. The group does not present its impairment losses separately in the statement of profit or loss, but in the notes thereto.

(iii) Derivatives and hedge accounting

The group adopted the new general hedge accounting model in IFRS 9 and ensured that hedging relationships and documentation were aligned with the group's risk management strategy and objectives before year-end 2017. The outstanding foreign currency forwards and interest rate swaps used for cash flow hedges and net investment hedges at December 31, 2017, have continued as qualifying hedging relationships under IFRS 9 resulting in no significant change in accounting. Hedge effectiveness testing has been assessed by a more qualitative and forward-looking approach.

With respect to foreign currency forwards used for hedge accounting, the group designates as a hedge instrument only the change in the value of the spot component of a forward contract (and not the forward element). The differential between the contracted forward rate and the market spot rate, defined as forward points, was recognized immediately in the statement of profit or loss under the previous accounting policy (based on IAS 39). Under the new accounting policy, the group has accounted for these changes in forward points as cost of hedging. Forward points are now recognized in other comprehensive income and accumulated in the hedging reserve within total equity. This change has been applied as of January 1, 2018, and amounts to a loss of €4 million for the year 2018.

The group has applied IFRS 9 retrospectively from January 1, 2018, and has used an exemption not to restate comparative information for prior periods with respect to the classification and measurement (including impairment) requirements and the application of the cost of hedging approach for forward points. Therefore, comparatives for 2017 have not been restated.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 became effective on January 1, 2018, and superseded the revenue recognition included in IAS 18 Revenue, IAS 11 Construction Contracts, and the related interpretations.

Under IFRS 15, revenue is now recognized to depict the transfer of promised goods or services to a customer in an amount that reflects the consideration to which the group expects to be entitled in exchange for those goods and services. The underlying principle is a five-step approach to determine performance obligations, the consideration and the allocation thereof, and timing of revenue recognition. IFRS 15 also includes guidance on the presentation of assets and liabilities arising from contracts with customers, which depends on the relationship between the group's performance and the customers' payment.

The group elected to apply IFRS 15 retrospectively, with the use of several practical expedients, whereby the prior year's financial statements have been restated. The most important practical expedient applied is the relief for restating contracts which were already completed before the earliest period presented (i.e. before December 31, 2016) under the previous accounting policies.

Other practical expedients that have been used for transition accounting are:

- For completed contracts that have a variable consideration, we used the transaction price at the date the contract was completed;
- For contracts that were modified before December 31, 2016, we considered the aggregate effect of all modifications before December 31, 2016, when determining the transaction price, and identifying the satisfied and unsatisfied performance obligations; and
- The transaction price allocated to the remaining performance obligations for the reporting periods before January 1, 2018, will not be disclosed.

IFRS 15 allows more practical expedients, of which the group has adopted the following in its accounting policies relating to revenues:

- The consideration is not adjusted for any financing component if we expect that the period between the transfer of goods and services to the customer and the payment will be less than one year; and
- Sales commissions relating to obtained contracts are recognized as an expense when incurred if the amortization period of the asset would be one year or less.

The consolidated financial statements are primarily affected due to a change in the timing of revenue recognition and accounting of the cost associated with obtaining a contract, and in more detail for the following:

- Revenue from certain license/maintenance software business models whereby certain licenses will no longer be recognized immediately in the statement of profit and loss, but will be recognized as a right to access license. As a result, revenue of these licenses will be recognized in the statement of profit and loss over the term of the underlying contract, or product life;
- A new approach towards the bundling/unbundling of multiple elements (performance obligations) in a contract and the allocation of the transaction price (including discounts). This approach resulted in different bundling/unbundling of performance obligations and a different allocation of the transaction price, including discounts, to the multiple elements of the contracts and a different revenue recognition pattern in such arrangements. The allocation of the consideration is performed based on relative standalone selling prices;
- Presentation changes in the statements of profit and loss and financial position, with no impact on operating profit or profit after tax, amongst others, following the reassessment of principal-agent relationships; and
- The capitalization of incremental cost to obtain a contract, especially sales commissions, for contracts with an expected contract term longer than 12 months will be amortized over the underlying contract period including expected renewals. Under the previous accounting policies, all sales commissions were expensed when incurred.

The opening balance sheet adjustments and total impact on equity, per January 1, 2017, are as follows:

in millions of euros		
Equity attributable to owners of the company at December 31, 2016 – IAS 18		**2,621**
Recognition of asset for cost to obtain a contract (i)	25	
Recognition of asset for cost to fulfil a contract (i)	1	
Restatement of contract assets for unbilled revenue (ii)	28	
Restatement of contract liabilities (ii)	(142)	
Net impact on deferred tax liabilities	26	
Adjustment to retained earnings from adoption of IFRS 15, net of tax		(62)
Equity attributable to owners of the company at January 1, 2017 – IFRS 15		**2,559**

(i) Contract costs as a result of IFRS 15
Cost to obtain a contract and to fulfil a contract were previously expensed when incurred. However, sales commission plans which meet the criteria of incremental cost to obtain a contract are now capitalized and amortized over the longer of the contract term or product life period. Incurred cost to fulfil contracts are now, if directly associated with our effort to execute the contract, capitalized and amortized over the related revenue recognition period.

(ii) Contract asset and liabilities
The restatements in unbilled revenue (contract assets) and deferred income (contract liabilities) are the cumulative change due to deferral of license revenues, bundling/unbundling multiple element arrangements, and allocation of discounts. Revenue from licenses for certain license/maintenance business will no longer be recognized immediately in the statement of profit or loss, but recognized as a right to access license over the term of the underlying contract, or product life.

(iii) Changes in classification and presentation
A few presentation changes have been made whereby the group now discloses all contract assets and contract liabilities separately. The provision for returns has been reclassified from trade receivables to contract liabilities. For contracts whereby neither party has performed, we previously presented trade receivables and deferred income balances on a gross basis instead of on a net basis. This netting reclassification had an effect of €108 million on the opening balance sheet at January 1, 2017; at December 31, 2017, this amounted to €102 million.

Summary of IFRS 15 changes

in millions of euros, unless otherwise stated impacted accounts only	**2017 reported**	**IFRS 15**	**2017 restated**
Revenues	4,422	(54)	4,368
Cost of sales	1,335	(4)	1,331
Total operating expenses	2,265	(11)	2,254
Operating profit	869	(39)	830
Income tax expense	(94)	5	(89)
Profit for the year	671	(34)	637
Diluted EPS (€)	2.33	(0.12)	2.21
Benchmark figures			
Adjusted operating profit	1,009	(39)	970
Adjusted operating profit margin (%)	22.8	(0.6)	22.2
Adjusted net profit	668	(29)	639
Return on invested capital (ROIC) (%)	10.2	(0.2)	10.0
Net-debt-to-EBITDA ratio	1.7	0.1	1.8
Diluted adjusted EPS (€)	2.32	(0.10)	2.22

Furthermore, we changed the recognition and presentation of a few contractual arrangements whereby the group is considered to act as an agent instead of a principal. This change had no effect on the operating profit but resulted in a decrease in revenues and in the corresponding cost of sales or sales costs.

The table above summarizes the impact of IFRS 15 to the 2017 consolidated statement of profit or loss.

In 2017, revenues were €4,422 million, of which a net amount of €50 million was deferred under the new standard and recognized ratably in the profit or loss, normally over a period between one and five years, with most of the deferred revenue being released in the subsequent year. In addition, €4 million of revenues were reclassified and mainly related to the reassessment of the principal-agent relationships with customers. Not applying the earlier mentioned practical expedients in the transition accounting would have led to a larger effect of revenue deferral and increased capitalized cost to obtain a contract in the opening consolidated statement of financial position at January 1, 2017.

In 2017, sales commission expenses were €160 million, of which €20 million was capitalized and amortized under the new standard. Capitalized sales commissions will be amortized over useful lives of one, three, or five years, or underlying contract life if longer, subject to the nature of the underlying performance obligations. Most of our sales commissions will continue to be expensed when incurred.

Effect of forthcoming accounting standards

The following new standards and amendments are not yet effective for the year ended December 31, 2018, and have not been early adopted in preparing these consolidated financial statements.

IFRS 16 Leases
IFRS 16 is the new standard on lease accounting and will result in almost all operating leases being recognized in the consolidated statement of financial position, as the distinction between operating and finance leases is no longer applicable to lessees. Under the new standard, which became effective on January 1, 2019, an asset (the right to use the leased item) and a financial liability (a liability for discounted future lease installments) are recognized in the statement of financial position. In addition, the rent expense will be replaced by depreciation of the right-of-use asset and interest expense on the lease liability.

The standard will have a material impact on the consolidated statement of financial position, but will not have a material impact on the consolidated statement of profit or loss. The most significant impact will be the recognition of right-of-use assets and lease liabilities for leases qualifying as operating lease, while our accounting for leases qualifying as finance lease under the current standard will remain substantially unchanged. Most of the leasing commitments that will be in scope of the new standard relate to real estate and, to a lesser extent, IT data centers, automobile leases, and other lease arrangements.

The group has decided to transition to this new standard based on the full retrospective approach. This means that a restated consolidated statement of financial position at January 1, 2018, will be prepared and in the 2019 financial statements the comparative consolidated statements of financial position and profit or loss will be restated.

IFRS 16 requires management judgment with respect to the determination of the discount rate and the assessment of renewal and termination options in the lease contracts. The discount rate applied is based on the incremental borrowing rate for the respective leases considering the primary economic environment of the lease, the currency, the credit risk premium, the lease term, and the nature of the leased asset.

The group elected to exclude all short-term leases and all leases for which the underlying asset is of low value, and not to apply IFRS 16 to leases of intangible assets. Except for the group's real estate leases, the group elected to apply the practical expedient to not separate non-lease components from lease components, and instead to account for as a single lease component.

The preliminary impact of IFRS 16 on the consolidated statement of financial position at January 1, 2018, and December 31, 2018, is as follows:

in millions of euros *impacted accounts only*	December 31, 2017 reported	IFRS 16	January 1, 2018 restated	December 31, 2018 reported	IFRS 16	December 31, 2018 restated
Assets						
Property, plant, and equipment	101	(5)	96	94	(5)	89
Right-of-use assets	–	221	221	–	232	232
Financial assets	16	2	18	36	2	38
Deferred tax assets	93	1	94	106	1	107
Other receivables	227	(6)	221	265	(4)	261
Liabilities						
Trade and other payables	333	(15)	318	397	(14)	383
Short-term lease liabilities	–	73	73	–	67	67
Long-term lease liabilities	–	169	169	–	188	188
Deferred and other tax liabilities	419	(3)	416	509	(3)	506
Equity						
Equity attributable to the owners of the company	2,219	(11)	2,208	2,267	(12)	2,255

The preliminary impact of IFRS 16 on the consolidated statement of profit or loss for the year 2018 is as follows:

in millions of euros, unless otherwise stated impacted accounts only	**2018 reported**	**IFRS 16**	**2018 restated**
Revenues	4,260	1	4,261
Total operating expenses	2,158	(5)	2,153
Operating profit	961	6	967
Financing results	(72)	(7)	(79)
Income tax expense	(234)	0	(234)
Profit for the year	657	(1)	656
Diluted EPS (€)	2.35	0.00	2.35
Benchmark figures			
Adjusted operating profit	980	6	986
Adjusted operating profit margin (%)	23.0	0.1	23.1
Adjusted net profit	683	(1)	682
Return on invested capital (ROIC) (%)	10.9	(0.3)	10.6
Net-debt-to-EBITDA ratio	1.7	0.1	1.8
Diluted adjusted EPS (€)	2.45	0.00	2.45

Under the current standard IAS 17 Leases, the undiscounted expected minimum non-cancellable operating lease payments are disclosed as off-balance sheet commitments in the notes to the consolidated financial statements (refer to *Note 35 – Commitments and Contingent Liabilities*). This disclosure is only indicative for the size of the IFRS 16 lease liability due to:

- Lease commitments at December 31, 2018, of which the lease commencement date is in 2019;
- Lease commitments not being discounted;
- Lease commitments not including anticipated renewals, as these are not committed; and
- Contracts previously not being recognized as a lease could now be in scope and vice versa.

Other forthcoming amendments and new standards

The following other forthcoming amendments and new standards are not yet effective for the year ended December 31, 2018, and have not been adopted earlier in preparing these consolidated financial statements:

- Annual Improvements to IFRSs 2015-2017 Cycle (amendments to IFRS 3, IFRS 11, IAS 12, and IAS 23);
- Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28);
- Prepayment Features with Negative Compensation (Amendments to IFRS 9);
- Plan Amendments, Curtailment or Settlement (Amendment to IAS 19); and
- Uncertainty over Income Tax Treatments – IFRIC 23; and
- IFRS 17 Insurance Contracts.

The group expects no significant changes as a result of these amendments.

Note 2 – Significant Accounting Policies

Except for the changes explained in *Note 1 - General and Basis of Presentation*, the group has consistently applied the following significant accounting policies to all periods presented in these consolidated financial statements.

Basis of consolidation

Subsidiaries
Subsidiaries are all entities controlled by the group. The group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and can affect those returns through its power over the entity. The principle of control is the basis for determining which entities are consolidated in the consolidated financial statements.

Equity-accounted investees
Equity-accounted investees comprise interests in associates and joint ventures.

Interests in associates and joint ventures are accounted for using the equity method of accounting and are initially recognized at cost, which includes transaction costs. Associates and joint ventures are recognized from the date the group has significant influence or joint control, and recognition ceases the date the group has no significant influence or joint control over the equity investment. The carrying value of the group's investments in associates and joint ventures includes goodwill identified on acquisition, net of any accumulated impairment loss.

When an interest in an associate is increased to a controlling interest, the equity interest previously held is treated as if it were disposed of and reacquired at fair value on the acquisition date. Accordingly, it is remeasured to fair value at acquisition date, and any resulting gain or loss compared to the carrying amount is recognized in profit or loss. Any amount that has previously been recognized in other comprehensive income, and that would be reclassified to profit or loss following a disposal, is similarly reclassified to profit or loss.

Loss of control
On loss of control, the group derecognizes the assets and liabilities of the subsidiary, any non-controlling interests and the other components of equity related to the subsidiary. Any surplus or deficit arising on the loss of control is recognized in profit or loss.

If the group retains any equity interest in the previous subsidiary, then such interest is measured at fair value at the date that control is lost. Subsequently, the remaining interest is accounted for as an equity-accounted investee or as financial asset at fair value through profit or loss or other comprehensive income depending on the level of influence retained.

Assets/liabilities held for sale
Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the asset or disposal group is available for immediate sale in its present condition, subject only to terms that are usual and customary for sales of such asset or disposal group and its sale is highly probable. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

When the group is committed to a sale plan involving loss of control of a subsidiary, all the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the group will retain a non-controlling interest in its former subsidiary after the sale.

After the disposal takes place, the group accounts for any retained interest in the associate or joint venture in accordance with IFRS 9 Financial Instruments unless the retained interest continues to be an associate or a joint venture, in which case the group uses the equity method.

Non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying value amount and fair value less costs to sell.

Transactions eliminated on consolidation
Intragroup balances and transactions, as well as income and expenses and any unrealized gains and losses arising from transactions between group companies are eliminated in preparing the consolidated financial statements. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Unrealized gains arising from transactions between the group and its equity-accounted investees and joint ventures are eliminated to the extent of the group's interest in the equity-accounted investees and joint ventures.

Foreign currency

Functional and presentation currency

Items included in the financial statements of each of the group entities are measured using the currency of the primary economic environment in which the group entities operate (the functional currency). The consolidated financial statements are presented in euros, which is the group's presentation currency.

Foreign currency transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in profit or loss.

However, foreign currency differences arising from the following items are recognized in other comprehensive income:
- Qualifying cash flow hedges to the extent that the hedge is effective;
- Financial assets measured at fair value through other comprehensive income (except for impairment); and
- Qualifying net investment hedges on foreign operations to the extent that the hedge is effective.

Non-monetary assets and liabilities in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the transaction date. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are translated to the functional currency at the foreign exchange rates prevailing on the dates the fair value was determined.

Foreign operations

The assets and liabilities of group companies are translated to euros at foreign exchange rates prevailing at the end of the reporting period. Income and expenses of group companies are translated to euros at exchange rates on the dates of the transactions. All resulting exchange differences are recognized in the currency translation reserve as a component of other comprehensive income.

When a foreign subsidiary is disposed of, exchange differences that were recorded in other comprehensive income prior to the sale are reclassified through profit or loss as part of the gain or loss on disposal.

Net investment in foreign operations

Net investment in foreign operations includes equity financing and long-term intercompany loans for which settlement is neither planned nor likely to occur in the foreseeable future. Exchange differences arising from the translation of the net investment in foreign operations, and of related hedges, are taken to the reserve on exchange differences on translation of the foreign operations in other comprehensive income.

Main currency exchange rates

rates to the euro	2018	2017
U.S. dollar (average)	1.18	1.13
U.S. dollar (at December 31)	1.15	1.20

Business combinations

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the group.

Changes in the group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

Goodwill

The group measures goodwill at the acquisition date as the sum of the fair value of the consideration transferred (including deferred and contingent consideration) and the recognized amount of any non-controlling interests in the acquiree, less the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed. Any contingent consideration payable (such as earn-out arrangements) is recognized at fair value at the acquisition date.

Costs related to acquisitions which the group incurs in a business combination are expensed as incurred.

Non-controlling interests

Acquisitions of non-controlling interests are accounted for as transactions with owners of the company in their capacity as owners and therefore no goodwill is recognized for those transactions. The adjustments to non-controlling interests are based on a proportionate amount of the net assets of the subsidiary.

Principles for the determination and presentation of results

Revenues

Revenues represent the amount of consideration the group expects to be entitled to – arising from contracts with customers in the ordinary course of business – in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties. Revenue is recognized once the performance obligations are fulfilled (i.e. when the customer obtains control over those goods and/or services).

Subscriptions

Revenues related to subscriptions are recognized over the period in which the goods and/or content are dispatched and/or made available online and when the goods and/or content involved are similar in value over time. Subscription income received or receivable in advance of the delivery of goods and/or content is included in deferred income.

Licenses

License fees paid for the use of the group's software products and/or services are recognized in accordance with the substance of the agreement. Normally, revenues from licenses representing a right to access are recognized over time, on a straight-line basis. In case of a transfer of rights, which permits the licensee to exploit those rights freely and the group as a licensor has no remaining obligations to perform after delivery, revenue is recognized at the time of the sale, considering any significant customer acceptance clauses.

Non-recoverable upfront fees charged to the customers are often not considered to be a distinct performance obligation as these considerations do not result in a transfer of goods and services. Instead, these fees are considered an advance payment for future goods and/or services and therefore these payments are recognized as revenue when those future goods or services are provided.

Goods

Revenues from the sale of goods are normally recognized upon shipment or upon delivery when control is transferred to the customer, provided that the ultimate collectability and final acceptance by the customer is reasonably assured. In case goods are sold with a right to return the products, the group recognizes the revenues of the transferred goods for the amount the group expects to be entitled to, a refund liability, and an asset for its right to recover products on settling the refund liability.

Services

Revenues from providing services are recognized in the accounting period in which the services are rendered. For fixed-price contracts, revenue is recognized based on the actual service provided up to the end of the reporting period as a proportion of the total services to be provided, because the customer receives and uses the benefits simultaneously. In case of fixed-price contracts, the customer pays the fixed amount based on a payment schedule. If the services rendered by the group exceed the payment, a contract asset is recognized. If the payments exceed the services rendered, a contract liability is recognized. If the contract includes an hourly fee, revenue is recognized in the amount to which the group has a right to invoice. Customers are invoiced on a periodical basis and consideration is payable when invoiced.

Implementation services

Revenues from the sale of implementation services are based on input or output methods, subject to the contractual arrangements, and are recognized as services are rendered or upon completion of services, depending upon which method faithfully depicts the group's performance towards completion.

Multiple element contracts

There are arrangements that include various combinations of performance obligations such as software, services, training, implementation, and hardware. Where performance obligations are satisfied over different periods of time, revenues are allocated to the respective performance obligations based on relative stand-alone selling prices at the inception of the arrangement, and revenues are recognized as each performance obligation is satisfied.

Agent/principal arrangements

If the group acts as an agent, whereby the group sells goods or services on behalf of a principal, the group recognizes the amount of the net consideration as revenues. If the group acts as a principal, the group recognizes the gross amount of consideration for the specific goods or services transferred once the performance obligations are satisfied.

Financing components

As a practical expedient, the group does not adjust the consideration for the effects of a significant financing component if the group expects that the period between the transfer of the promised goods or services to the customer and payment by the customer is one year or less. The group has no significant contracts with periods of one year or more between the transfer of goods and services and the payment of the consideration.

Consequently, the group does not adjust any of the transaction prices for the time value of money.

Warranty
In most cases, any warranty given in connection with the sale of products and/or services does not qualify as a significant distinct service and therefore these general warranties are not considered to be separate performance obligations. Consequently, no warranty provisions are recognized.

Cost of sales
Cost of sales comprises directly attributable costs of goods and services sold.

For digital products and services, the cost of sales include data maintenance, hosting, license fees, royalties, product support, personnel cost, subcontracted work, training, and other costs incurred to support and maintain the products, applications, and services.

For print products, these costs may include cost for paper, printing and binding, royalties, personnel cost, subcontracted work, shipping cost, and other incurred costs.

Sales costs
Sales-related costs relate to direct internal personnel expenses and direct external costs incurred for marketing and sales activities.

Sales costs also include sales commissions directly expensed as incurred and the amortization of capitalized sales commissions, that qualify as cost to obtain a contract. As a practical expedient, the group recognizes as an expense the incremental cost of obtaining a contract if the amortization period of the asset that the group otherwise would have recognized is one year or less. If sales commissions are granted for a bundled and/or multi-elements contract in which the predominant consideration element is recognized for performance obligations satisfied at a point in time (for example the sale of a book, implementation and/or training services and/or the sale of a license being a right to use), the sales commission is expensed when incurred. In addition, sales commissions, that are commensurate or based on generic performance indicators or based on a net target, are expensed when incurred.

For all other commission plans on new sales targets, the amortization period ranges between one and five years subject to the nature of the underlying promise in the contract with the customer, unless the underlying non-cancellable contract period for the right-to-access license is longer than five years. In those situations, the longer non-cancellable contract period of the license contract prevails as amortization period.

Further, sales costs include the loss allowance recognized on trade receivables and contract assets (unbilled revenue). The loss allowance is determined as an amount equal to the lifetime expected credit losses.

General and administrative costs
General and administrative costs include costs that are neither directly attributable to cost of sales nor to sales costs (sales and marketing activities). They include costs such as product development cost, information technology cost, general overhead, amortization of acquired identifiable intangible assets, and impairments of goodwill and acquired identifiable intangible assets.

Other operating income and expense
Other operating income and expense relate to items which are different in their nature or frequency from operating items. They include results on divestments of operations (including direct attributable divestment costs), additions to provisions for restructuring of stranded costs following divestments, acquisition-related costs, additions to acquisition integration provisions, and subsequent fair value changes on contingent considerations.

Financing results
Financing results include interest payable/receivable on loans and borrowings for the period, calculated using the effective interest rate method, interest receivable on funds invested, divestment results of equity-accounted investees, dividend income on financial assets measured at fair value through profit or loss and other comprehensive income, fair value changes and gain or loss on the sale of financial assets measured at fair value through profit or loss, impairments of financial assets (other than receivables), financing income or costs resulting from defined benefit plans, foreign exchange gains and losses on financial assets and liabilities, and gains and losses on hedging instruments that are recognized in profit or loss.

Share-based payments
The group's Long-Term Incentive Plan (LTIP) qualifies as an equity-settled share-based payments transaction. The fair value of shares awarded is recognized as an expense with a corresponding increase in equity. The fair value is measured at the grant date and spread over the period during which the employees become unconditionally entitled to the shares. The amount recognized as an expense is adjusted for the actual forfeitures due to participants' resignations before the vesting date.

Total Shareholder Return (TSR) condition
The fair value of the shares based on the TSR performance condition, a market condition under IFRS 2, is measured using a Monte Carlo simulation model, considering the terms and conditions upon which the shares were awarded.

Earnings Per Share (EPS) condition
The fair value of the shares based on the non-market performance condition of EPS is equal to the opening share price of the Wolters Kluwer shares in the year of the grant, adjusted by the present value of the future dividend payments during the three-year performance period. The amount recognized as an expense in each year is adjusted to reflect the number of share awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service and non-market conditions at the vesting date.

Operating segments
An operating segment is a component of the group that engages in business activities from which it may earn revenues and incur expenses. All operating segments are regularly reviewed by the Executive Board, within Wolters Kluwer defined as the group's chief operating decision-maker, to make decisions about resources to be allocated to the segment and to assess its performance to the extent discrete financial information is available.

Operating segments are reported in a manner consistent with the internal financial reporting provided to the Executive Board.

Segment results reported to the Executive Board include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items are made up of mainly corporate assets and liabilities, corporate office expenses, and corporate income tax assets and liabilities.

Operating segments that do not meet the quantitative thresholds and that have similar economic characteristics have been aggregated into a single reportable segment.

Principles underlying the statement of cash flows

Cash flows from operating activities
Cash flows from operating activities are calculated by the indirect method; by adjusting the consolidated profit for the year for items and expenses that are not cash flows and for autonomous movements in operating working capital (excluding the impact from acquisitions/divestments and foreign exchange differences).

Cash flows from operating activities include receipts from customers, cash payments to employees and suppliers, paid financing costs of operating activities (including financing cash flow resulting from derivatives not qualifying for hedge accounting), acquisition and divestment-related costs, spending on restructuring provisions, and corporate income taxes paid on operating activities.

Cash flows from investing activities
Cash flows from investing activities are those arising from net capital expenditure, from acquisitions and the sale of subsidiaries and business activities, from dividends received, and cash flow from derivatives.

Net capital expenditure is the sum of capitalized expenditure on property, plant, and equipment and other intangible assets less any carrying value of assets disposed of.

Dividends received relate to dividends received from equity-accounted investees and financial assets measured at either fair value through profit or loss or other comprehensive income.

Cash receipts and payments from derivative financial instruments are classified in the same manner as the cash flows of the hedged items. The group primarily uses derivatives for hedging its net investments in U.S. dollar denominated subsidiaries. As a result, cash receipts and payments from settlement from derivatives are classified under cash flows from investing activities.

Cash flows from financing activities
The cash flows from financing activities comprise the cash receipts and payments from issued and repurchased shares, long-term debt instruments, short-term financing, and dividends paid. Dividends paid relate to dividends paid to the owners of the company and the non-controlling interests.

Bank overdrafts repayable on demand are presented as cash and cash equivalents in the statement of cash flows to the extent that they form an integral part of the group's cash management. However, in the statement of financial position, the bank overdrafts are presented separately as the offsetting criteria are not met.

Main principles of valuation and presentation of assets and liabilities

Contract balances resulting from revenue contracts with customers

Contract assets and contract liabilities
The group recognizes the following contract-related assets: unbilled revenues, cost to obtain a contract, costs to fulfil a contract, and right to return assets.
The group identifies the following contract-related liabilities: deferred income and the provisions for returns, refunds and/or volume discounts.

In general, when either party to a customer contract has performed, the group recognizes a contract asset (unbilled revenue) or a contract liability (deferred income), depending on the relationship between the group's performance and the timing of the customers' payment.

Where the group has performed by transferring a good or service to the customer and the customer has not yet paid the related consideration, a contract asset (unbilled revenue) or a receivable is presented in the statement of financial position, depending on the nature of the group's right to consideration. For contracts whereby neither party has performed, we present trade receivables and deferred income balances on a net basis.

A contract asset is recognized when the group's right to consideration is conditional on something other than the passage of time, for example future performance of the entity. A receivable is recognized when the group's right to consideration is unconditional except for the passage of time.

Cost to obtain a contract
Incremental cost for obtaining a contract (primarily sales commissions) will be capitalized and amortized if the contract term is expected to be 12 months, or longer. The capitalization and amortization period, i.e. the useful life of this asset, will be normally one, three, or five years, or the underlying contract life if longer, subject to the nature of the underlying performance obligations. Applying the practical expedient in paragraph 94 of IFRS 15, the group recognizes any incremental cost as an expense when incurred if the amortization period would be less than one year.

Cost to fulfil a contract
If the group incurs cost to fulfil a revenue contract with a customer (like set-up cost, pre-contract costs) an asset is recognized if these costs directly relate to a contract, generate or enhance resources that will be used in satisfying performance obligations in the future, and are expected to be recovered. The amortization of these costs is recognized as an expense over the term of the associated contract.

Deferred income
Deferred income (a contract liability) is presented in the statement of financial position when a customer has paid an amount of consideration prior to the group performing their obligations (by transferring the related good or service to the customer). It represents the part of the amount invoiced to customers that has not yet met the criteria for revenue recognition and thus still must be earned as revenue by means of the delivery of goods and/or services in the future. Deferred income is recognized at its nominal value.

Provisions for returns, refunds, and volume discounts
The group recognizes a contract liability if the group receives consideration from a customer and expects to refund some or all of that consideration to the customer and/or expects that the customer return some or all of the goods delivered. The contract liability is measured as the amount of the consideration for which the group does not expect to be entitled to.

Impairment
Any impairment of assets relating to contracts with customers will be measured, presented, and disclosed in accordance with IFRS 9.

Goodwill, acquired identifiable intangible assets, and other intangible assets

Goodwill
Goodwill recognized for acquisitions represents the consideration made by the group in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognized. This includes expected synergies, skilled workforces, new customers expected to generate revenue streams in the future, revenues generated by new versions of the product, and the possibility to have an immediate significant presence in new markets through an existing customer base that can be leveraged by the group for other products and/or services.

Goodwill on acquisitions of subsidiaries is included in intangible assets. Goodwill on acquisitions of associates, joint ventures, and financial assets is included in the initial fair value recognition of those investments. Goodwill is carried at cost less any accumulated impairment. Goodwill is tested for impairment annually or more frequently if events or changes in circumstances indicate that it might be impaired. Goodwill is allocated to cash-generating units for impairment testing purposes. The allocation is made to those cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

Gains or losses on the disposal of a subsidiary and/or business operations include the amount of goodwill allocated to a subsidiary and/or business operations that is sold.

Acquired identifiable intangible assets
Acquired identifiable intangible assets acquired through business combinations include:
- Customer relationships: subscriber accounts and other customer relationships;
- Technology: databases, software, and product technology;
- Trademarks and titles: trademarks, imprints, product titles, and copyrights; and
- Other: license agreements, non-compete covenants, and favorable purchase agreements.

The fair value of the acquired identifiable intangible assets is computed at the acquisition date by applying one of the following methods:
- Relief from royalty approach: this approach assumes that if the identifiable intangible asset was not owned, it would be acquired through a royalty agreement. The value of owning the asset equals the benefits from not having to pay royalty fees;
- Multi-period excess earnings method: under this approach, cash flows associated with the specific acquired identifiable intangible assets are determined. Contributory charges of other assets that are being used to generate the cash flows are deducted from these cash flows. The net cash flows are discounted to arrive at the value of the asset; or
- Cost method: the cost method reflects the accumulated cost that would currently be required to replace the asset.

Acquired identifiable intangible assets are stated at cost less accumulated amortization and any impairment and are amortized over their estimated useful economic life by applying the straight-line method. The useful life of the acquired identifiable intangible assets is deemed finite, reflecting management's assessment of the life of the assets, usually supported by outside valuation experts, and considering the impact of technological change and changes in the marketplace.

The estimated useful life for acquired identifiable intangible assets is five to thirty years.

Other intangible assets
Other intangible assets mainly relate to purchased and self-developed information systems and software that are valued at cost less accumulated amortization and any impairment. Capitalized software is amortized using the straight-line method over the economic life of the software. The estimated useful life for other intangibles is three to ten years.

Impairment
The carrying amounts of the group's non-current assets other than deferred tax assets are reviewed at the end of each reporting period to determine whether there is any indication of impairment. If such indication exists, the asset's recoverable amount is estimated.
Irrespective of whether there is any indication of impairment, the group also: (1) annually tests for impairment goodwill and acquired identifiable intangible assets acquired in a business combination; and (2) annually tests a tangible or intangible asset not yet available for use for impairment by comparing the carrying amount with its recoverable amount.

An impairment is immediately recognized in profit or loss whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or Cash Generating Unit (CGU). For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGUs. Subject to an operating segment ceiling test, CGUs to which goodwill has been allocated are aggregated so that the level at which impairment testing is performed reflects the lowest level at which goodwill is monitored. Goodwill acquired in a business combination is allocated to a group of CGUs that is expected to benefit from the combination.

The group assesses at the end of each reporting period whether there is any indication that an impairment recognized in prior periods for an asset other than goodwill may no longer exist or may have decreased. If any such indication exists, the group will estimate the recoverable amount of that asset.

Financial instruments

Financial instruments comprise the following:

- Non-derivative financial assets and liabilities: investments, other receivables, trade and other receivables, cash and cash equivalents, borrowings and bank overdrafts, other current liabilities (excluding derivative financial instruments), and long-term debt;
- Derivative financial assets and liabilities: forwards and cross-currency interest rate swaps.

Financial assets and liabilities are offset and presented as net in the statement of financial position when the group has a legal right to offset the amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

Non-derivative financial assets and liabilities

The group recognizes non-derivative financial assets and liabilities on the trade date.

Non-derivative financial assets

Loans and receivables comprise trade and other receivables, and non-current other receivables, and are measured at amortized cost, less accumulated impairment.

Impairment of non-derivative financial assets

The determination of the provision for impairment is based on the group's historical average of three years of write-offs, which is used as a proxy for expected losses on trade receivables with similar characteristics and credit profile. Trade receivables longer than one year overdue and specific risk trade receivables with no reasonable expectation of recovery are impaired and hence provided for in full, unless reliable supporting information to assess otherwise is available. The group does not present its impairment losses separately in the statement of profit or loss, but in the notes thereto.

Non-derivative financial assets designated at fair value through profit or loss

Non-derivative financial assets designated at fair value through profit or loss comprise equity-investments and are measured at fair value. Fair value changes are recognized in profit or loss.

Non-derivative financial liabilities

Non-derivative financial liabilities comprise long-term debt (such as bond loans and other loans from credit institutions), trade and other payables, borrowings and bank overdrafts, and other current liabilities (excluding derivative financial instruments).

Non-derivative financial liabilities measured at amortized cost

The group initially recognizes non-derivative financial liabilities at fair value less any directly attributable transaction costs. After initial recognition, these financial liabilities are measured at amortized cost with any difference between cost and redemption value being recognized in profit or loss over the period of the borrowings, using the effective interest method.

Non-derivative financial liabilities designated at fair value through profit or loss

Non-derivative financial liabilities designated at fair value through profit or loss comprise contingent considerations and are measured at fair value. Changes therein are recognized in profit or loss.

Derivative financial instruments and hedging activities

The group holds derivative financial instruments to hedge risk exposures. Derivative financial instruments are initially recognized at fair value on the date a derivative contract is concluded and are subsequently remeasured at their fair value. The method of recognizing the resulting gain or loss depends on whether the derivative is designated as a hedging instrument and if so, the nature of the item being hedged.

The group designates certain derivatives as either:

- Hedges of a risk associated with a recognized asset or liability or a highly probable forecast transaction (cash flow hedge); or
- Hedges of a net investment in a foreign operation (net investment hedge); or
- Currency forward instruments to protect the group's net profit.

The fair value of derivative financial instruments is classified as a non-current asset or long-term debt if the remaining maturity of the derivative financial instrument is more than 12 months and as a current asset or liability if the remaining maturity of the derivative financial instrument is 12 months or less after the end of the reporting period.

With respect to foreign currency forwards used for hedge accounting, the group designates as a hedge instrument only the change in the value of the spot component of a forward contract (and not the forward element).

The differential between the contracted forward rate and the market spot rate, defined as forward points, will be recognized as cost of hedging in other comprehensive income and accumulated in the hedging reserve within total equity.

Cash flow hedge
The effective part of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognized and accumulated in other comprehensive income. Amounts accumulated in other comprehensive income are reclassified to profit or loss in the same period the hedged item affects the statement of profit or loss within the line where the result from the hedged transaction is recognized.

The gain or loss relating to the ineffective part of the hedging relationship is recognized in profit or loss within financing income or costs.

When a hedging instrument matures or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in other comprehensive income at that time remains in other comprehensive income and is recognized when the hedged transaction is ultimately recognized in profit or loss. When a hedged transaction is no longer expected to occur, the cumulative gain or loss that was reported in other comprehensive income is reclassified to profit or loss.

Net investment hedge
Fair value changes of derivative financial instruments that are used to hedge the net investment in foreign operations, which are determined to be an effective hedge, are recognized directly in other comprehensive income in the translation reserve. Gains and losses accumulated in other comprehensive income are included in profit or loss when the foreign operation is disposed or if a hedging relationship is terminated and the derivative financial instrument is not sold, future changes in the fair value of the net investment hedge are recognized in profit or loss.

The gain or loss relating to the ineffective part of the hedging relationship is recognized in profit or loss within financing income or costs.

Derivatives that do not qualify for hedge accounting
Certain derivatives do not qualify for hedge accounting. Changes in the fair value of any derivative financial instruments that do not qualify for hedge accounting are recognized in profit or loss within financing results.

Taxation
Corporate income tax on the result for the year is made up of current and deferred tax. Corporate income tax is recognized in profit or loss except to the extent that it relates to business combinations and/or items directly recognized in equity or other comprehensive income.

Current tax is the expected tax payable or tax receivable on the taxable income for the year, using the tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable or tax receivable in respect of previous years. If the current tax shall be settled over more than 12 months and the amounts are material, the current tax will be discounted using the risk-free rate belonging to the corresponding period, and the jurisdiction. The group recognizes deferred tax assets and liabilities for all taxable temporary differences between the carrying amounts of assets or liabilities in the statement of financial position for financial reporting purposes and their tax base for taxation purposes.

Deferred tax assets and liabilities are not recognized for temporary differences arising on:
- Initial recognition of goodwill;
- Investments in subsidiaries and joint arrangements to the extent that the parent can control the timing of the reversal of the temporary difference, and it is probable that they will not reverse in the foreseeable future; and
- Initial recognition of an asset or liability in a transaction, which is not a business combination and that, at the time of the transaction, affects neither accounting profit nor taxable profit.

A deferred tax asset is recognized for deductible temporary differences and for the carry forward of unused tax losses and unused tax credits to the extent that it is probable that future taxable profits will be available against which these can be utilized. Deferred tax assets are reviewed at the end of each reporting period and are remeasured to the extent that it is no longer probable that the related tax benefit will be realized.

Deferred tax assets and liabilities are not discounted and measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the end of the reporting period. The effect of changes in tax rates on the deferred taxation is recognized in profit or loss if, and to the extent that, the deferred tax liability was originally formed as a charge to profit or loss.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

Employee benefits

Defined contribution plans

Obligations for contributions to defined contribution plans are recognized as an employee benefit expense in profit or loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or reduction in future payment is available.

Defined benefit plans

The group's net obligation in respect of defined employee benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount, and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contribution to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability or asset, which are made up of actuarial gains and losses, the return on plan assets (excluding interest), and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income.

The group determines the net interest expense or income on the net defined benefit liability or asset for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability or asset, considering any changes in the net defined benefit liability or asset during the period resulting from contributions and benefit payments. Net interest expense and other expense related to defined benefit plans, like fund administration costs, are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in the defined benefits that relates to past service or the gain or loss on curtailment is recognized directly in profit or loss.
The group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs. A curtailment occurs when an entity significantly reduces the number of employees covered by a plan. A curtailment may arise from an isolated event, such as disposal or restructuring, discontinuance of an operation or termination and suspension of a plan. Amendments to the terms of a defined benefit plan will be considered plan amendments and will be fully accounted for as past service costs.

Long-term service benefits

The group's net obligation in respect of long-term service benefits, such as jubilee benefits, is the amount of future benefits that employees have earned in return for their service in the current and prior periods. The obligation is calculated using the projected unit credit method and is discounted to its present value, and the fair value of any related assets is deducted.

The group recognizes all remeasurement gains and losses arising from defined benefit plans immediately in the period in which they occur in other comprehensive income. All expenses related to defined benefit plans are presented in the statement of profit or loss.

Provisions

A provision is recognized when: (1) the group has a present legal or constructive obligation because of a past event; (2) it is probable that an outflow of resources in the form of economic benefits will be required to settle the obligation; and (3) the amount of the obligation can be reliably estimated.

Note 3 – Accounting Estimates and Judgments

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates, and assumptions that affect the application of policies and reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of revenues and expense. Actual results may differ from those estimates and may result in material adjustments in the next financial year(s).

Policies that are critical for the presentation of the financial position and financial performance of the group and that require estimates and judgments are summarized in this note.

Revenue recognition
Revenue recognition requires estimates and judgments. IFRS 15 Revenue from Contracts with Customers requires management to make judgments on the characteristics of a performance obligation, bundling/(un)bundling of multi-element arrangements, the fair value of a performance obligation, variable considerations such as provisions for returns, determination whether the revenue should be recognized over time or at a point in time, and the product and contract life.

Also, when another party is involved in providing goods and services to a customer, the assessment of whether the nature of the promise to the customer is a performance obligation by the group (i.e. acting as a principal) or by another party (i.e. the group acts as an agent) is an area requiring judgment.

Further, the assessment of the nature of sales commission plans (incremental cost to obtain a contract) for meeting the capitalization criteria, with the applicable amortization period, requires judgment.

Loss allowance
Due to the adoption of IFRS 9 Financial Instruments, the group will determine its loss allowance for financial assets by making assumptions and using judgment about the risk of default and expected loss rates at contract inception over the expected life of the financial instrument, using the group's historical incurred losses and existing market conditions, as well as forward-looking information at the end of each reporting period.

Employee benefits
The net plan assets or liabilities of the defined employee benefit plans and the costs related to these pension and post-retirement medical plans are based upon actuarial and economic assumptions. The main economic assumptions are:
- Discount rate;
- Rate of pension increase;
- Inflation; and
- Medical trend rate.

For actuarial assumptions, the group uses generally accepted mortality rates (longevity risk). The withdrawal rates and retirement rates are based upon statistics provided by the relevant entities based on past experiences.

Reference is made to *Note 29 – Employee Benefits*.

Capitalized software
Software development costs are capitalized if the group can demonstrate the technical feasibility of completing the software project so that it will be available for use or sale and if it can demonstrate that the project complies with the following requirements: the intention to complete the development project; the ability to sell or use the end-product; demonstration of how the end-product will yield probable future economic benefits; the availability of adequate technical, financial and other resources to complete the project; and the ability to reliably measure the expenditure attributable to the project.

Capitalization of software depends on several assumptions as indicated above. While management has procedures in place to control the software development process, there is uncertainty regarding the outcome of the development process (timing of technological developments, technological obsolescence, and competitive pressures).

Capitalized software development is tested for impairment at reporting dates.

Reference is made to *Note 17 – Goodwill and Intangible Assets*.

Useful lives of assets

The useful lives of assets are estimated based upon best practice within the group and in line with common market practice. The group reviews the remaining useful lives of its assets annually.

Reference is made to *Note 17 – Goodwill and Intangible Assets* and *Note 18 – Property, Plant, and Equipment*.

Valuation and impairment testing intangible assets

Upon acquisition, the values of intangible assets acquired are estimated, applying the methodologies as set out under the accounting policies. These calculations are usually performed by the management of the acquiring division in close cooperation with an external consulting firm. These calculations require estimates like future cash flow, royalty rates, discount rates, useful life, churn rate, and rate of return. The methodology applied in this respect is in line with normal market practice.

The impairment test requires estimates of a discount rate, future cash flows, and a perpetual growth rate. These estimates are made by management that manages the business with which the goodwill is associated. The future cash flows cover a five-year period and are based on Vision & Strategy Plans (VSP), prepared by management and approved by the Executive Board.

The fair value of the assets, liabilities, and contingent liabilities of a business combination should be measured within 12 months from the acquisition date. For some acquisitions, provisional fair values have been included in the statement of financial position and the final valuation of the identifiable tangible assets is still pending but will be completed within the 12-month timeframe. Actual valuation of these assets, liabilities, and contingent liabilities may differ from the provisional valuation.

When a business combination agreement provides for an adjustment to the cost of the combination contingent on future events (such as earnouts), the group includes an initial fair value of that adjustment in the cost of the combination at the acquisition date if the adjustment is probable and can be measured reliably. The initial and subsequent measurement will usually be based on estimates of future results of the business combination. Subsequent changes to the fair value are recognized in profit or loss.

Reference is made to *Note 17 – Goodwill and Intangible Assets*, and *Note 11 – Other Operating Income and (Expense)*.

Accounting for income taxes

Corporate income tax is calculated based on profit before tax, considering the local tax rates and regulations. For each operating entity, the current corporate income tax expense is calculated and differences between the accounting and tax base are determined, resulting in deferred tax assets or liabilities. These calculations may deviate from the final tax assessments, which will be received in future periods.

A deferred tax asset is recognized for deductible temporary differences, the carry-forward of unused tax losses and unused tax credits to the extent that it is probable that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilized. Management assesses the probability that taxable profit will be available against which the unused tax losses or unused tax credits can be utilized.

In determining the amount of current and deferred tax, the group considers the impact of uncertain tax positions and whether additional taxes and interest may be due. The group believes that its current tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax laws and prior experience. The assessment relies on estimates and assumptions and may involve a series of judgments about future events. New information may become available that causes the group to change its judgment regarding the adequacy of existing tax liabilities. Such changes to tax liabilities will impact the corporate income tax expenses in the statement of profit or loss in the period that such a determination is made.

Changes in tax rates are considered if these tax rate changes are substantially enacted before year-end. The United States Tax Cuts and Jobs Act introduced significant changes in U.S. tax laws that took effect on January 1, 2018. During 2018, the U.S. government issued interpretative and legislative regulations in final and proposed form to further explain the application of the new tax law. A complete understanding of the implications of the Act continues to take time as government guidance will continue to be issued in 2019. Reported corporate income tax amounts in the 2018 financial statements will therefore be subject to a higher degree of uncertainty than is usually the case and measurement adjustments may need to be made in subsequent reporting periods.

Finally, not all tax authorities have decided whether they will allow for the adoption of the new IFRS standards (IFRS 9, IFRS 15, and IFRS 16) in the filing of corporate income tax returns. If the tax authorities deviate from these standards the classification between current tax assets and liabilities and deferred tax assets and liabilities may change.

Reference is made to *Note 15 – Income Tax Expense* and *Note 21 – Tax Assets and Liabilities*.

Legal and judicial proceedings and claims
For legal and judicial proceedings and claims against the company and its operating entities, a liability is accrued only if an adverse outcome is probable and the amount of the loss can be reasonably estimated. If one of these conditions is not met, the proceeding or claim is disclosed as a contingent liability if material. The actual outcome of a proceeding or claim may differ from the estimated liability, and consequently may affect the actual result. The prediction of the outcome and the assessment of a possible loss by management are based on management's judgments and estimates. Management usually consults lawyers and other specialists for support.

Reference is made to *Note 35 – Commitments and Contingent Liabilities*.

Note 4 – Benchmark Figures

Benchmark figures refer to figures adjusted for non-benchmark items and, where applicable, amortization and impairment of goodwill and acquired identifiable intangible assets. Adjusted figures are non-IFRS compliant financial figures but are internally regarded as key performance indicators to measure the underlying performance of the business. These figures are presented as additional information and do not replace the information in the consolidated statements of profit or loss and cash flows.

All figures are from continuing operations, unless stated otherwise.

Benchmark figures

in millions of euros, unless otherwise stated		2018	2017*	Change in actual currencies (%)	Change in constant currencies (%)**
Revenues		4,260	4,368	(2)	1
Organic revenue growth (%)		4	3		
Adjusted operating profit		980	970	1	5
Adjusted operating profit margin (%)		23.0	22.2		
Adjusted net profit		683	639	7	12
Adjusted net financing costs	*Note 14*	(70)	(109)	(36)	(41)
Adjusted free cash flow		762	746	2	6
Cash conversion ratio (%)		104	100		
Return on invested capital (ROIC) (%)		10.9	10.0		
Net debt	*Note 27*	1,994	2,069	(4)	
Net-debt-to-EBITDA ratio		1.7	1.8		
Diluted adjusted EPS (€)		2.45	2.22	10	
Diluted adjusted EPS in constant currencies (€)		2.60	2.24		16
Diluted adjusted free cash flow per share (€)		2.73	2.59	5	10

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.
** Constant currencies at €/$ 1.13.

Revenue reconciliation

	€ million	*%*
Revenues 2017*	4,368	
Organic change	181	4
Acquisitions	35	1
Divestments	(179)	(4)
Currency impact	(145)	(3)
Revenues 2018	4,260	(2)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Reconciliation between operating profit and adjusted operating profit

		2018	2017*
Operating profit		961	830
Amortization and impairments of acquired identifiable intangible assets	*Note 13*	175	187
Non-benchmark items in operating profit	*Note 11*	(156)	(47)
Adjusted operating profit		980	970

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Reconciliation between profit for the year and adjusted net profit

	2018	2017*
Profit for the year attributable to the owners of the company (A)	657	636
Amortization and impairments of acquired identifiable intangible assets	175	187
Tax benefit on amortization and impairments of acquired identifiable intangible assets and goodwill	(43)	(65)
Non-benchmark items, net of tax	(106)	(119)
Adjusted net profit (B)	683	639

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Reconciliation between total financing results and adjusted net financing costs

		2018	2017
Total financing results	*Note 14*	(72)	(108)
Non-benchmark items in total financing results	*Note 14*	2	(1)
Adjusted net financing costs		(70)	(109)

Summary of non-benchmark items

		2018	2017*
Included in operating profit:			
Other operating income and (expense)	*Note 11*	156	47
Included in total financing results:			
Other finance income/(costs)	*Note 14*	(2)	1
Total non-benchmark items before tax		154	48
Tax benefit/(expense) on non-benchmark items		(57)	6
Impact of changes in tax rates and mandatory repatriation tax		9	65
Non-benchmark items, net of tax		106	119

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Reconciliation between net cash from operating activities and adjusted free cash flow

		2018	2017
Net cash from operating activities		934	940
Capital expenditure		(214)	(210)
Acquisition-related costs	*Note 7*	4	3
Paid divestment expenses	*Note 7*	3	11
Dividends received	*Note 19*	1	1
Income tax on internal restructuring		–	5
Net tax charge/(benefit) on divested assets and consolidation of platform technology, and mandatory repatriation tax		34	(4)
Adjusted free cash flow (C)		762	746

Return on invested capital (ROIC)

	2018	2017*
Adjusted operating profit	980	970
Allocated tax	(246)	(251)
Net operating profit after allocated tax (NOPAT)	734	719
Average invested capital	6,709	7,189
ROIC (NOPAT/Average invested capital) (%)	10.9	10.0

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Per share information

in €, unless otherwise stated		2018	2017*
Total number of ordinary shares outstanding at December 31 (in millions of shares)	*Note 31*	271.2	281.4
Weighted average number of ordinary shares (D) (in millions of shares)	*Note 6*	276.7	285.1
Diluted weighted average number of ordinary shares (E) (in millions of shares)	*Note 6*	278.8	287.7
Adjusted EPS (B/D)		2.47	2.24
Diluted adjusted EPS (B/E)		2.45	2.22
Diluted adjusted EPS in constant currencies		2.60	2.24
Basic EPS (A/D)		2.37	2.23
Diluted EPS (A/E)		2.35	2.21
Adjusted free cash flow per share (C/D)		2.75	2.62
Diluted adjusted free cash flow per share (C/E)		2.73	2.59

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Benchmark tax rate

		2018	2017*
Income tax expense	*Note 15*	234	89
Tax benefit on amortization and impairments of acquired identifiable intangible assets		43	65
Tax benefit/(expense) on non-benchmark items		(57)	6
Impact of changes in tax rates and mandatory repatriation tax		9	65
Tax on adjusted profit (F)		229	225
Adjusted net profit (B)		683	639
Adjustment for non-controlling interests		0	1
Adjusted profit before tax (G)		912	865
Benchmark tax rate (F/G) (%)		25.1	25.9

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Cash conversion ratio

		2018	2017*
Operating profit		961	830
Amortization, depreciation, and impairments	*Note 13*	395	396
EBITDA		1,356	1,226
Non-benchmark items in operating profit	*Note 11*	(156)	(47)
Adjusted EBITDA		1,200	1,179
Autonomous movements in working capital		30	5
Capital expenditure		(214)	(210)
Adjusted operating cash flow (H)		1,016	974
Adjusted operating profit (I)		980	970
Cash conversion ratio (H/I) (%)		104	100

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Non-benchmark items in operating profit

Non-benchmark items relate to income and expenses arising from circumstances or transactions that, given their size or nature, are clearly distinct from the ordinary activities of the group and are excluded from the benchmark figures.

Acquisition integration costs

Acquisition integration costs are those one-time, non-recurring costs incurred by the group to integrate activities acquired by business combination and have been included in other operating income and expense in the consolidated statement of profit or loss.

Acquisition-related costs

Acquisition-related costs are one-time, non-recurring costs incurred by the group resulting from acquisition activities. The acquisition-related costs are directly attributable to acquisitions, such as legal fees, broker costs, commercial and financial due diligence fees, and have been included in other operating income and expense in the consolidated statement of profit or loss.

Divestment-related results on operations
Divestment-related results are event-driven gains and losses incurred by the group from the sale of activities (subsidiaries and business operations). These results also include related divestment expenses and restructuring of stranded costs and have been included in other operating income and expense in the consolidated statement of profit or loss.

Fair value changes of contingent considerations
Results from changes in the fair value of contingent considerations are not considered to be part of the ordinary activities of the group and have been included in other operating income and expense in the consolidated statement of profit or loss.

Other non-benchmark items
Non-benchmark items, which cannot be classified in the categories above, relate to income and expenses arising from circumstances or transactions that, given their size or nature, are clearly distinct from the ordinary activities of the group and are excluded from the benchmark figures.

Non-benchmark items in financing results

Financing component employee benefits
Financing component employee benefits relates to net interest results on the net defined benefit liability or asset of the group's defined benefit pension plans and other employee benefit plans.

Impairment of financial assets at fair value through profit or loss and/or other comprehensive income
Impairment loss on financial assets at fair value through profit or loss and/or other comprehensive income is based on fair value calculations. An impairment loss is recognized when the change in fair value is significant and prolonged.

Book results and fair value changes of investments measured at fair value through profit or loss
Fair value changes of financial assets measured at fair value through profit or loss and any gain or loss on the sale of financial assets measured at fair value through profit or loss.

Divestment-related results on equity-accounted investees
When equity accounting for equity-accounted investees ceases, the group calculates the book gain or loss as the difference between the sum of the fair value of proceeds, the fair value of retained investment, and any amount reclassified from other comprehensive income less the carrying amount of the investment at the date on which significant influence is lost.

Non-benchmark tax items in income tax expense
This item includes the tax effect on non-benchmark items as defined above, and on the amortization and impairments of acquired identifiable intangible assets, and corporate income tax expense relating to any material changes in (corporate income) tax laws and (corporate income) tax rates in the jurisdictions where the group operates (for example the U.S. tax reform in 2017).

Note 5 – Segment Reporting

reporting by division	Health		Tax & Accounting		Governance, Risk & Compliance		Legal & Regulatory		Corporate**		Total	
	2018	2017*	2018	2017*	2018	2017*	2018	2017*	2018	2017	2018	2017*
Revenues from third parties	1,110	1,166	1,295	1,234	975	1,054	880	914	–	–	4,260	4,368
Cost of sales	348	358	379	344	277	322	293	307	–	–	1,297	1,331
Gross profit	762	808	916	890	698	732	587	607	0	0	2,963	3,037
Sales costs	190	218	253	251	135	159	175	179	–	–	753	807
General and administrative costs	307	336	409	389	310	325	328	345	51	52	1,405	1,447
Total operating expenses	497	554	662	640	445	484	503	524	51	52	2,158	2,254
Other operating income and (expense)	75	(3)	0	(10)	55	51	26	9	0	0	156	47
Operating profit	340	251	254	240	308	299	110	92	(51)	(52)	961	830
Amortization of acquired identifiable intangible assets	37	43	65	70	37	47	27	27	–	–	166	187
Impairment of acquired identifiable intangible assets***	–	–	9	–	–	–	–	–	–	–	9	–
Non-benchmark expense/(income) in operating profit	(75)	3	0	10	(55)	(51)	(26)	(9)	0	0	(156)	(47)
Adjusted operating profit	302	297	328	320	290	295	111	110	(51)	(52)	980	970
Depreciation of property, plant, and equipment and amortization of other intangible assets	57	74	71	62	46	36	39	37	0	0	213	209
Impairment of other intangible assets***	–	–	7	–	–	–	–	–	–	–	7	–
Goodwill and acquired identifiable intangible assets at December 31	1,424	1,385	1,622	1,666	1,164	1,154	1,009	867	0	0	5,219	5,072
Capital expenditure	36	48	71	70	65	54	40	38	2	0	214	210
Assets classified as held for sale at December 31	–	109	–	–	–	78	–	60	–	–	–	247
Liabilities classified as held for sale at December 31	–	47	–	–	–	20	–	13	–	–	–	80
Ultimo number of FTEs	2,866	3,162	6,649	6,738	4,155	4,187	4,343	4,110	121	118	18,134	18,315

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*
** The corporate function does not represent an operating segment.
*** See *Note 17 – Goodwill and Intangible Assets.*

The four global operating divisions are based on strategic customer segments: Health, Tax & Accounting, Governance, Risk & Compliance, and Legal & Regulatory. This segment information by division is based on the group's management and internal reporting structure. The Executive Board reviews the financial performance of the segments and the allocation of resources based on revenues and adjusted operating profit. Internal deliveries between the divisions are conducted on an at arm's length basis with terms comparable to transactions with third parties. These revenues are limited and therefore not presented separately and have been eliminated.

Costs and capital expenditure incurred on behalf of the segments by Global Business Services and Global Platform Organization and associated FTEs are allocated. Third-party revenues reported to the Executive Board are measured in a manner consistent with the revenues in the statement of profit or loss.

There are no customers with a revenue stream that exceeds 1% of the group's total revenues. Non-current liabilities, including interest-bearing liabilities, are not considered to be segment liabilities but are primarily managed by the central treasury and tax function. Operating working capital is not managed at the operating segment level but at a country or regional level.

Disaggregation of revenues

reporting by division	Health		Tax & Accounting		Governance, Risk & Compliance		Legal & Regulatory		Total	
	2018	2017*	2018	2017*	2018	2017*	2018	2017*	2018	2017*
Revenue recognition										
At a point in time recognition	254	298	231	238	413	458	281	296	1,179	1,290
Overtime recognition	856	868	1,064	996	562	596	599	618	3,081	3,078
Revenues third parties	1,110	1,166	1,295	1,234	975	1,054	880	914	4,260	4,368
Revenue by contract term										
Contracts one year or less	765	823	966	933	740	816	480	532	2,951	3,104
Multiyear contracts	345	343	329	301	235	238	400	382	1,309	1,264
Revenues third parties	1,110	1,166	1,295	1,234	975	1,054	880	914	4,260	4,368

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Revenues by media format

revenues were generated by the following media formats:	2018		2017*	
		%		%
Digital	3,274	77	3,318	76
Services	471	11	480	11
Print	515	12	570	13
Total	4,260	100	4,368	100

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Revenues by type

	2018	2017*	Δ	Δ CC	Δ OG
Digital and service subscription	2,793	2,806	0	3	6
Print subscription	209	234	(11)	(9)	(7)
Other recurring	288	292	(1)	4	5
Total recurring revenues	3,290	3,332	(1)	2	5
Print books	226	249	(10)	(8)	(6)
LS transactional	214	239	(10)	(6)	10
FS transactional	98	107	(8)	(3)	(3)
Other non-recurring	432	441	(2)	0	6
Total revenues	4,260	4,368	(2)	1	4

Δ: % Change; Δ CC: % Change in constant currencies (€/$ 1.13); Δ OG: % Organic growth. *Restated for IFRS 15.

Geographical information

revenues were generated in the following regions:	2018		2017*	
		%		%
The Netherlands	178	4	161	4
Europe (excluding the Netherlands)	1,151	27	1,174	27
North America	2,588	61	2,693	61
Asia Pacific	254	6	252	6
Rest of the world	89	2	88	2
Total	4,260	100	4,368	100

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

total non-current assets per region:	2018		2017*	
		%		%
The Netherlands	738	12	595	10
Europe (excluding the Netherlands)	1,515	25	1,507	26
North America	3,697	61	3,594	62
Asia Pacific	75	1	71	1
Rest of the world	30	1	52	1
Total	6,055	100	5,819	100

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 6 – Earnings per Share

Earnings per share
The group presents basic and diluted earnings per share data for its ordinary shares.

Basic earnings per share
Basic earnings per share is calculated by dividing the profit for the year of €657 million (2017: €636 million) attributable to the ordinary equity holders of the company, by the weighted average number of ordinary shares outstanding during the year of 276.7 million (2017: 285.1 million), after adjustment for own ordinary shares held (treasury shares).

Profit for the year

	2018	2017*
Profit for the year attributable to the owners of the company (A)	657	636

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Weighted average number of ordinary shares

in millions of shares, unless otherwise stated		2018	2017*
Outstanding ordinary shares at January 1	*Note 31*	290.3	301.9
Effect of cancellation of shares		(2.4)	(3.6)
Effect of repurchased shares		(11.2)	(13.2)
Weighted average number of ordinary shares (B) for the year		276.7	285.1
Basic EPS (€) (A/B)		2.37	2.23

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Diluted earnings per share
Diluted earnings per share is determined by dividing the profit for the year of €657 million (2017: €636 million) attributable to ordinary shareholders of the company, by the weighted average number of ordinary shares outstanding of 278.8 million (2017: 287.7 million), after adjustments for own shares held (treasury shares) and for the effects of all dilutive potential ordinary shares which consist of LTIP shares granted.

Diluted weighted average number of ordinary shares

in millions of shares, unless otherwise stated	2018	2017*
Weighted average number of ordinary shares (B)	276.7	285.1
Long-Term Incentive Plan	2.1	2.6
Diluted weighted average number of ordinary shares (C) for the year	278.8	287.7
Diluted EPS (€) (A/C)	2.35	2.21

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 7 – Acquisitions and Divestments

Acquisitions

General
In 2018, the following main acquisitions were completed:

On March 21, 2018, Wolters Kluwer Health acquired 100% of the shares of Firecracker Inc. for an initial consideration of €6 million, net of cash acquired and working capital adjustments, excluding a deferred payment of €1 million. Firecracker is an adaptive learning, assessment, and study-planning solution used by more than 20 percent of U.S. medical students. Firecracker has become part of the Health Learning, Research & Practice group, has 16 employees and is headquartered in Boston, Massachusetts. Revenues are recurring in nature and derived from the U.S. market.

On September 28, 2018, Wolters Kluwer Legal & Regulatory acquired 100% of the shares of Legisway S.A., a provider of corporate contract management software, for a cash consideration of €17 million. The company employs 48 employees and is based in Paris, France. Legisway has been added to the Legal & Regulatory Software group.

On October 30, 2018, Wolters Kluwer Legal & Regulatory acquired 100% of the shares of eVision Holding B.V., a global provider of industrial operational risk management software, for an initial consideration of $140 million (net of cash acquired, working capital adjustments, and assumed debt) and a deferred contingent consideration of up to $35 million that may become payable in the future depending on certain financial and strategic targets being met. eVision will be aligned with the Enablon business unit, as eVision's software and services are highly complementary to Wolters Kluwer's Enablon environmental, health & safety (EHS) and operational risk management (ORM) platform. eVision has 225 employees and offices in the Netherlands, U.K., U.S., and Qatar. eVision recorded unaudited revenues of $25 million in 2017. While eVision's on-premise software remains in strong demand, future growth is expected to be driven primarily by recurring revenue from eVision's cloud-based offerings. In 2017, approximately 20% of revenues was recurring and nearly 80% was booked in U.S. dollars. Margins currently reflect investment to drive growth.

In addition, smaller acquisitions were completed, with a combined acquisition spending, net of cash acquired, of €9 million excluding a total of €1 million deferred and contingent consideration, and combined annualized unaudited revenues of €13 million.

Acquisition spending
Total acquisition spending, net of cash acquired, in 2018 was €166 million (2017: €313 million) including deferred and contingent consideration payments of €12 million (2017: €12 million). Acquisition related costs amounted to €4 million in 2018 (2017: €3 million).

The goodwill relating to the 2018 acquisitions represents future economic benefits specific to the group arising from assets that do not qualify for separate recognition as intangible assets. This includes expected new customers who generate revenue streams in the future and revenues generated because of new capabilities of the acquired product platforms.

The goodwill recognized in 2018 did not include any amount deductible for corporate income tax purposes (2017: nil).

The acquisition of eVision was the most significant acquisition in 2018. The following tables provide information in aggregate for all business combinations in 2018:

Acquisitions

		Carrying amount	Fair value adjustments	2018 Recognized values	2017 Recognized values
Consideration payable in cash				157	309
Deferred and contingent considerations at fair value:					
Non-current				12	1
Current				1	0
Total consideration				170	310
Intangible assets	*Note 17*	7	100	107	195
Other non-current assets		2		2	2
Current assets		13		13	38
Current liabilities		(16)		(16)	(31)
Non-current liabilities		(1)		(1)	(15)
Employee benefits	*Note 29*	0		0	(1)
Deferred tax assets/(liabilities)		5	(24)	(19)	(47)
Fair value of net identifiable assets/(liabilities)		10	76	86	141
Goodwill on acquisitions	*Note 17*			84	169
Cash effect of acquisitions:					
Consideration payable in cash				157	309
Cash acquired				(3)	(8)
Deferred and contingent considerations paid				12	12
Acquisition spending, net of cash acquired				166	313

Contribution of acquisitions

	Revenues	Adjusted operating profit	Profit for the year
Totals excluding the impact of 2018 acquisitions	4,248	978	659
Contribution of 2018 acquisitions	12	2	(2)
Totals for the year 2018	4,260	980	657
Pro forma contribution of 2018 acquisitions for the period January 1, 2018, up to acquisition date	37	0	(5)
Pro forma totals for the year 2018	4,297	980	652

The above unaudited pro forma information does not purport to represent what the actual results would have been had the acquisitions been concluded on January 1, 2018, nor is the information necessarily indicative for future results of the acquired operations. In determining the contributions by the acquisitions, management has assumed that the fair value adjustments that arose on the date of the acquisition would have been the same as if the acquisition had occurred on January 1, 2018.

Contingent and deferred considerations
The acquisitions completed in 2018 resulted in a maximum achievable undiscounted contingent and deferred consideration of €33 million. The fair value of this contingent and deferred consideration amounts to €13 million at acquisition date and at December 31, 2018.

For further disclosure on contingent and deferred considerations, reference is made to *Note 28 – Financial Risk Management*.

Provisional fair value accounting
The fair value of the identifiable assets and liabilities will be revised if new information, obtained within one year from the acquisition date, about facts and circumstances that existed at the acquisition date, identifies adjustments to the above amounts, or for any additional provisions that existed at the acquisition date. Subsequent changes in purchase price accounting for 2017 acquisitions were not material. Reference is made to *Note 17 - Goodwill and Intangible Assets*.

Divestments

General
The group completed four divestments in 2018 classified as disposal groups held for sale at year-end 2017.

On January 4, 2018, Wolters Kluwer Legal & Regulatory completed the sale of certain Swedish assets to Karnov Group, as originally announced on October 25, 2017. The consideration of the transaction, after purchase price adjustments for working capital and net debt, was SEK 611 million (€62 million) in cash and a deferred consideration of SEK 131 million (€13 million). The rationale for the divestment was to further sharpen our focus on core markets where the Legal & Regulatory division is best positioned for long-term growth. The Swedish assets sold included legal and regulatory information, in print and digital formats, as well as printing and distribution services. The business lines had revenues of €22 million in 2017 and approximately 70 employees.

On January 6, 2018, Wolters Kluwer Governance, Risk & Compliance (GRC) completed the sale of Corsearch to Audax Private Equity, as originally announced on October 23, 2017, for €113 million in cash, after purchase price adjustments for working capital and net debt. The industry in which Corsearch operates is evolving from providing traditional trademark clearance and protection services to delivering end-to-end digital solutions for brand management and marketing professionals. Although this presented new opportunities for Corsearch, GRC decided to focus its investment on developing its core regulatory compliance and risk management software and services for corporations, financial institutions, and law firms. The business had revenues of €53 million in 2017 and approximately 215 employees.

On March 9, 2018, Wolters Kluwer Health completed the sale of ProVation Medical, its procedure documentation and order set management software business, to Clearlake Capital Group, L.P. for $172 million (€140 million) in cash, after purchase price adjustments for working capital and net debt. The divestment reflects the division's increasing focus on supporting healthcare providers in delivering improved patient outcomes by offering a broad and cohesive suite of products, from healthcare learning and research, to advanced clinical decision support, terminology management, and patient engagement. This broad-based, multi-specialty, and integrated range of solutions can most effectively help healthcare providers in improving outcomes and reducing variability in care. The ProVation Medical business had revenues of €69 million in 2017 and approximately 200 employees.

At the end of March 2018, Wolters Kluwer Health reduced its equity shareholding in Chengdu Medicom Medical Information Systems Co., Ltd. (China) from 55% to 45%. As a result, the group no longer has a controlling interest and Medicom China has been deconsolidated and treated as an equity-accounted investee starting in April 2018. The Medicom China business had revenues of €8 million in 2017 and approximately 230 employees.

On December 7, 2018, Wolters Kluwer Legal & Regulatory sold its 40% stake in Manz Schulbuch GmbH (Wien, Austria) for a consideration of €1 million.

Divestment-related results on operations, equity-accounted investees, and financial assets

		2018	2017
Divestments of operations:			
Consideration receivable in cash		315	93
Consideration received as equity-accounted investee	*Note 19*	2	–
Deferred divestment consideration receivable (current)	*Note 24*	13	–
Consideration receivable		330	93
Intangible assets	*Note 17*	0	30
Other non-current assets		0	1
Current assets (including assets held for sale)		234	15
Current liabilities (including liabilities held for sale)		(65)	(27)
Employee benefits		0	(1)
Non-controlling interests	*Note 16*	(2)	–
Deferred tax assets/(liabilities)		0	1
Net identifiable assets/(liabilities)		167	19
Reclassification of foreign exchange differences on loss of control, recognized in other comprehensive income		–	0
Book profit/(loss) on divestments of operations		163	74
Divestment expenses		(3)	(11)
Restructuring of stranded costs following divestments		(1)	(3)
Divestment related results included in other operating income and (expense)	*Note 11*	159	60
Divestments of equity-accounted investees and financial assets:			
Consideration receivable in cash		6	7
Goodwill allocated	*Note 17*	(1)	–
Carrying value of financial asset	*Note 20*	(2)	–
Carrying value of equity-accounted investee	*Note 19*	(1)	(1)
Divestment-related results included in total financing results	*Note 14*	2	6
Cash effect of divestments:			
Consideration receivable in cash		321	100
Cash included in divested operations		(14)	(6)
Receipts from divestments, net of cash disposed		307	94

Note 8 – Assets/Liabilities Classified as Held for Sale

During the year 2018, the group completed several divestments, as described in *Note 7 – Acquisitions and Divestments*, which were announced but not yet completed at December 31, 2017, and hence were classified as disposal groups held for sale.

	2018	2017*
Assets of disposal groups classified as held for sale	–	247
Liabilities of disposal groups classified as held for sale	–	(80)
Net assets classified as held for sale	–	167

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Disposal groups

General

	2018	2017*
Health - ProVation Medical	–	50
Health – Medicom	–	12
Governance Risk & Compliance – Corsearch	–	58
Legal & Regulatory – certain Swedish assets	–	47
Net assets classified as held for sale	–	167

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Assets and liabilities of disposal groups

The assets and liabilities of the disposal groups can be specified as follows:

	2018	2017*
Non-current assets	–	176
Cash and cash equivalents	–	19
Other current assets	–	52
Current liabilities	–	(74)
Capital employed	–	173
Non-current liabilities	–	(6)
Net assets classified as held for sale	–	167

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Results of disposals groups

No impairment charge had been recognized on the disposal groups in 2017.

The revenues, adjusted operating profit, and operating profit of the disposal groups can be specified as follows:

	2018	2017*
Revenues	13	149
Adjusted operating profit	6	40
Operating profit	6	34

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 9 – Sales Costs

		2018	2017*
Marketing and promotion costs		224	235
Sales-related costs – sales commissions directly expensed		123	140
Sales-related costs – amortization of capitalized sales commissions	*Note 23*	24	14
Other sales-related costs		295	321
Customer support costs		70	76
Impairment of trade receivables and contract assets	*Note 23*	17	21
Total		753	807

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 10 – General and Administrative Costs

		2018	2017
Research, development, and editorial costs		416	386
General and administrative operating expenses		814	874
Amortization and impairments of acquired identifiable intangible assets	*Note 13*	175	187
Total		1,405	1,447

Research, development, and editorial costs as well as general and administrative operating expenses were largely impacted by the net impact of acquisitions and divestments, foreign exchange, and investments in platform migrations, product implementations, cloud networks, and cyber security. In 2018, general and administrative operating expenses included one-time benefits of €30 million (2017: €2 million), partly offset by impairment of self-developed software for an amount of €7 million. Amortization of acquired identifiable intangible assets includes an impairment of €9 million (2017: nil).

Note 11 – Other Operating Income and (Expense)

		2018	2017
Divestment-related results	*Note 7*	159	60
Additions to acquisition integration provisions	*Note 30*	0	(1)
Acquisition-related costs	*Note 7*	(4)	(3)
Fair value changes of contingent considerations	*Note 28*	1	(9)
Total		156	47

Note 12 – Personnel Expenses

		2018	2017
Salaries and wages		1,474	1,526
Social security charges		151	165
Costs of defined contribution plans		61	60
Expenses related to defined benefit plans	*Note 29*	21	18
Equity-settled share-based payment transactions	*Note 32*	22	23
Total		1,729	1,792
Employees			
Headcount at December 31		18,553	18,830
In full-time equivalents at December 31		18,134	18,315
Thereof employed in the Netherlands		1,143	931
In full-time equivalents average per annum*		18,687	18,982

* Average full-time equivalents per annum include temporary help and contractors, whereas headcount and its full-time equivalent only relate to staff on the payroll of the group.

The decrease in personnel expenses is largely related to lower headcount, mainly following net impact of current year and previous year's acquisitions and divestments, foreign exchange, and one-off benefits.

Note 13 – Amortization, Impairments, and Depreciation

		2018	2017
Amortization of acquired identifiable intangible assets	*Note 17*	166	187
Impairment of acquired identifiable intangible assets	*Note 17*	9	–
Amortization of other intangible assets	*Note 17*	188	179
Impairment of other intangible assets	*Note 17*	7	–
Depreciation of property, plant, and equipment	*Note 18*	25	30
Total		395	396

The amortization of other intangible assets increased from 2017 to 2018 because of investments in technology and product development and the amortization following the reclassification of capitalized internally developed software previously reported under the Inventories as work in progress, partly offset by foreign exchange.

Note 14 – Financing Results

		2018	2017
Financing income			
Interest income for financial assets, measured at amortized cost:			
Interest income on short-term bank deposits		12	10
Other financing income:			
Derivatives – foreign exchange contracts		0	0
Other		9	6
Total financing income		21	16
Financing costs			
Interest expense for financial liabilities, measured at amortized cost:			
Bank borrowings and overdrafts		(1)	0
Bonds and private placements		(69)	(102)
Amortization of fee expense for debt instruments		(2)	(3)
Other financing expense:			
Net foreign exchange gains/(losses)		(9)	(6)
Derivatives – foreign exchange contracts, not qualifying as hedge, measured at fair value through profit or loss		(1)	(5)
Other		(7)	(7)
Items in hedge relationships, measured at fair value:			
Interest rate swaps		(2)	(2)
Foreign exchange gains/(losses) on loans subject to cash flow hedge		(10)	14
Net change in fair value of cash flow hedges reclassified from other comprehensive income		10	(14)
Total financing costs		(91)	(125)
Net financing results		(70)	(109)
Other finance income/(costs)			
Divestment-related results on equity-accounted investees	*Note 7*	(1)	6
Gain on the sale of assets at fair value through profit or loss	*Note 7*	3	–
Revaluation of assets at fair value through profit or loss	*Note 20*	(1)	–
Financing component employee benefits	*Note 29*	(3)	(5)
Total other finance income/(costs)		(2)	1
Total financing results		(72)	(108)

Net foreign exchange gains or losses include currency hedging results and foreign exchange results on certain intercompany positions, which are not eliminated in consolidation of group results.

Note 15 – Income Tax Expense

Taxation on income recognized in statement of profit or loss

		2018	2017*
Current tax expense		186	152
Adjustments previous years		1	7
Deferred tax expense:			
Changes in tax rates		(5)	(92)
Origination and reversal of temporary differences		52	22
Movements in deferred tax assets and liabilities	*Note 21*	47	(70)
Total	*Note 21*	234	89

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Reconciliation of the effective tax rate

The effective tax rate in the consolidated statement of profit or loss differs from the Netherlands' statutory income tax rate of 25%.

The following table reconciles the statutory income tax rate with the effective income tax rate in the consolidated statement of profit or loss:

	2018		2017*	
	%		%	
Profit before tax		891		726
Income tax expense at statutory tax rate in the Netherlands	25.0	223	25.0	182
Tax effect of:				
Rate differential (local income tax rates versus statutory income tax rate in the Netherlands)	(4.4)	(40)	0.0	0
Tax incentives, exempt income, and divestments	1.4	12	(6.4)	(46)
Recognized and unrecognized tax losses	1.0	9	0.6	4
Adjustments previous years	0.1	1	1.0	7
Changes in income tax rates	(0.5)	(5)	(12.6)	(92)
Other taxes and U.S. repatriation tax	0.4	4	4.4	32
Non-deductible costs and other items	3.3	30	0.2	2
Total	26.3	234	12.2	89

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Rate differential indicates the effect of the group's taxable income being generated and taxed in jurisdictions where tax rates differ from the statutory income tax rate in the Netherlands.

The effective tax rate increased to 26.3% (2017: 12.2%), the prior year having benefitted from a one-time, non-cash revaluation of our U.S. deferred tax position in consequence of the lower U.S. corporate income tax rate per January 1, 2018. The current year was impacted by taxable gains on the divestments of Corsearch and Provation Medical.

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (U.S. tax reform) was enacted. Main changes included a lower federal tax rate in the U.S. from 35% to 21% and a deemed repatriation tax on undistributed foreign profits, both taking effect per January 1, 2018. The 2017 effective tax rate was positively impacted by €92 million resulting from tax rate changes impacting the group's deferred tax position of which €85 million related to the revaluation of the deferred tax position in the U.S. per December 31, 2017. The effective tax rate was negatively impacted by €32 million by other taxes of which €27 million resulted from the mandatory repatriation tax of the U.S. tax reform in 2017.

For corporate income taxation recognized directly in the consolidated statements of changes in total equity and other comprehensive income, reference is made to *Note 21 - Tax Assets and Liabilities.*

Note 16 – Non-controlling Interests

Non-controlling interests are the portion of the profit or loss and net assets of a subsidiary attributable to equity interests that are not owned, directly or indirectly through subsidiaries, by the group. Losses applicable to the non-controlling interest in a subsidiary are allocated to the non-controlling interest even if these cause the non-controlling interest to have a debit balance.

The group's shares in significant consolidated subsidiaries that were not fully owned at December 31 are:

Ownership in %	2018	2017
Akadémiai Kiadó Kft. (Budapest, Hungary)	74	74
Chengdu Medicom Medical Information System Co., Ltd. (Chengdu, China)	45	55

The group reduced its equity shareholding in Chengdu Medicom Medical Information Systems Co., Ltd. from 55% to 45% at the end of March 2018, and as a result, the group concluded that it no longer has control over this entity.

See also *Note 7 – Acquisitions and Divestments* and *Note 19 – Investments in Equity-accounted Investees*.

The movements in non-controlling interests are as follows:

		2018	2017
Position at January 1		4	5
Dividends paid		(2)	(3)
Loss of control - divestment	*Note 7*	(2)	–
Share of profit in non-controlling interests, net of tax		0	1
Foreign exchange differences and other movements		0	1
Position at December 31		0	4

Non-controlling interests of consolidated participations in the profit for the year of the group totaled €0 million in 2018 (2017: €1 million). Non-controlling interests in the equity of consolidated participations, totaling €0 million (2017: €4 million), are based on third-party shareholding in the underlying shareholders' equity of the subsidiaries.

Financial information of non-controlling interests combined, based on 100% ownership, can be summarized as follows:

	2018	2017
Revenues	7	14
Adjusted operating profit	2	4
Net profit	2	3
Total assets	3	17
Total liabilities	1	8
Total equity	2	9
Total gross external debt	–	–
Total cash and cash equivalents	0	1

The group's proportionate share of each line item in the financial statements of the non-controlling interests does not materially differ from the fully consolidated financial statements.

Note 17 – Goodwill and Intangible Assets

		Goodwill	Acquired identifiable intangible assets	Other intangible assets	2018	2017
Position at January 1						
Purchase value		3,759	2,701	1,495	7,955	8,519
Accumulated amortization and impairments		(9)	(1,379)	(986)	(2,374)	(2,406)
Book value at January 1		3,750	1,322	509	5,581	6,113
Movements						
Investments		–	–	198	198	196
Acquired through business combinations	*Note 7*	84	100	7	191	364
Divestments of operations	*Note 7*	–	–	–	0	(30)
Disposals of assets		(1)	–	–	(1)	0
Net expenditures		83	100	205	388	530
Amortization	*Note 13*	–	(166)	(188)	(354)	(366)
Impairment	*Note 13*	–	(9)	(7)	(16)	–
Reclassifications		(1)	–	31	30	0
Assets classified as held for sale	*Note 8*	–	–	–	0	(175)
Foreign exchange differences and other movements		113	27	16	156	(521)
Total movements		195	(48)	57	204	(532)
Position at December 31						
Purchase value		3,954	2,437	1,714	8,105	7,955
Accumulated amortization and impairments		(9)	(1,163)	(1,148)	(2,320)	(2,374)
Book value at December 31		3,945	1,274	566	5,785	5,581

Identifiable intangible assets acquired through business combinations mainly consist of customer relationships (subscriber accounts), technology (databases, software, and product technology), trademarks, and titles.

Other intangible assets mainly relate to purchased and self-developed information systems and software. Investments include an amount of €151 million (2017: €133 million) relating to product development. In 2018, other intangible assets include a reclassification of €30 million relating to self-developed software from Inventories.

Impairment testing cash-generating units containing goodwill

Carrying amounts of goodwill and acquired identifiable intangible assets per segment	Goodwill	Acquired identifiable intangible assets	2018	2017
Health	1,058	366	1,424	1,385
Tax & Accounting	1,324	298	1,622	1,666
Governance, Risk & Compliance	848	316	1,164	1,154
Legal & Regulatory	715	294	1,009	867
Total	3,945	1,274	5,219	5,072

At the end of each reporting period, the group reviews whether there is an indication that any of the cash-generating units (CGUs) that contain goodwill and acquired identifiable intangible assets may be impaired. Furthermore, the group performs an annual impairment test by comparing the carrying amount of the CGU to which the goodwill and acquired identifiable intangible assets belong, net of related deferred taxes, to the recoverable amount of the CGU.

The recoverable amount is determined based on a calculation of its value-in-use by discounting the future cash flows to be generated from the continuing use of the CGUs. These valuations are based on non-observable market data. The value-in-use calculations in 2018 were determined in a consistent manner with prior years. The cash flow projections are based on actual operating results and the long-term Vision & Strategy Plans, as approved by the Executive Board.

The annual impairment test carried out in 2018 showed that the recoverable amount for all groups of CGUs for goodwill impairment testing exceeded their carrying amounts, so no impairment for goodwill was recognized. However, the carrying values of the intangible assets of the cash generating unit Tax & Accounting Brazil were less than the value-in-use for an amount of €16 million. The group recognized an impairment of €16 million, of which €9 million related to acquired identifiable intangible assets and the remainder to internally developed software (part of other intangible assets).

eVision, acquired in 2018, will roll up in the group of cash generating units Legal & Regulatory for goodwill impairment testing purposes.

The total number of groups of cash generating units for goodwill impairment testing purposes was six in 2018 (2017: six CGUs).

Key assumptions

The group's key assumptions include assumptions that are based on non-observable market data (level 3 input). The period over which the group estimates its cash flow projections is five years. After five years, cash flow projections are extrapolated using an appropriate perpetual growth rate that is consistent with the long-term average market growth rate. The weighted long-term average growth rate is 2.0% for the U.S. and 1.0% for Europe (2017: 1.4% for the U.S. and 1.8% for Europe). In addition, the following key assumptions were used in the projections:

- Revenue growth: based on actual experience, an analysis of market growth and the expected development of market share; and
- Adjusted operating profit margin development: based on actual experience and management's long-term projections; adjusted operating profit is deemed to be the best approximation for estimating future cash flows.

The estimated pre-tax cash flows are discounted to their present value using a pre-tax weighted average cost of capital (WACC) between 8.5% and 15.7% (2017: between 8.5% and 17.5%), with a weighted average of 10.6% (2017: 12.2%).

In determining the WACC the group used a risk-free rate based on the long-term yield on Dutch government bonds with a maturity of 20 years, considering country risk premiums and country-specific inflation differentials.

In determining the WACC, the group used the following assumptions:

	2018	2017
Risk free rate U.S. (in %)	3.0	2.8
Risk free rate Europe (in %)	1.0	1.4
Market risk premium (in %)	6.5	6.5
Tax rate (in %)	25.0	25.0
Relevered beta	0.97	0.96

Sensitivity analysis

The impairment testing also includes an assessment if a reasonably possible change in a key assumption would cause the carrying amount of goodwill to exceed the recoverable amount. The outcome of the sensitivity analysis in the annual impairment test was that no reasonably possible change in one of the key assumptions would cause the carrying amount to exceed the recoverable amount.

The goodwill impairment sensitivity per CGU is as follows:

		Allowed change (in basis points)			
	Applied revenue growth rate	Decline in growth	Increase in discount rate	Decrease in adjusted operating profit margin	Allocated goodwill at December 31, 2018
Health Learning, Research & Practice	1.6%	>300	>300	>300	539
Clinical Solutions	2.0%	>300	>300	>300	519
Tax & Accounting Americas and Asia Pacific	2.0%	>300	>300	>300	913
Tax & Accounting Europe	1.0%	>300	>300	>300	411
Governance, Risk & Compliance	2.0%	>300	>300	>300	848
Legal & Regulatory	1.4%	>300	>300	>300	715
Total	1.8%				3,945

Note 18 – Property, Plant, and Equipment

		Land and buildings	Other fixed assets	2018	2017
Position at January 1					
Purchase value		95	400	495	569
Accumulated depreciation and impairments		(61)	(333)	(394)	(443)
Book value at January 1		34	67	101	126
Movements					
Investments		1	24	25	28
Acquired through business combinations	*Note 7*	0	2	2	2
Divestments of operations	*Note 7*	–	0	0	(1)
Disposals of assets		(9)	–	(9)	(14)
Net expenditures		(8)	26	18	15
Depreciation	*Note 13*	(1)	(24)	(25)	(30)
Assets classified as held for sale	*Note 8*	–	–	0	(1)
Foreign exchange differences and other movements		2	(2)	0	(9)
Total movements		(7)	0	(7)	(25)
Position at December 31					
Purchase value		82	410	492	495
Accumulated depreciation and impairments		(55)	(343)	(398)	(394)
Book value at December 31		27	67	94	101

Property, plant, and equipment, consisting of land and buildings, and other assets such as office equipment and vehicles, are valued at cost less accumulated depreciation and any impairment losses.

Depreciation is recognized in the statement of profit or loss on a straight-line basis over the estimated useful life of each part of an item of property, plant, and equipment. Land is not depreciated.

The estimated useful life for buildings is 20 to 40 years, and for other assets three to ten years.

In 2018, the group entered into a sale and lease back transaction for property in the United Kingdom. This transaction resulted in a net book gain of €6 million and a cash inflow of €12 million. In 2017, as part of our real estate portfolio rationalization strategy, we sold property in the U.S., the Netherlands, and Hungary. The sale of these buildings resulted in a net book gain of €3 million and a cash inflow of €16 million.

Note 19 – Investments in Equity-accounted Investees

The group's shares in equity-accounted investees at December 31 are:

Ownership in %		2018	2017
Manz Schulbuch GmbH (Wien, Austria)		–	40
Manz'schen Verlags- und Universitätsbuchhandlung GmbH (Wien, Austria)		40	40
Logical Images Inc. (Rochester, NY, USA)		39	35
HaoYisheng (Beijing, China)		22	22
Chengdu Medicom Medical Information System Co., Ltd. (Chengdu, China)	*Note 15*	45	55

During the year 2018, the group sold its 40% equity-shareholding in Manz Schulbuch GmbH. Furthermore, the sale of a 10% equity shareholding in Chengdu Medicom Medical Information System Co., Ltd. resulted in a loss of control of the subsidiary. The group now holds 45% of the equity and accounts for this equity shareholding as an equity-accounted investee.

The movement in equity-accounted investees is as follows:

		2018	2017
Position at January 1		11	10
Change in control	*Note 16*	2	–
Divestments	*Note 7*	(1)	(1)
Dividends received		(1)	(1)
Share of profit in equity-accounted investees, net of tax		2	4
Foreign exchange differences and other movements		2	(1)
Position at December 31		15	11

For the equity-accounted investees, at December 31, 2018, and December 31, 2017, respectively, the financial information (at 100%) and the group's weighted proportionate share is as follows:

	Total equity-accounted investees		Group's share	
	2018	2017	2018	2017
Total assets	57	43	20	14
Total liabilities	44	35	14	10
Total equity	13	8	6	4
Revenues	75	60	27	22
Net profit/(loss) for the year	7	6	2	4

Note 20 – Financial Assets

		2018	2017
Financial assets at fair value through profit or loss		0	3
Other receivables		15	13
Derivative financial instruments	*Note 27*	21	–
Total		36	16

Other receivables predominantly relate to long-term advance payments.

Financial assets at fair value through profit or loss

		2018	2017
Position at January 1		3	3
Divestments	*Note 7*	(2)	–
Revaluation gain/(loss) on financial assets at fair value through profit or loss	*Note 14*	(1)	–
Foreign exchange differences and other movements		0	0
Position at December 31		0	3

The exposure to credit risk of the financial assets is considered immaterial.

Note 21 – Tax Assets and Liabilities

Deferred tax assets and deferred and other tax liabilities

	Assets	Liabilities	2018	2017*
Intangible assets	8	(448)	(440)	(427)
Property, plant, and equipment	0	(2)	(2)	(9)
Employee benefits	39	(7)	32	54
Interest carry-forward	2	–	2	11
Tax value of loss carry-forwards recognized	51	–	51	49
Other items	114	(160)	(46)	(6)
Subtotal	214	(617)	(403)	(328)
Set off of tax	(108)	108	0	0
Position at December 31	106	(509)	(403)	(328)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

The actual recognition of deferred tax assets depends on the generation of future taxable income during the periods in which the temporary differences become deductible. Based on projected future taxable income and available strategies, the group considers the future realization of these deferred tax assets as being probable.

Other items include uncertain tax positions of which most of the liabilities is expected to be settled beyond one year.

Movements in temporary differences and other movements, 2018

	Balance at January 1, 2018	Acquisitions/ divestments	Transfer to liabilities held for sale	Recognized in statement of profit or loss *(Note 15)*	Recognized in equity and other comprehensive income	Foreign exchange differences and other movements	Balance at December 31, 2018
Intangible assets	(427)	(24)	–	19	–	(8)	(440)
Property, plant, and equipment	(9)	–	–	7	–	0	(2)
Employee benefits	54	–	–	(20)	(4)	2	32
Interest carry-forwards	11	–	–	(9)	–	0	2
Tax value of loss carry-forwards recognized	49	5	–	(4)	–	1	51
Other items*	(4)	–	–	(40)	0	(2)	(46)
Total	(326)	(19)	–	(47)	(4)	(7)	(403)

* Restated for IFRS 9 for an amount of €2 million at January 1, 2018. See *Note 1 – General and Basis of Preparation*.

Movements in temporary differences and other movements, 2017

	Balance at January 1, 2017	Acquisitions/ divestments	Transfer to liabilities held for sale	Recognized in statement of profit or loss *(Note 15)*	Recognized in equity and other comprehensive income	Foreign exchange differences and other movements	Balance at December 31, 2017
Intangible assets	(581)	(47)	5	154	–	42	(427)
Property, plant, and equipment	(15)	–	–	5	–	1	(9)
Employee benefits	75	–	–	(1)	(14)	(6)	54
Interest carry-forwards	95	–	–	(77)	–	(7)	11
Tax value of loss carry-forwards recognized	54	–	–	(1)	–	(4)	49
Other items*	2	(1)	–	(10)	0	3	(6)
Total	(370)	(48)	5	70	(14)	29	(328)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Movements in overall tax position

		2018	2017*
Position at January 1			
Tax receivable		9	18
Tax payable		(12)	(23)
Deferred tax assets		93	109
Deferred and other tax liabilities**		(419)	(479)
Overall tax position		(329)	(375)
Movements			
Total income tax expense	*Note 15*	(234)	(89)
Deferred tax from acquisitions and divestments	*Note 7*	(19)	(48)
Current tax from acquisitions and divestments		(2)	2
Deferred tax on items recognized directly in other comprehensive income		(4)	(14)
Paid corporate income tax		206	156
Transfer to liabilities held for sale		(5)	10
Foreign exchange differences and other movements		(7)	27
Total movements		(65)	44
Position at December 31			
Tax receivable		35	9
Tax payable		(26)	(12)
Deferred tax assets		106	93
Deferred and other tax liabilities		(509)	(421)
Overall tax position		(394)	(331)

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*
** Restated for IFRS 9 for an amount of €2 million at January 1, 2018. See *Note 1 – General and Basis of Preparation.*

Unrecognized tax losses
The group has not recognized deferred tax assets that relate to unused tax losses amounting to €249 million (2017: €221 million), as it is not probable that future taxable profit will be available against which the group can use the benefits. Of these unused tax losses 9% (2017: 13%) expire within the next five years, 10% (2017: 8%) expire after five years, and 81% (2017: 79%) carry forward indefinitely.

Deferred tax on items recognized immediately in other comprehensive income and equity

	2018			2017*		
	Amount before tax	Tax	Amount net of tax	Amount before tax	Tax	Amount net of tax
Exchange differences on translation of foreign operations and net investment hedges	123	0	123	(473)	0	(473)
Gains/(losses) on cash flow hedges	13	–	13	0	–	0
Remeasurement gains/(losses) on defined benefit plans	12	(4)	8	27	(14)	13
Tax in other comprehensive income	148	(4)	144	(446)	(14)	(460)
Share-based payments	22	–	22	23	–	23
Tax in equity	22	0	22	23	0	23

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

The total amount recognized for corporate income tax in the consolidated statement of other comprehensive income is impacted by €0 million (2017: €6 million) resulting from changes in corporate income tax rates.

Note 22 – Inventories

	2018	2017
Work in progress	19	19
Finished products and trade goods	56	76
Total	75	95

Inventories are valued at the lower of cost and net realizable value. The cost of inventories includes all costs of purchase and other costs incurred in bringing the inventories to their present location and condition. Net realizable value is the estimated selling price in the ordinary course of business less the estimated cost of completion and the estimated cost necessary to complete the sale.

Inventories also include internally developed commercial software products. The cost of internally produced goods includes the developing, manufacturing, content, and publishing costs. Trade goods purchased from third parties are valued at the purchase price.

At December 31, 2018, the provision for obsolescence deducted from the inventory carrying values amounted to €18 million (2017: €20 million). In 2018, an amount of €3 million was recognized as an expense for the change in the provision for obsolescence (2017: €2 million) and is presented as part of cost of sales in the statement of profit or loss.

Note 23 – Contract Assets and Liabilities

	2018	2017
Trade receivables	1,018	955
Non-current contract assets	19	17
Current contract assets	99	105
Deferred income	1,592	1,486
Other contract liabilities	45	43

The group recognizes contract assets and contract liabilities resulting from revenue contracts with customers. A contract asset or contract liability reflects the timing of invoicing, the delivery of goods and services, and the obligations of the group and the customer in a revenue contract.

Contract assets include unbilled revenue balances where we already have rendered services, capitalized sales commissions and cost to fulfil a contract, and right to return assets.

Contracts liabilities include deferred income and provisions for returns and/or refunds. Due to our business models and the industries we operate in, the deferred income balance is the most significant contract liability.

In general, the group applies payment terms in line with normal industry practice. There are no contracts with a material financing component. There are contracts with variable consideration, but almost never constrained.

In a number of contracts, the group acts an agent.

The group has a mixed practice in fulfilling performance obligations and the relating payment terms. Most of our services and products require prepayment of the consideration, however, the group also has contracts with customers where invoicing occurs after delivery of the goods and/or services.

Trade receivables are shown net of impairment losses amounting to €64 million (January 1, 2018: €67 million). The fair value of the receivables approximates the carrying amount. Impairment losses on trade receivables and contracts assets are presented as part of sales costs in the consolidated statement of profit or loss.

For further information on credit risk, reference is made to *Note 28 – Financial Risk Management*.

In 2018, the movement in the loss allowance on trade receivables and contract assets is as follows:

		2018
Position at December 31, 2017, under IAS 39		56
Change in accounting policy, before tax, recognized in equity (IFRS 9)		11
Position at January 1, 2018, under IFRS 9		67
Additions to loss allowances	*Note 9*	17
Usage of loss allowances		(20)
Foreign exchange differences and other movements		0
Position at December 31		64

Contract assets

	Unbilled revenues	Cost to obtain/ fulfil a contract	2018	2017*
Position at January 1	90	32	122	107
Acquired through business combinations	3	–	3	–
Divestments of operations	–	–	–	(1)
Recognized as revenues in the year	855		855	946
Transferred to trade receivables	(867)		(867)	(935)
Newly recognized cost to obtain a contract		26	26	20
Amortization of capitalized sales commissions *Note 9*		(24)	(24)	(14)
Foreign exchange differences and other movements	2	1	3	(1)
Position at December 31	83	35	118	122

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

The group did not recognize an impairment loss on any of the contract assets during the year (2017: nil). Furthermore, we did not have material changes in deferred income because of changes in our estimates or because of contract modifications

Deferred income

	2018	2017*
Position at January 1	1,486	1,589
Acquired through business combinations	7	12
Divestments of operations	–	(16)
Transferred to liabilities held for sale	–	(40)
New and existing contracts with customers	3,008	2,923
Recognized from opening balance as revenue	(1,395)	(1,455)
Recognized as revenue in the year on new and existing contracts	(1,546)	(1,379)
Foreign exchange differences and other movements	32	(148)
Position at December 31	1,592	1,486

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Of the deferred income balance at the beginning of the year 2018, an amount of €1,395 million is recognized as revenue in the current year (2017: €1,455 million). No material amount of revenue was recognized in 2018 from performance obligations satisfied or partially satisfied in previous years, as a result of events such as changes in transaction price.

The aggregate amount of the transaction price allocated to the remaining performance obligations that are unsatisfied at year-end 2018 was €2,706 million (2017: €2,250 million), of which €1,592 million (2017: €1,486 million) was included in deferred income. Most of the deferred income (remaining performance obligations) will be satisfied in the following year as the performance obligations are part of contracts that have an original expected duration of one year or less. The remainder of the unfulfilled performance obligations, not recognized in deferred income, relate to multiyear contracts agreed with customers whereby we expect to satisfy these performance obligations between one and five years.

Other contract liabilities

	2018	2017*
Position at January 1	43	45
Additions to the provision for returns	159	153
Usage of provision for returns	(154)	(150)
Foreign exchange differences and other movements	(3)	(5)
Position at December 31	45	43

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 24 – Other Receivables

		2018	2017*
Prepayments		203	186
Derivative financial instruments	*Note 27*	0	1
Deferred divestment consideration receivable	*Note 7*	13	–
Other receivables		49	40
Total		265	227

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Note 25 – Cash and Cash Equivalents

		2018	2017
Deposits		10	447
Cash and bank balances		773	573
Total cash and cash equivalents in the statement of financial position	*Note 27*	783	1,020
Minus: Bank overdrafts used for cash management purposes	*Note 27*	(604)	(288)
Total cash and cash equivalents in the statement of cash flows		179	732
Plus: Cash included in assets held for sale	*Note 8*	–	19
Total cash and cash equivalents including cash included in assets held for sale in the statement of cash flows		179	751

Cash and cash equivalents comprise cash balances and call deposits. Bank overdrafts predominantly result from cash pool arrangements and are shown within borrowings and bank overdrafts in current liabilities. The group discloses the financial assets and financial liabilities within these netting arrangements on a gross basis.

An amount of €0 million (2017: €1 million) relates to cash and cash equivalent balances of entities that the group does not fully own (see *Note 16 - Non-controlling Interests*).

All deposits are demand deposits that are readily convertible into cash. Bank balances include an amount of approximately €24 million (2017: €17 million) of restricted cash, primarily due to local exchange control regulations that provide for restrictions on exporting cash and/or capital from the country.

Note 26 – Other Current Liabilities

		2018	2017
Salaries and holiday allowances		239	231
Social security premiums and other taxation		59	78
Pension-related payables		27	22
Royalties payable		74	81
Interest payable		32	67
Share buyback commitment	*Note 31*	–	50
Derivative financial instruments	*Note 28*	0	–
Deferred and contingent acquisition payments	*Note 28*	2	12
Other liabilities and accruals		86	77
Total		519	618

Note 27 – Long-term Debt

	Nominal value	Effective interest rate in %	Nominal interest rate in %	Repayment commit-ments 1-5 years	Repayment commit-ments >5 years	2018	2017
Bonds 2008-2028 (100.00*)	€36	6.812	6.748	–	36	36	36
Bonds 2013-2023 (99.709*)	€700	2.950	2.875	698	–	698	697
Bonds 2014-2024 (99.164*)	€400	2.640	2.500	–	397	397	397
Bonds 2017-2027 (99.659*)	€500	1.575	1.500	–	497	497	497
Subtotal bonds, measured at amortized cost				698	930	1,628	1,627
Private placement 2008-2038	¥20,000	3.330	3.330	–	158	158	148
Private placement 2010-2020 (98.567*)	€250	4.425	4.200	249	–	249	248
Subtotal private placements, measured at amortized cost				249	158	407	396
Deferred and contingent acquisition payments, measured at fair value				12	–	12	2
Other debt, measured at amortized cost				14	–	14	12
Derivative financial instruments, measured at fair value				–	–	0	3
Subtotal other long-term debt				26	0	26	17
Total long-term debt				973	1,088	2,061	2,040

* Issue price of financial instruments.

Reconciliation long-term debt to net debt

		2018	2017
Total long-term debt		2,061	2,040
Borrowings and bank overdrafts			
Multi-currency rollover credit facility		144	–
Other short-term debt, measured at amortized cost		0	0
Bank overdrafts, measured at amortized cost	*Note 25*	604	288
Total borrowings and bank overdrafts		748	288
Short-term bond, measured at amortized cost		–	750
Deferred and contingent acquisition payments, measured at fair value	*Note 26*	2	12
Derivative financial instruments, measured at fair value	*Note 26*	0	–
Total short-term debt		750	1,050
Gross debt		2,811	3,090
Minus:			
Cash and cash equivalents	*Note 25*	(783)	(1,020)
Deferred divestment related receivable	*Note 24*	(13)	–
Derivative financial instruments:			
Non-current receivable	*Note 20*	(21)	–
Current receivable	*Note 24*	0	(1)
Net debt		1,994	2,069

Reconciliation of liabilities arising from financing activities

	Balance at January 1, 2018	Cash flows	Acquisitions/ divestments	Unwinding of discount	Foreign exchange differences	Other non-cash movements	Balance at December 31, 2018
Bonds	1,627	–	–	1	–	–	1,628
Private placements	396	–	–	1	10	–	407
Other debt	17	1	12	–	0	(4)	26
Total long-term debt	2,040	1	12	2	10	(4)	2,061

	Balance at January 1, 2017	Cash flows	Acquisitions/ divestments	Unwinding of discount	Foreign exchange differences	Other non-cash movements	Balance at December 31, 2017
Bonds	1,878	497	–	1	–	(749)	1,627
Private placements	410	–	–	–	(14)	–	396
Other debt	26	(18)	16	–	(2)	(5)	17
Total long-term debt	2,314	479	16	1	(16)	(754)	2,040

Loan maturity

The following amounts of gross debt at December 31, 2018, are due within and after five years:

	2018
2020	258
2021	9
2022	8
2023	698
Due after 2023	1,088
Long-term debt	2,061
Short-term debt (2019)	750
Total	2,811

Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost are bonds, multi-currency roll-over credit facility, private placements, and other long-term and short-term debt.

Bonds

The group has senior bonds outstanding for an amount of €1,628 million at December 31, 2018 (2017: €1,627 million). The nominal interest rates on the bonds are fixed until redemption.

In April 2018, the group redeemed a €750 million bond with a coupon of 6.375% nominal interest. No new bonds were issued during 2018.

Private placements

The group holds private placements in euro and Japanese yen. Private placements denominated in Japanese yen (¥20,000 million) are converted and hedged to euro via cross-currency interest rate swaps. These swaps have been collateralized for credit risk in line with the treasury risk management policies. The value of the collaterals is €0 million at December 31, 2018 (2017: €0 million).

Multi-currency rollover credit facility

In June 2016, the group concluded the final extension of the €600 million multi-currency revolving credit facility maturing in July 2020, to €550 million maturing in July 2021. The relevant terms and conditions remain unchanged, except for an amendment following IFRS 16 Leasing, effective January 1, 2019. The interest rates on the multi-currency rollover credit facility are variable. The credit facility is for general corporate purposes.

At December 31, 2018, an amount of €144 million was drawn (December 31, 2017: nil) under the facility. The multi-currency rollover facility is subject to customary conditions, including a financial credit covenant. The credit facility covenant requires that the consolidated net senior borrowings (excluding fully subordinated debt) to adjusted EBITDA shall not exceed 3.5. In 2018, the group was comfortably within the thresholds stipulated in the financial covenants of the credit facility. At December 31, 2018, the indebtedness ratio was 1.7 (2017: 1.8). The existing credit facility covenant will not be redefined due to the implementation of IFRS 16 Leasing, effective January 1, 2019.

Other bilateral bank loans

In 2018, the group renewed a bilateral bank loan of $100 million (undrawn at December 31, 2018; December 31, 2017: undrawn). The interest rates on the other bilateral bank loans are variable.

Other loans

The group has immaterial outstanding finance lease arrangements at December 31, 2018, and December 31, 2017.

Financial liabilities measured at fair value through profit or loss

Financial liabilities measured at fair value through profit or loss are deferred contingent considerations and currency forwards classified as derivatives at fair value through profit or loss (not qualifying for hedge accounting).

Financial liabilities measured at fair value through other comprehensive income

Financial liabilities measured at fair value through other comprehensive income are derivative financial liabilities as a result of net investment hedges and cash flow hedges.

Defaults and/or breaches

There were no defaults or breaches on the loans and borrowings during 2018 and 2017.

Note 28 – Financial Risk Management

Risk management framework

The group's activities are exposed to a variety of financial risks, including market, liquidity, and credit risk. Financial risk identification and management is carried out by the central treasury department (Corporate Treasury), whereby the treasury operations are conducted within a framework of policies and guidelines (Treasury Policy), which have been approved by the Executive Board and Supervisory Board. The Treasury Policy is reviewed at least annually considering market circumstances and market volatility, and is based on assumptions concerning future events, subject to uncertainties and risks that are outside the group's control. The Treasury Committee, comprising the Vice President Group Accounting & Reporting, Controller Corporate Office, Senior Vice President Treasury & Risk, and representatives of the Corporate Treasury and Treasury Back-Office, meets quarterly to review treasury activities and compliance with the Treasury Policy and reports directly to the Executive Board and the Audit Committee. The Treasury Back-Office reports deviations directly to the CFO and the Senior Vice President Treasury & Risk.

The Internal Audit department reviews the Corporate Treasury department on its financial risk management controls and procedures. Corporate Treasury reports on a quarterly basis to the Audit Committee about its hedging status.

The group's funding activities are carried out by Corporate Treasury, using long-term capital market instruments and committed credit facilities to ensure optimal financial flexibility and capital efficiency. The borrowings, together with cash generated from operations, are lent or contributed as equity to the operating companies. The group targets a net-debt-to-EBITDA ratio of approximately 2.5; however, the group could temporarily deviate from this relative indebtedness ratio. At December 31, 2018, the net-debt-to-EBITDA ratio was 1.7 (2017: 1.8).

All treasury activities - in particular, the use of derivative financial instruments - are subject to the principle of risk minimization and are transacted by specialist treasury personnel. For this reason, financial transactions and risk positions are managed in a central treasury management and payment system. It is the group's practice that material currency translation and variable interest exposures are partially hedged by Corporate Treasury, in accordance with the annual treasury plan approved by the Audit Committee. The group does not purchase or hold derivative financial instruments for speculative purposes. The group's risk profile is defined and reviewed regularly. Although the economic environment has become more challenging because of the volatility on financial markets, the exposure to financial risks for the group has not significantly changed, nor the approach to these risks.

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the group's profit or loss or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

Currency risk

The group has identified transaction and translation risks as the main currency risks. The transaction risk exposure within individual group entities is relatively immaterial. The transaction prices invoiced to customers for products and services are mainly denominated in the customers' local currencies. Given the nature of the business, almost all related costs are also incurred in those local currencies. Derivative financial instruments to hedge transaction risks are therefore not frequently used.

Hedge accounting

Translation risk is the risk that exchange rate gains or losses arise from translating the statement of profit or loss, the statement of financial position, and statement of cash flows of foreign subsidiaries to the group's presentation currency (the euro) for consolidation purposes.

The group's risk management strategy practice is that material currency translation exposures (including U.S. dollar net investments) are partially hedged by Corporate Treasury. Currency exposures which impact the consolidated statements of financial position and/or profit or loss by 10% or more are considered material. The translation exposure on the statement of cash flows is partly mitigated by matching cash inflows and outflows in the same currency. The group's main translation risk is its exposure to the U.S. dollar.

In line with the group's risk management strategy, the group manages the translation risk using three types of risk mitigating actions, of which two types of transactions are designated as a hedge and for which the group applies hedge accounting:

- Partially protect total equity for foreign exchange differences using U.S. dollar currency forward contracts, qualifying as net investment hedges, as hedging instrument which partially offset the translation risk on U.S. denominated subsidiaries and long-term receivables of the U.S. operations being the hedged item. The fair value changes of the net investment hedge partially offset the currency differences on translation of U.S. denominated subsidiaries and long-term receivables of the U.S. operations, both being recognized in equity. The group had U.S. dollar forward contracts outstanding for a total notional amount of €175 million ($200 million) at December 31, 2018 (2017: €167 million or $200 million). These hedges create a U.S. dollar balance sheet cover with a future settlement date; the hedges have a carrying value of €0 million at December 31, 2018 (see *Note 27 - Long-term Debt*). The group had U.S. dollar liabilities outstanding for a total notional amount of €332 million ($380 million) at December 31, 2018 (2017: €181 million or $217 million). The U.S. dollar liabilities include net investment hedges and other U.S. dollar denominated liabilities. The U.S. dollar balance sheet cover of 9% (2017: 5%) is defined as the sum of U.S. dollar net investment hedges and other U.S. dollar liabilities outstanding divided by the group's net investment in U.S. dollar denominated assets;
- Partially protect the translation differences on the Japanese yen private placement swaps (2018 and 2017: ¥20,000 million) using cash flow hedges by means of four cross-currency interest rate swaps. The fair value changes of the cash flow hedge are recognized in equity until the hedge relationship with the corresponding costs are terminated. At that moment the translation differences are recycled into profit or loss; and
- Partially protect net profit for foreign exchange differences using U.S. dollar and other currency forwards not qualifying for hedge accounting. The fair value changes of these currency forwards are recognized in the total financing results and partially offset any translation risk on denominated profit or loss elements in operating profit. In 2018, the group swapped 59% (2017: 51%) of the net financing results of €70 million (2017: €109 million) into U.S. dollars, using foreign exchange derivatives of $50 million (2017: $60 million). Based on the percentage of 59% for net financing results payable in U.S. dollars, an instantaneous 1% decline of the U.S. dollar against the euro from its exchange rate at December 31, 2018, with all other variables held constant, would result in a decrease of approximately €0.4 million of net financing results (2017: approximately €0.5 million).

Before applying hedge accounting, the group assesses, in accordance with the group's risk management policies and the parameters of the hedge, that the designated hedge is highly effective. In 2018, the group did not record ineffectiveness because of hedging activities (2017: no ineffectiveness). The group measures hedge effectiveness on a forward-looking basis at the inception of the hedging relationship, and on an ongoing basis at reporting dates by a qualitative assessment of the critical terms of the hedging instrument and the hedged item. The hedge values will generally move in the opposite direction because of the same risk and hence an economic relationship exists. The results of these effectiveness tests all satisfied the effectiveness criterion during the year.

The following table details sensitivity on the group's financials to a 1% weakening of the U.S. dollar against the euro:

	2018	2017
Revenues	(28)	(29)
Adjusted operating profit	(8)	(8)
Operating profit	(8)	(7)
Adjusted net profit	(5)	(5)
Profit for the year	(5)	(5)
Shareholders' equity at December 31	(33)	(35)
Adjusted free cash flow	(7)	(6)

Sensitivity analysis

A sensitivity analysis on the derivative financial instruments portfolio yields the following results, assuming an instantaneous 1% decline of the U.S. dollar or Japanese yen against the euro from their levels at December 31, 2018, and an instantaneous 1% increase of the U.S. dollar, Japanese yen, or euro interest rates respectively:

in millions	Hedged risk	Amount	Type of instrument	Exchange rate movement €	Interest rate movement €
Cash flow hedge	Changes in ¥ floating interest payments and ¥ exchange rates	¥20,000	Cross-currency interest rate swaps	(2)	(4)
Net investment hedge	Changes of the U.S. dollar net investments due to fluctuations of U.S. dollar exchange rates	$200	Forward contracts	2	0

Interest rate risk

The group is exposed to interest rate risk, mainly regarding the euro. The group aims to mitigate the impact on its results and cash flows of interest rate movements, both by arranging fixed or variable rate funding and by possible use of derivative financial instruments. At December 31, 2018, the group's interest rate position (excluding cash and cash equivalents) carries predominantly fixed rates rather than floating rates; of the total interest portfolio (excluding cash and cash equivalents) 95% (2017: 100%) was carried at a fixed rate. The drawing of the credit facility and the other bilateral loans have a variable interest rate.

Assuming the same mix of variable and fixed interest rate instruments, an instantaneous increase of interest rates of 1% compared to the rates on December 31, 2018, with all other variables held constant, would result in an increase of approximately €1 million of the net financing results.

Liquidity risk

Liquidity risk is the risk that the group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The group's approach to manage liquidity is to ensure, as far as possible, that it will have enough liquidity to meet its liabilities when they are due.

The group actively manages liquidity risk by maintaining enough cash and cash equivalents and the availability of committed borrowing capacity. To reduce liquidity risk, the group has established the following minimum requirements:

- No more than 25% of outstanding gross debt minus available cash should be repayable within a 12 months-period;
- Acquiring of funding to start at least one year in advance of all maturing debt or alternative committed funding should be in place; and
- Minimum headroom of €500 million (sum of unused committed credit facilities, cash and cash equivalents, and receivable derivative financial instruments, minus other short-term debt, current deferred acquisition payments, (current payable) derivative financial instruments, and bank overdrafts).

Per December 31, 2018, the group has access to the unused part of the committed credit facilities of €543 million in total (2017: €683 million) and has cash and cash equivalents of €783 million, receivable derivative financial instruments of €21 million, minus other short-term debt, current deferred acquisition payments, bank overdrafts and current payable derivative financial instruments of in total €606 million. The headroom was €741 million at year-end 2018 (2017: €1,404 million).

No property has been collateralized or in any other way secured under debt contracts.

Exposure to liquidity risk

The following tables relate to the remaining contractual cash flows of financial liabilities at the reporting date. The amounts for the non-derivative financial instruments are gross and undiscounted and include estimated interest payments and exclude the impact of netting agreements.

Contractual cash flows 2018

	Carrying amount	Contractual undiscounted cash flows	Less than 1 year	1-2 years	2-5 years	More than 5 years
Non-derivative financial liabilities						
Bonds:						
Bonds 2008-2028	36	59	2	2	7	48
Bonds 2013-2023	698	800	20	20	760	–
Bonds 2014-2024	397	460	10	10	30	410
Bonds 2017-2027	497	569	8	8	23	530
Private placements:						
Private placement 2008-2038	158	262	5	5	16	236
Private placement 2010-2020	249	272	11	261	–	–
Long and short-term deferred and contingent acquisition payments	14	14	2	5	7	–
Other debt	14	14	0	3	11	–
Borrowings and bank overdrafts	748	748	748	–	–	–
Trade and other payables	397	397	397	–	–	–
Total	3,208	3,595	1,203	314	854	1,224
Derivative financial liabilities						
(Receipts)		(175)	(175)	–	–	–
Payments		174	174	–	–	–
Foreign exchange derivatives	0	(1)	(1)	0	0	0
(Receipts)		(262)	(5)	(5)	(16)	(236)
Payments		276	8	8	23	237
Cross-currency interest rate swaps	21	14	3	3	7	1
Total	21	13	2	3	7	1

The table shows net cash flow amounts for derivative financial liabilities that have simultaneous cash settlements.

Contractual cash flows 2017

	Carrying amount	Contractual undiscounted cash flows	Less than 1 year	1-2 years	2-5 years	More than 5 years
Non-derivative financial liabilities						
Bonds:						
Bonds 2008-2018	750	798	798	–	–	–
Bonds 2008-2028	36	62	2	2	7	51
Bonds 2013-2023	697	820	20	20	60	720
Bonds 2014-2024	397	470	10	10	30	420
Bonds 2017-2027	497	577	8	8	23	538
Private placements:						
Private placement 2008-2038	148	250	5	5	15	225
Private placement 2010-2020	248	283	11	11	261	–
Long and short-term deferred and contingent acquisition payments	14	14	12	2	–	–
Other debt	12	12	–	5	7	–
Borrowings and bank overdrafts	288	288	288	–	–	–
Trade and other payables*	333	333	333	–	–	–
Total	3,420	3,907	1,487	63	403	1,954
Derivative financial liabilities						
(Receipts)		(164)	(164)	–	–	–
Payments		167	167	–	–	–
Foreign exchange derivatives	(1)	3	3	0	0	0
(Receipts)		(250)	(5)	(5)	(15)	(225)
Payments		283	8	8	23	244
Cross-currency interest rate swaps	3	33	3	3	8	19
Total	2	36	6	3	8	19

* Restated for IFRS 15. See *Note 1 - General and Basis of Preparation.*

The table shows net cash flow amounts for derivative financial liabilities that have simultaneous cash settlements.

Credit risk

Credit risk represents the loss that would be recognized if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the group's receivables from customers and investments in debt securities. The carrying amount of non-derivative financial assets represents the maximum credit exposure and amounts to €1,946 million (2017: €2,108 million).

Financial instruments and excess cash at financial institutions

The group is exposed to credit risks due to its use of derivatives and because of excess cash deposited at banks. It is the group's practice to conclude financial transactions under ISDA (International Swap Dealers Association) master agreements. Cash is invested and financial transactions are concluded only with financial institutions with strong credit ratings (at least a credit rating of A-/A3). Furthermore, credit limits per counterparty are in place and are monitored periodically.

At December 31, 2018, there were no material credit risk concentrations outstanding while the average weighted credit rating of counterparties was A+ (2017: A+). The aim is to spread transactions among counterparties. No credit limits were materially exceeded during the reporting period and management does not expect any losses from non-performance by these counterparties on current outstanding contracts.

Trade receivables

The group has a natural exposure to credit risk in its operational business. This exposure of the group's operating companies to credit risk is inherently limited, as there is no customer who represents more than 1% of the group's revenues. A substantial part of the transactions is prepaid by customers. The group's operating companies actively monitor the solvency of their key accounts and asses creditworthiness of customers before concluding a contract.

The group determines the impairment on trade receivables and contract assets using the lifetime expected credit loss model, whereby the historical write-offs on trade receivables (a credit event) are used as a base for the future expected losses. The policy and the assumptions are periodically evaluated by the group using macroeconomic data and historical back-testing of the assumptions.

The trade receivables that are neither past due nor impaired have sound creditworthiness and meet the credit rating grades as defined in the internal policy for assessing loss allowances on financial assets.

Fair value of financial instruments

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy.

	2018					2017**	
	Carrying value	Fair value	Level 1	Level 2	Level 3	Carrying value	Fair value
Non-derivative financial instruments:							
Financial assets at fair value through profit or loss	0	0			0	3	3
Unbilled revenues*	83	83				90	90
Trade receivables*	1,018	1,018				955	955
Deferred divestment consideration receivable*	13	13				–	–
Other receivables (current)*	49	49				40	40
Cash and cash equivalents*	783	783				1,020	1,020
Total non-derivative financial assets	1,946	1,946	0	0	0	2,108	2,108
Bonds 2008-2018 (in €)	–	–				750	763
Bonds 2008-2028 (in €)	36	53	53			36	54
Bonds 2013-2023 (in €)	698	769	769			697	783
Bonds 2014-2024 (in €)	397	434	434			397	440
Bonds 2017-2027 (in €)	497	507	507			497	511
Private placement 2008-2038 (in ¥)	158	219		219		148	203
Private placement 2010-2020 (in €)	249	267		267		248	277
Long and short-term deferred and contingent acquisition payments	14	14			14	14	14
Other debt*	14	14				12	12
Borrowings and bank overdrafts*	748	748				288	288
Trade and other payables*	397	397				333	333
Total non-derivative financial liabilities	3,208	3,422	1,763	486	14	3,420	3,678
Derivative financial instruments:							
Non-current receivable	(21)	(21)		(21)		–	–
Current receivable	0	0		0		(1)	(1)
Non-current payable	–	–		–		3	3
Current payable	0	0		0		–	–
Total derivative financial instruments	(21)	(21)	0	(21)	0	2	2

* Fair value approximates the carrying amount.
** Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Fair value hierarchy

The fair value has been determined by the group based on market data and appropriate valuation methods/quotes. Valuation methods include:

- Level 1: reference to quoted prices (unadjusted) in active markets for similar assets and liabilities;
- Level 2: inputs other than quoted prices that are observable for the asset or liability and that may have a significant impact on the fair value, either directly (i.e. as prices) or indirectly (i.e. derived from prices) based on discounted cash flow analysis, using data input of observable financial markets and financial institutions; and
- Level 3: inputs for the asset or liability that are not based on observable market data. The valuation method can be based on discounted cash flow analysis, or other instruments that are substantially identical.

There has been no change in the fair value hierarchy compared to 2017.

The Level 3 fair value movements in non-derivatives financial liabilities are as follows:

		2018	2017
Balance at January 1		14	17
Acquired through business combinations	*Note 7*	13	1
Fair value changes of contingent considerations	*Note 11*	(1)	9
Settlements	*Note 7*	(12)	(12)
Foreign exchange differences and other movements		0	(1)
Balance at December 31		14	14

Level 3 financial liabilities comprise deferred and contingent acquisition payments relating to acquisitions. The group has reassessed the fair values of the various deferred payments outstanding at year-end 2018 and recognized a €1 million gain arising from fair value changes in the statement of profit or loss for acquisitions stemming from previous years (2017: €9 million loss).

Deferred and contingent acquisition payments

The fair value of the deferred and contingent acquisition payment balance amounts to €14 million (2017: €14 million).

A summary of deferred and contingent considerations at December 31, 2018, can be presented as follows:

	Fair value December 31, 2018	Of which: short-term	Of which: long-term	Maximum exposure (undiscounted)	Fair value December 31, 2017
Total	14	2	12	33	14

The contingent considerations are based on a discounted cash flow model, which considers the present value of expected payments, using a risk-adjusted discount rate. The expected payment is determined by considering possible adjusted operating profit or revenue scenarios, the amount to be paid under each scenario, and the probability of each scenario. The estimated fair value could potentially increase (or decrease) if annual growth rates and/or adjusted operating profit margins are higher (or lower).

Note 29 – Employee Benefits

	2018	2017
Retirement plans	54	60
Other post-employment benefits plans	75	78
Other long-term employment benefits	14	12
Total	143	150

Provisions for retirement and other post-employment benefits plans

The provisions for retirement and other post-employment plans relate to defined employee benefit plans.
The group has arranged pension schemes in various countries for most of its employees in accordance with the legal requirements, customs, and local situation of the countries involved. These retirement schemes are partly managed by the group itself and partly entrusted to external entities, such as company pension funds and insurance companies.

In addition, the group provides certain employees with other benefits upon retirement. These benefits include contributions towards medical health plans in the United States, where the employer refunds part of the insurance premium for retirees, or, in the case of uninsured schemes, bears the medical expenses while deducting the participants' contributions.

Characteristics of material plans

	The Netherlands	United States	United Kingdom
Retirement plans			
Type of benefits	Pensions	Pensions	Pensions
Type of plan	Career average	Final salary	Final salary
Status of plan	Open	Frozen	Frozen
Service costs	Yes	No	No
Status of plan funding	Funded	Funded	Funded
Other post-employment plans			
Type of benefits		Post-retirement medical plan	
Type of plan		Annual insurance premium coverage	
Status of plan		Open	
Service costs		Yes	
Status of plan funding		Unfunded	

There are open retirement plans for new entrants in the Netherlands and Belgium.

The group has closed plans in Belgium, Canada, and Australia. A closed plan means that no new members can join the pension plans; however, current participants in the plan can still accrue for future service benefits, and therefore the plan incurs service costs for the active participants.

If a plan is frozen, the plan is closed to new entrants and existing participants do not build up future service benefits accruals. The group has frozen plans in the United States, the United Kingdom, and Canada; these plans will have a service cost of zero.

Retirement plans

The group has its largest defined benefit retirement plan in the Netherlands with defined benefit obligations of €1.1 billion as of December 31, 2018, followed by the United States and the United Kingdom with defined benefit obligations of €127 million and €104 million respectively. There are also retirement plans in Belgium, Canada, and Australia. All plans are funded schemes. The largest defined benefit plans in the Netherlands, U.S., and U.K. are insured with the company's self-administrated pension funds, which are separate legal entities with plan assets being held independently of the group.

The Netherlands

In the Netherlands, the scheme is a career average salary scheme; members accrue a portion of their current salary at a rate calculated to enable them to reach a pension level based on their average salary. The Dutch pension plan falls under the supervision of the Dutch Central Bank ('DNB'). The scheme funding level is determined by the new Financial Assessment Framework ('nFTK'), whereby funding liabilities are determined based on a 120-month moving average of the 20-year forward rate. Benefit reductions, if necessary, will be smoothed over time when recovery to full funding within eight years is not expected. Reductions will amount to one-eighth of the deficit at the measurement date. Indexation of pension entitlements will not be allowed at funding ratios below 110%, while full indexation will be allowed only at funding ratios higher than approximately 125% (these are year- and plan-specific).

In 2017, there was a minor plan amendment gain in the pension expense following the increase of the retirement age from 67 to 68, effective January 1, 2018.

The Dutch pension scheme has an unaudited 12-months rolling average coverage ratio - as determined under the nFTK - of 112.9% at December 31, 2018 (2017: 110.4%). If the nFTK funding ratio is below 104%, a rolling eight-year recovery plan should be submitted to DNB in the event of funding shortfalls, on an annual basis. The pension contributions are based on contributions by the employer (two-thirds) and employees (one-third). The total annual pension contribution is currently determined at 24% of base salary. The pension base is capped but will be corrected for inflation annually.

United States

The U.S. retirement scheme has an annual statutory valuation which forms the basis for establishing the employer contribution each year (subject to ERISA and IRS minimums). The U.S. scheme was a final average pay plan, based on years of credited service, but is now a frozen plan. The plan fiduciaries of the U.S. scheme are required by law to act in the interest of the funds' beneficiaries. 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.

United Kingdom

The U.K. retirement scheme is a final salary-based scheme, but it is a frozen plan. The trustees of the pension fund are required by law to act in the interest of the funds' beneficiaries and are responsible for the investment policy regarding the assets of the fund. The board of trustees consists of an equal number of company-appointed and member-nominated directors. The level of funding is determined by statutory triennial actuarial valuations in accordance with pension 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. Pension rate increase is usually a fixed promise and is built into the funding requirement. The U.K. Pensions Regulator has significant powers and sets out in codes and guidance the parameters for scheme funding. At December 31, 2018, the future deficit contribution commitments are larger than the deficit in the U.K. plan and therefore there is an additional balance sheet liability in respect of these contributions.

Other post-employment plans

Other post-employment plans exist in the United States, Canada, and Italy. These schemes have no plan assets and are unfunded. The main plan is the post-employment medical plan in the U.S. The group funds the U.S. post-employment medical plan obligations on a pay-as-you-go basis. If healthcare costs in the future increase more than anticipated, the actuarially determined liability, and as a result the related other post-employment benefit plan expense, could increase along with future cash outlays.

Funding requirements

Funding requirements of the plans are based on local legislation and separate actuarial valuations for which the assumptions differ from the assumptions used under IAS 19. The funding requirements are based on each pension fund's actuarial measurement framework set out in the funding policies of the individual plans.

In the Netherlands, there is no formal requirement to fund deficits of the Dutch plan by the employer.

In the United States, there are minimum contribution requirements. In case the statutory funded status falls below certain thresholds, the U.S. Pensions Protection Act requires the deficit to be rectified with additional minimum employer contributions, spread over a seven-year period, to avoid restrictions on the ability to pay some accelerated benefit forms, such as lump sums. These funding levels are reassessed annually.

The trustees of the U.K. plan are required to act in the best interest of the plan's participants. The group and the trustees finalized the latest triennial valuation 2017 for funding purposes in 2018. The parties agreed to have a continuation of the funding of £1.4 million per annum for the years 2019 up to and including 2021. The U.K. Pensions Regulator has the power to demand more funding and support where a pension scheme has been exposed to unacceptable risk. As part of the 2017 actuarial funding valuation, the parent company guarantee of £7.5 million has been increased to £18 million and a negative pledge has been amended (issued by a Wolters Kluwer U.K. group company). In addition, it has been agreed to continue with any annual deficit contributions. The funding will be reassessed based on a new triennial valuation to be finalized in 2021.

Risk management of main plans in the group

The retirement and other post-employment plans expose the group to actuarial risks, such as longevity risks, interest rate risks, investment and market risks, and currency risks.

The group has restructured employee benefit plans in the past by moving existing and newly hired employees to defined contribution plans or by freezing the plans (either with no future service benefit accruals and/or no new participants entering the plan). These redesigns reduce or cancel future benefit accruals in the plans and consequently reduce the pace of liability growth. The group also reviews periodically its financing and investments policies (liability-driven investments) and its liability management (lump sum offerings).

The various plans manage their balance sheet to meet their pension promise. By using asset liability management (ALM) studies, major risk sources are identified, and the impact of decisions is assessed by quantifying the potential impact on elements like future pensions, contributions, and funded ratio. These ALM studies also determine risk and return measures that consider the interests of all stakeholders. The outcome of these studies results in a risk-return trade-off, taking the duration of pension liabilities into account, which will be an integral part of the investment strategy. The investment strategy covers the allocation of asset classes and hedging strategies, but also decisions on new and alternative asset classes, passive versus active investments, leverage, and the use of derivatives.

Actuarial assumptions for retirement and other post-employment benefit plans

The discount rate is the yield rate at the end of the reporting period on high-quality corporate bonds that have maturity dates approximating the terms of the group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The calculation is performed annually by qualified actuaries.

The following weighted average principal actuarial assumptions were used to determine the pension expense and other post-employment plans' expense for the year under review, and defined benefit obligations at the end of the reporting period:

in %	2018	2017
Retirement plans		
Discount rate to discount the net obligations/assets at year-end	2.1	2.1
Discount rate of pension expense	2.1	2.1
Expected rate of pension increases (in payment) at year-end	1.2	1.4
Expected rate of pension increases (in deferral) at year-end	1.1	1.3
Expected rate of inflation increase for pension expense	1.8	1.9
Other post-employment benefit plans		
Discount rate used to discount the obligations at year-end	3.7	3.1
Discount rate for pension expense	3.1	3.6
Medical cost trend rate	3.0	3.0

For most of the retirement and other post-employment schemes, the discount rate is determined or validated using the 'Towers Watson Rate: Link methodology', which uses mid-price AA corporate bond data from Bloomberg. Bonds with options are excluded, as are bonds whose yields are among the top and bottom 10% within each maturity category (outliers). The 30-year spot rate is assumed constant beyond 30 years. For the U.S. plans the discount rate is based on the yield curve/cash flow matching approach which uses spot yields from the standard FTSE Yield Curve and the timing of the cash flows of the plan.

Mortality assumptions for the most important plans are based on the following retirement mortality tables:

- The Netherlands: AG projection table 2018, including fund specific 2016 experience loading (2017: AG projection table 2016, including fund specific 2016 experience loading);
- U.S.: RP-2006 Mortality Table with MP 2018 projections, being the current standard mortality table (2017: RP-2006 Mortality Table with MP 2017 projections); and
- U.K.: SAPS S2 (Year of Birth) CMI 2017 projections with 1.5% long-term improvement rate (2017: SAPS S2 (Year of Birth) – CMI 2016 projections with 1.5% long-term improvement rate.

Assumptions regarding future mortality experience are set based on actuarial advice and best estimate mortality tables in the applicable countries.

The current life expectancies underlying the value of the defined benefit retirement obligations at December 31, 2018, are as follows:

in years	The Netherlands	United States	United Kingdom
Life expectancy at age of 65 now – Male	21.7	20.6	22.1
Life expectancy at age of 65 now – Female	25.4	22.7	24.1
Life expectancy aged 65 in 20 years – Male	23.9	22.3	23.8
Life expectancy aged 65 in 20 years – Female	27.3	24.2	25.9

Given the nature of the defined benefit obligations in Belgium, Italy, and Australia, with lump sum benefit payments at retirement date instead of annuity payments, the impact of changing life expectancy after the retirement age on the plan liabilities is limited in these countries.

Sensitivity of actuarial assumptions

The sensitivity for a 1% change in the discount rate, a 0.5% change in inflation, and a 0.5% change in the pension increase rate is as follows for the retirement plans:

Sensitivity retirement plans

in millions of euros		**Gross service cost**		**Defined benefit obligations**
2018 Baseline		15		1,415
Change compared to baseline	***Decrease of assumption***	***Increase of assumption***	***Decrease of assumption***	***Increase of assumption***
Discount rate (change by 1%)	5	(4)	281	(216)
Pension increase rate (change by 0.5%)	(2)	2	(99)	112
Inflation increase rate (change by 0.5%)	(1)	1	(67)	72
Mortality table (change by one year)	n.a.	0	n.a.	50

Gross service cost represents the annual accrual of liability due to another year of service, excluding any interest or offsetting employee contributions, and therefore differs from the current service cost included in the calculation of the pension expense.

Sensitivity of the defined benefit obligations (DBO) retirement plans in the statement of financial position and the defined benefit expense of the retirement plans in the statement of profit or loss (P&L)

	The Netherlands		**United States**		**United Kingdom**	
	DBO	P&L	DBO	P&L	DBO	P&L
Discount rate sensitivity	✓	✓	✓	n.a.	✓	n.a.
Pension increase sensitivity	✓	✓	n.a.	n.a.	✓	n.a.
Inflation rate sensitivity	✓	✓	n.a.	n.a.	✓	n.a.
Mortality sensitivity	✓	✓	✓	n.a.	✓	n.a.

Pension rate increases are only applicable for the plans in the Netherlands and the United Kingdom. Pension increases in the Netherlands are related to price inflation. However, these increases are conditional and depend on the funding position of the Dutch pension fund. Pension increases are therefore capped. The pension increase assumption is based on the liability ceiling approach and determined as the rate of increase such that the present value of vested benefits, including the assumed rate of pension increases, is not greater than the fair value of plan assets. For 2018, this results in a Dutch pension increase assumption of 1.03% compared to 1.22% at year-end 2017.

Since the plans in the United States and the United Kingdom are frozen, the service cost is zero and not sensitive for changes in discount rate, pension increases, inflation, and longevity.

Sensitivity of other post-employment plans

in millions of euros	Gross service costs	Defined benefit obligations
2018 Baseline	3	75
Change compared to baseline		
Discount rate (by -1%)	1	9
Discount rate (by +1%)	0	(8)

The actual medical cost trend rate in the United States exceeds the applied medical cost trend rate for its main medical plan which is capped at 3% (2017: 3%) according to the plan rules. The main U.S. medical plan is therefore not sensitive to medical cost increases. Employees over the age of 65, who retired after 1992, are not subject to a cap, but instead receive an annual Health Reimbursement arrangement subsidy based on years of service at retirement.

Plan liabilities and assets

		Defined benefit retirement plans		Other post-employment plans	
		2018	2017	2018	2017
Plan liabilities					
Fair value at January 1		1,482	1,494	78	89
Divestments		–	(4)	–	–
Employer service cost		14	12	4	4
Interest expense on the defined benefit obligations		30	30	2	3
Administration costs and taxes		1	2	–	–
Benefits paid by fund		(56)	(51)	(4)	(3)
Remeasurement (gains)/losses		(65)	21	(8)	(7)
Acquired through business combinations		–	–	0	1
Contributions by plan participants		3	3	–	–
Plan amendments and curtailments		2	0	–	–
Foreign exchange differences		4	(25)	3	(9)
Fair value at December 31		1,415	1,482	75	78
Plan assets					
Fair value at January 1		1,433	1,403	0	0
Divestments		–	(3)	–	–
Interest income on plan assets		29	28	–	–
Return on plan assets greater/(less) than discount rate		(60)	52	–	–
Benefits paid by fund		(56)	(51)	(4)	(3)
Contributions by the employer		21	22	4	3
Contributions by plan participants		3	3	–	–
Foreign exchange differences		3	(21)	–	–
Fair value at December 31		1,373	1,433	0	0
Funded status					
Deficit/(surplus) at December 31		42	49	75	78
Irrecoverable surplus		12	11	–	–
Net liability at December 31		54	60	75	78
Pension expenses					
Employer service cost		14	12	4	4
Past service costs plan amendments		2	0	–	–
Interest expense on irrecoverable surplus		0	0	–	–
Interest expense on defined benefit obligations		30	30	2	3
Interest (income) on plan assets		(29)	(28)	–	–
Administration costs and taxes		1	2	–	–
Total pension expense		18	16	6	7
Of which included in:					
Personnel expenses	*Note 12*	17	14	4	4
Other finance (income)/costs	*Note 14*	1	2	2	3

There was a plan amendment in the U.K. pension fund following a High Court Decision in 2018 relating to equalization of member benefits for the gender effects of Guaranteed Minimum Pensions ("GMP equalization"). The impact has been reflected as a plan amendment and thus recognized as a cost of €1.5 million in the statement of profit or loss.

The group's employer contributions to be paid to the defined benefit retirement plans in 2019 are estimated at €16 million (2018: actual employer contributions of €21 million). In 2017, the group made an additional pension contribution in the U.K. and Canadian pension plans by €6 million; in 2018, the U.S. pension fund received an additional contribution by the employer for an amount of €5 million.

In 2018, there was an asset ceiling of €12 million (2017: €11 million) in the U.K. pension plan; the surplus is not recognized as a pension asset as there is no unconditional right to a refund of this surplus from the U.K. scheme.

Remeasurements

The pre-tax cumulative amount of remeasurement gains/losses recognized in the statement of comprehensive income is as follows:

Remeasurements

	2018	2017
Position at January 1	(174)	(201)
Recognized in other comprehensive income	12	27
Cumulative amount at December 31	(162)	(174)

Remeasurement gains/(losses) for the year

	2018	2017
Remeasurement gains/(losses) due to experience on defined benefit obligations	22	28
Remeasurement gains/(losses) due to demographic assumptions in defined benefit obligations	13	7
Remeasurement gains/(losses) due to financial assumption changes in defined benefit obligations	38	(49)
Remeasurement gains/(losses) on defined benefit obligations	73	(14)
Return on plan asset greater/(less) than discount rate	(60)	52
Change in irrecoverable surplus, other than interest	(1)	(11)
Recognized gains/(losses) in other comprehensive income	12	27

Experience adjustments result from changes, such as changes in plan populations, data corrections, and differences in cash flows.

Demographic assumption changes relate to differences between the current and previous actuarial assumptions in mortality tables, rate of employee turnover, disability, and early retirement.

Financial assumption changes relate to differences between the current and previous actuarial assumptions like discount rate, pension rate increases, price increases, and future salary and benefit levels.

In 2018, there were remeasurement gains mainly due to positive demographic assumption changes, experience changes in the Netherlands, and relatively higher discount rates compared to prior year.

The actual return on plan assets for the year ended December 31, 2018, was a loss of €31 million (2017: gain of €80 million). The actual returns on plan assets were lower in 2018 compared to 2017, mainly due to lower returns on shares, but are in line with market returns.

Duration

Duration is an indicator of the plan liabilities' sensitivity for changes in interest rates. The liability-weighted duration for the defined benefit plan liabilities is as follows:

duration in number of years	2018	2017
Retirement plans		
The Netherlands	18.2	18.8
United Kingdom	16.8	17.0
United States	10.9	11.6
Other post-employment plans		
United States	11.5	12.0

Investment mix

The breakdown of plan assets as of December 31 is as follows:

	2018	Quoted	Unquoted	2017	Quoted	Unquoted
Equity						
Equity	326	326	–	396	396	–
Private equity	6	–	6	8	–	8
Bonds						
Government bonds	450	450	–	453	453	–
Corporate bonds	419	419	–	400	400	–
Other						
Insurance contracts	62	–	62	60	–	60
Real estate	93	46	47	87	47	40
Derivatives and other	10	9	1	22	22	–
Cash	7	7	–	7	7	–
Total	1,373	1,257	116	1,433	1,325	108

At December 31, 2018, 92% of the plan assets relate to quoted financial instruments (2017: 92%). Plan assets do not include any direct investments in the group or financial instruments issued by the group; nor do they include any property or other assets used by the group. However, pension plans invest in index funds and as a result these plans may indirectly hold financial instruments issued by the group.

Proportion of plan assets

in %	2018	2017
Equity	24	28
Bonds	63	60
Other	13	12
Total	100	100

Note 30 – Provisions

	2018	2017
Provision for restructuring commitments	20	23
Provision for acquisition integration	0	1
Subtotal restructuring provisions	20	24
Other provisions	3	0
Total	23	24
Of which short-term	20	22

Movements in provisions

		Restructuring provisions	Other provisions	2018	2017
Position at January 1		2	0	2	1
Add: short-term commitments		22	0	22	26
Total at January 1		24	0	24	27
Movements					
Acquired through business combinations	*Note 7*	–	1	1	–
Additions for restructuring of stranded costs following divestments	*Note 7*	1	–	1	3
Additions to acquisition integration	*Note 11*	0	–	0	1
Other additions		17	1	18	21
Total additions		18	2	20	25
Appropriation of provisions		(22)	0	(22)	(27)
Release of provisions		0	–	0	0
Exchange differences and other movements		0	1	1	(1)
Total movements		(4)	3	(1)	(3)
Total at December 31		20	3	23	24
Less: short-term commitments		(20)	0	(20)	(22)
Position at December 31		0	3	3	2

Other additions of €17 million to restructuring provisions mainly relate to programs announced in Legal & Regulatory and Tax & Accounting.

Most of the provisions will be settled within the next twelve months (€20 million). The remaining long-term part of the provisions (€3 million) is expected to be settled in 2020 and beyond.

Restructuring provision

The provisions for restructuring include provisions for the integration of activities, including acquisitions, and other substantial changes of the organizational structure, expected redundancy payments, and onerous contracts. A provision for restructuring is recognized only when the general recognition criteria are met. Redundancy payments are recognized as an expense when the group is demonstrably committed – without realistic possibility of withdrawal – to a formal detailed plan to either terminate employment before the normal retirement date, or to provide termination benefits as result of an offer made to encourage voluntary redundancy.

Acquisition integration provision
The acquisition integration provision relates to non-recurring expenses to be incurred for the integration of activities acquired through business combinations, and mainly consists of expected redundancy payments, IT migration costs, and onerous contracts.

Other provisions
Other provisions include provisions for dilapidation commitments on real estate and any other provisions, like provisions for onerous contracts.

Note 31 – Capital and Reserves

Share capital and number of shares
The authorized capital amounts to €143.04 million, consisting of €71.52 million in ordinary shares (nominal value of €0.12 per ordinary share) and €71.52 million in preference shares.

Ordinary shares
The issued share capital consists of ordinary shares. On October 2, 2018, the company completed the reduction in ordinary share capital approved by shareholders at the Annual General Meeting of Shareholders held on April 19, 2018. In 2018, the company cancelled 10,600,000 ordinary shares previously held as treasury shares (2017: 11,579,879 ordinary shares were cancelled). Therefore, in 2018, the total number of issued ordinary shares was reduced to 279,716,860 shares, with a value of €34 million at December 31, 2018 (2017: 290,316,860 shares, with a value of €35 million).

Incremental costs directly attributable to the issue of ordinary shares are recognized as a deduction from equity, net of any tax effects.

Preference shares
Preference share capital is classified as equity if it is non-redeemable, or redeemable only at the company's option, and any dividends are discretionary. There are no preference shares issued.

Repurchase and reissue of share capital (treasury shares)
When share capital recognized as equity is repurchased (treasury shares), the amount of the consideration paid, including directly attributable costs, is recognized as a change in equity.

For a reconciliation of the (weighted) average number of shares and earnings per share, see *Note 6 – Earnings per Share*.

Number of shares

in thousands	**Number of ordinary shares**		**Minus: number of treasury shares**		**Total number of ordinary shares outstanding**	
	2018	2017	2018	2017	2018	2017
At January 1	290,317	301,897	(8,956)	(14,198)	281,361	287,699
Cancellation of shares	(10,600)	(11,580)	10,600	11,580	–	–
Repurchased shares	–	–	(11,503)	(7,768)	(11,503)	(7,768)
Long-Term Incentive Plan	–	–	1,306	1,430	1,306	1,430
At December 31	279,717	290,317	(8,553)	(8,956)	271,164	281,361
Issued share capital at €0.12 (€'000)	33,566	34,838				
Dividend proposal (€)					0.98	0.85
Proposed dividend distribution (€'000)					265,740	239,157

Treasury shares
Treasury shares are recorded at cost, representing the market price on the acquisition date. This reserve is not available for distribution. Treasury shares are deducted from retained earnings. The company has announced that it will offset the dilution of its performance share issuance annually via share repurchases.

In 2018, the company executed a share buyback of €550 million (2017: €300 million and a carry-over of €2 million relating to the share buyback program 2016). The company repurchased 11.5 million (2017: 7.8 million) of ordinary shares under this program at an average stock price of €47.81 (2017: €38.62). In 2018, the company used 1.3 million shares held in treasury for the vesting of the LTIP grant 2015-17 and vesting of current share plans due to exceptional circumstances.

At December 31, 2017, share buybacks had been executed for an amount of €50 million under a mandate with a value of €100 million and an accrual was recognized in respect of this non-discretionary commitment for €50 million (see *Note 26 – Other Current Liabilities*).

Legal reserves participations
Legal reserves participations contain appropriations of profits of group companies, which are allocated to a legal reserve based on statutory and/or legal requirements. This includes reserves carried in respect of amounts capitalized for development cost. The legal reserve is not available for distribution.

Hedge reserve
Hedge reserve relates to the effective portion of the change in fair value of the hedging instrument used for cash flow hedging and net investment hedging purposes. The hedge reserve is a legal reserve and not available for distribution.

Translation reserve
Translation reserve contains foreign exchange differences arising from the translation of the net investments in foreign operations. When a foreign operation is sold, exchange differences that were recorded in equity prior to the sale are reclassified from equity to profit or loss as part of the gain or loss on divestment. The translation reserve is a legal reserve and is not available for distribution.

Dividends
Dividends are recognized as a liability upon being declared. Pursuant to Article 29 of the Articles of Association, and with the approval of the Supervisory Board, a proposal will be submitted to the Annual General Meeting of Shareholders to make a total distribution of €0.98 per share over financial year 2018 (dividend over financial year 2017: €0.85 per share).

The group applies a semi-annual dividend frequency. On February 20, 2018, the Supervisory Board and Executive Board of Wolters Kluwer resolved to distribute an interim dividend of €0.34 per share, equal to 40% of prior year's dividend (compared to 2017 interim dividend which amounted to 25% of prior year's dividend). The interim dividend was paid on September 19, 2018. Subject to the approval of the Annual General Meeting of Shareholders a final dividend of €0.64 per ordinary share will be paid in cash on May 16, 2019.

The company has a progressive dividend policy under which the company expects to increase the total dividend per share each year.

Free distributable reserves
The share premium reserve, retained earnings, and undistributed profit for the year are available for dividend distribution.

Option preference shares
The company has granted an option to purchase preference shares to the Wolters Kluwer Preference Shares Foundation (Stichting Preferente Aandelen Wolters Kluwer). The dividend on these shares would equal a normal market rate of return, based on a weighted average interest rate applied by the European Central Bank. Therefore, the fair value of the option is deemed to be zero.

Shareholder's equity movement schedule
For the equity movement schedule reference is made to *Note 45 - Shareholders' Equity*.

Note 32 – Share-based Payments

Long-Term Incentive Plan

General
Executive Board members and senior management are awarded shares under the equity-settled Long-Term Incentive Plan (LTIP); the performance conditions are based on Diluted Earnings per Share (EPS) at constant currencies and Total Shareholder Return (TSR).

For the Executive Board, the LTIP awards depend partially on the TSR performance (50% of the value of the conditionally awarded rights on shares) and partially on the EPS performance (50% of the value of the conditionally awarded rights on shares).

For senior management, the LTIP awards depend partially on the TSR performance (50% of the conditionally awarded rights on shares) and partially on the EPS performance (50% of the conditionally awarded rights on shares). The TSR-related LTIP awards for the Executive Board and senior management are based on the same payout schedules. The performance period of the LTIP is three years, at the beginning of which a base number of shares (norm payout) is conditionally awarded to each beneficiary.

In 2018, €22 million has been recognized within personnel expenses in profit or loss (2017: €23 million) related to the total cost of the LTIP grants for 2016-18, 2017-19, and 2018-20, see *Note 12 – Personnel Expenses*.

Conditionally awarded TSR related LTIP shares
For the conditional TSR awards that were awarded up to and including 2018, the payout of shares after three years fully depends on the group's TSR relative to a pre-defined group of 15 peer companies. Vesting of these conditional grants is subject to the non-market condition that the participant stays with the group until the plan's maturity.

The expense of the TSR-related LTIP is recognized ratably in profit or loss over the performance period. Actual awards at the end of the performance period will range from 0% to 150% of the norm payout.

There will be no payout for the Executive Board and senior management if the group ends below the eighth position in the TSR ranking, while other payouts will be made as follows: 150% for first or second position, 125% for third or fourth position, 100% for fifth or sixth position, and 75% for seventh or eighth position.

LTIP 2018-20 and 2017-19 grants for Executive Board and senior management

	LTIP 2018-20	LTIP 2017-19
Fair value of TSR shares at grant date (€)	30.00	23.42
Fair value of EPS shares at grant date (€)	40.72	31.90
TSR shares – key assumptions		
Share price at grant date (€)	43.48	34.42
Expected volatility	20%	20%
Expected life	3 years	3 years
Annual dividend increase	5.6%	5.1%
Risk-free interest rate (yield on Dutch 3-year government bonds)	0.0%	0.0%

Conditional awarded EPS-related LTIP shares
The amount recognized as an expense in a year is adjusted to reflect the number of share awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service and non-market conditions at the vesting date. For the EPS-related shares, there will be no payout if the performance over three years is less than 50% of the target. In case of overachievement of the target, the Executive Board members and senior management can earn up to a maximum of 150% of the conditionally awarded shares.

The fair value of each LTIP 2018-20 EPS-related performance share granted to the Executive Board and senior management is estimated at €40.72 (LTIP 2017-19: €31.90; LTIP 2016-18: €28.68).

LTIP 2015-17
The LTIP 2015-17 vested on December 31, 2017. Total Shareholder Return (TSR) ranked second relative to the peer group of 15 companies, resulting in a payout of 150% of the conditional base number of shares awarded to the Executive Board and senior management. The EPS-related shares resulted in a payout of 150%.

A total number of 1,303,741 shares were released on February 22, 2018, at a volume-weighted average price of Wolters Kluwer N.V. of €41.9023.

LTIP 2015-2017: number of shares vesting and cash equivalent

number of shares	Outstanding at December 31, 2017	Increase on conditional number of TSR shares (50%)	Increase on conditional number of EPS shares (50%)	Payout/ Vested shares December 31, 2017	Cash value vested shares[1]
N. McKinstry, Chairman	166,997	48,811	34,688	250,496	10,496
K.B. Entricken	48,278	14,111	10,028	72,417	3,034
Total Executive Board	215,275	62,922	44,716	322,913	13,530
Senior Management	653,884	163,472	163,472	980,828	41,099
Total	869,159	226,394	208,188	1,303,741	54,629

[1] Cash value in thousands of euros; calculated as the number of shares vested multiplied by the volume average price on February 22, 2018.

LTIP 2016-18
The LTIP 2016-18 vested on December 31, 2018. On Total Shareholder Return (TSR), Wolters Kluwer ranked third relative to its peer group of 15 companies, resulting in a payout of 125% of the conditional base number of shares awarded to the Executive Board and senior management. The EPS-related shares resulted in a payout of 150%. The shares will be released on February 21, 2019. The volume weighted average price for the shares released will be based on the average exchange prices traded at the Euronext Amsterdam N.V. on February 21, 2019, the first day following the company's publication of its annual results.

Number of performance shares outstanding, corrected for the actual performance of the respective LTIP grants

LTIP 2016-18

number of shares	Total	EPS-condition	TSR-condition
Total grant	849,996	409,611	440,385
Forfeited in previous years	(65,882)	(32,941)	(32,941)
Shares outstanding at January 1, 2018	784,114	376,670	407,444
Forfeited/vested during the year	(70,380)	(35,190)	(35,190)
Effect of 150% vesting based on EPS-ranking	170,775	170,775	–
Effect of 125% vesting based on TSR-ranking	93,081	–	93,081
Vested at December 31, 2018	977,590	512,255	465,335

LTIP 2017-19

base number of shares at 100% payout	Total	EPS-condition	TSR-condition
Conditionally awarded grant 2017	760,967	366,742	394,225
Forfeited in previous years	(11,544)	(5,772)	(5,772)
Shares outstanding at January 1, 2018	749,423	360,970	388,453
Forfeited/vested during the year	(63,182)	(31,591)	(31,591)
Shares outstanding at December 31, 2018	686,241	329,379	356,862

LTIP 2018-20

base number of shares at 100% payout	Total	EPS-condition	TSR-condition
Conditionally awarded grant 2018	611,122	294,775	316,347
Forfeited/vested during the year	(8,754)	(4,377)	(4,377)
Shares outstanding at December 31, 2018	602,368	290,398	311,970

Overall overview of outstanding performance shares: LTIP 2018-20 and LTIP 2017-19

base numbers of shares at 100% payout	LTIP 2018-20	LTIP 2017-19	Total
Conditionally awarded grant 2017		760,967	760,967
Forfeited in previous years		(11,544)	(11,544)
Shares outstanding at January 1, 2018		749,423	749,423
Conditionally awarded grant 2018	611,122		611,122
Forfeited/vested in 2018	(8,754)	(63,182)	(71,936)
Shares outstanding at December 31, 2018	602,368	686,241	1,288,609

Fair value summary of conditionally awarded shares per LTIP grant
The fair value of each conditionally awarded share under the running LTIP grants for the Executive Board and senior management of the group, as determined by an outside consulting firm, is summarized as follows:

Fair value of conditionally awarded shares under each LTIP grant

in euro	Fair value EPS shares	Fair value TSR shares
LTIP 2018-20	40.72	30.00
LTIP 2017-19	31.90	23.42
LTIP 2016-18	28.68	20.87

The fair values of the conditionally awarded shares under the LTIP 2018-20 grants increased compared to the previous year, mainly because of the higher share price of Wolters Kluwer at January 1, 2018, compared to January 1, 2017.

Note 33 – Related Party Transactions

The company has a related party relationship with its subsidiaries, equity-accounted investees, the pension funds, and members of the Supervisory Board and the Executive Board. Wolters Kluwer N.V. has filed a list of the subsidiaries at the Dutch Commercial Register in The Hague, the Netherlands. Related party transactions are conducted on an at arm's length basis with terms comparable to transactions with third parties.

For transactions with key management, reference is made to *Note 36 – Remuneration of the Executive Board and Supervisory Board*.

The group has no significant transactions or outstanding balances with its equity-accounted investees other than its equity-interest holdings.

Note 34 – Audit Fees

With reference to Section 2:382a (1) and (2) of the Dutch Civil Code, the following fees for the financial year have been charged by Deloitte Accountants B.V. to the company, its subsidiaries, and other consolidated entities. Deloitte is not involved in most of the statutory audits of operating companies that are not within the scope of the group audit.

Audit fees 2018

in millions of euros	Deloitte Accountants B.V.	Other Deloitte member firms and affiliates	Total Deloitte
Statutory audit of annual accounts	0.8	2.1	2.9
Other assurance services	0.0	0.0	0.0
Tax advisory services	–	0.1	0.1
Other non-audit services	–	0.1	0.1
Total	0.8	2.3	3.1

Audit fees 2017

in millions of euros	Deloitte Accountants B.V.	Other Deloitte member firms and affiliates	Total Deloitte
Statutory audit of annual accounts	0.9	2.8	3.7
Other assurance services	0.0	0.3	0.3
Tax advisory services	–	0.0	0.0
Other non-audit services	–	0.0	0.0
Total	0.9	3.1	4.0

The audit fees for 2018 and 2017 include final invoicing with respect to the statutory audits of 2017 and 2016.

Note 35 – Commitments and Contingent Liabilities

Leases

The group leases a large number of offices up operating leases. The leases run for a period up to 15 years, with often an option to renew the lease. Lease payments are increased to reflect market rentals. None of the leases include contingent rentals.

At December 31, 2018, annual commitments under rental and operating lease agreements, excluding anticipated renewals, amounted to €79 million (2017: €107 million). The average term of these commitments is approximately 5.2 years (2017: 3.5 years).

Non-cancellable operating lease rentals are payable as follows:

	2018	2017
Less than one year	62	90
Between one and five years	134	136
More than five years	80	26
Total undiscounted expected operating lease payments	276	252

Some of the leased property is sublet by the group. Sublease payments of €1 million (2017: €1 million) are expected to be received during the following financial year. The group has recognized a provision of €0 million related to these subleases (2017: €0 million).

Guarantees

The group has the following outstanding guarantees at December 31:

	2018	2017
Bank credit facilities	196	191
Parental performance guarantees to third parties	13	13
Guarantee to subsidiary	20	8
Other bank guarantees (mainly real estate)	19	25
Royalty payments to health societies	2	5
Total outstanding guarantees	250	242

Of the guarantees issued for the bank credit facilities on behalf of several subsidiaries, €2 million had been utilized (2017: €5 million).

Legal and judicial proceedings and claims
The group is involved in legal and judicial proceedings and claims in the ordinary course of business. Liabilities and contingencies relating to these matters are periodically assessed based upon the latest information available, usually with the assistance of lawyers and other specialists.

A liability is accrued only if an adverse outcome is probable and the amount of the loss can be reasonably estimated. If one of these conditions is not met, the proceeding or claim is disclosed as contingent liability if material. The actual outcome of a proceeding or claim may differ from the estimated liability and consequently may affect the financial performance and position of the group.

Note 36 – Remuneration of the Executive Board and Supervisory Board

Remuneration costs Executive Board under IFRS, on accrual and cost basis
The table below provides the accounting costs of the total compensation of the Executive Board recognized in the statement of profit or loss:

	Salary	STIP	Contribution pension plan	Social security	Other benefits	Share-based payments (LTIP)[2]	Subtotal	Tax related cost	Total
in thousands of euros									2018
N. McKinstry, Chairman[1,3]	1,283	1,697	52	21	185	4,554	7,792	(3,068)	4,724
K.B. Entricken[4]	645	737	28	88	349	1,451	3,298	670	3,968
Total	1,928	2,434	80	109	534	6,005	11,090	(2,398)	8,692

	Salary	STIP	Contribution pension plan	Social security	Other benefits	Share-based payments (LTIP)[2]	Subtotal	Tax related cost	Total
in thousands of euros									2017
N. McKinstry, Chairman[1,3]	1,276	1,805	47	21	220	4,292	7,661	1,640	9,301
K.B. Entricken[4]	657	396	422	47	267	1,314	3,103	718	3,821
Total	1,933	2,201	469	68	487	5,606	10,764	2,358	13,122

[1] In 2018, Ms. McKinstry's salary was $1,390,000 (€1,283,484). In 2018, Ms. McKinstry elected not to defer base salary and variable compensation to pension. The 2018 STIP bonus is calculated on a U.S. dollar denominated equivalent of total salary as: $1,390,000 x 144.17% ($2,003,957 equivalent to €1,696,831).
[2] LTIP share-based payments are based on IFRS accounting policies and therefore do not reflect the actual payout or value of performance shares released upon vesting.
[3] The 2018 tax related cost decreased compared to 2017 mainly due to a refund of payroll taxes of €3,038,776 (relating to the years 2016 and 2017 for Ms. McKinstry).
[4] In 2018, Mr. Entricken did not elect to defer base salary and variable compensation to pension. In 2017, Mr. Entricken elected to defer 50% of the accrued 2017 STIP bonus, once paid in 2018, and 50% of the payout of the vested LTIP shares under grant 2015-2017 to pension in 2018.

Long-Term Incentive Plan (LTIP) for Executive Board members

LTIP 2015-17 vesting and payout
The LTIP 2015-17 vested on December 31, 2017. On Total Shareholder Return (TSR), Wolters Kluwer ranked second relative to its peer group of 15 companies, resulting in a payout of 150% of the conditional base number of shares awarded to the Executive Board members. The EPS-related LTIP 2015-2017 grant ended at a 150% payout to the Executive Board. See *Note 32 – Share-based Payments* for the cash equivalents of these vested shares.

LTIP 2016-18
The LTIP 2016-18 vested on December 31, 2018. On Total Shareholder Return (TSR), Wolters Kluwer ranked third relative to its peer group of 15 companies, resulting in a payout of 125% of the conditional base number of shares awarded to the Executive Board members. The EPS-related LTIP 2016-18 grant ended at 150% of target.

Number of shares	**Outstanding at December 31, 2018**	**Additional conditional number of TSR-shares (25%)**	**Additional conditional number of EPS-shares (50%)**	**Vested/payout February 21, 2019**
N. McKinstry, Chairman	148,000	21,416	31,168	200,584
K.B. Entricken	47,246	6,837	9,950	64,033
Total	195,246	28,253	41,118	264,617

Vesting LTIP 2016-18 shares will be released on February 21, 2019. The volume-weighted average price for the shares released will be based on the average exchange prices traded at the Euronext Amsterdam N.V. on February 22, 2019, the first day following the company's publication of its annual results.

LTIP 2018-20 and LTIP 2017-19
The Executive Board members have been conditionally awarded the following number of shares based on a 100% payout, subject to the conditions of the LTIP grants for 2018-20 and 2017-19.

	Conditionally awarded TSR based shares	**Conditionally awarded EPS based shares**	**Conditionally awarded TSR based shares**	**Conditionally awarded EPS based shares**	**Total conditionally awarded shares**
Base numbers of shares at 100% payout	LTIP 2018-20	LTIP 2018-20	LTIP 2017-19	LTIP 2017-19	December 31, 2018
N. McKinstry, Chairman	62,253	45,864	78,345	57,519	243,981
K.B. Entricken	19,686	14,503	25,042	18,385	77,616
Total	81,939	60,367	103,387	75,904	321,597

Shares owned by Executive Board members
At December 31, 2018, the Executive Board jointly held 391,274 shares (2017: 326,650 shares), of which 354,638 shares (2017: 292,014 shares) were held by Ms. McKinstry and 36,636 shares (2017: 34,636) by Mr. Entricken.

Remuneration of Supervisory Board members

in thousands of euros	Member of Selection and Remuneration Committee	Member of Audit Committee	2018	2017
F. J.G.M. Cremers, Chairman [1]	✓		117	60
D.R. Hooft Graafland, Deputy Chairman[2]		✓	100	80
B.F.J. Angelici		✓	85	72
J. A. Horan	✓		91	88
B.J. Noteboom		✓	82	72
F. M. Russo		✓	97	87
A. Ziegler[3]	✓		95	57
P.N. Wakkie[4]			–	25
L.P. Forman[4]			–	32
Total			667	573

[1] Mr. Cremers has been appointed as a new member of the Supervisory Board at the Annual General Meeting of Shareholders of 2017. After his appointment, Mr. Cremers succeeded Mr. Wakkie as Chairman of the Supervisory Board.
[2] Mr. Hooft Graafland has been appointed as Vice-Chairman of the Supervisory Board at the Annual General Meeting of Shareholders of 2017.
[3] Ms. Ziegler has been appointed as member of the Supervisory Board at the Annual General Meeting of Shareholders of 2017.
[4] Mr. Wakkie and Mr. Forman have retired from the Supervisory Board after the Annual General Meeting of Shareholders of 2017.

Shares owned by Supervisory Board members

At December 31, 2018, Mr. Noteboom held 4,865 shares (2017: 4,865) in the company. The other members of the Supervisory Board do not own shares in Wolters Kluwer.

Note 37 – Events after Balance Sheet Date

Subsequent events were evaluated up to February 19, 2019, which is the date the consolidated financial statements were authorized for issue by the Executive Board and Supervisory Board. There are no events to report.

Company Financial Statements

Company Financial Statements

Statement of Profit or Loss of Wolters Kluwer N.V.

in millions of euros		2018	2017*
General and administrative costs		(66)	(66)
Other operating income/(expense)		0	0
Operating profit		66	66
Financing income/(expense) third parties		(80)	(118)
Financing income/(expense) related parties		1	6
Profit/(loss) before tax		(13)	(46)
Income tax income/(expense)		(34)	(24)
Profit/(loss) after tax		(47)	(70)
Results from subsidiaries, net of tax	*Note 39*	704	706
Profit for the year		657	636

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Statement of Financial Position of Wolters Kluwer N.V.

in millions of euros and before appropriation of results, at December 31		2018	2017 restated*	January 1, 2017 restated*
Non-current assets				
Financial assets	*Note 39*	6,204	5,827	6,158
Deferred tax assets		16	21	27
Total non-current assets		6,220	5,848	6,185
Working capital				
Accounts receivable	*Note 40*	310	721	517
Cash and cash equivalents	*Note 41*	10	320	197
Total current assets		320	1,041	714
Short-term bonds	*Note 27*	–	750	–
Total current liabilities	*Note 42*	2,238	1,346	1,701
Working capital		(1,918)	(1,055)	(987)
Capital employed		4,302	4,793	5,198
Non-current liabilities				
Long-term debt:				
Bonds	*Note 27*	1,628	1,627	1,878
Private placements	*Note 27*	407	396	410
Derivative financial instruments	*Note 27*	–	3	–
Total long-term debt		2,035	2,026	2,288
Long-term debt to subsidiaries	*Note 43*	–	539	351
Total non-current liabilities		2,035	2,565	2,639
Equity				
Issued share capital	*Note 31*	34	35	36
Share premium reserve		87	87	87
Legal reserves		148	(14)	458
Other reserves		1,341	1,484	1,489
Undistributed profit		657	636	489
Shareholders' equity	*Note 45*	2,267	2,228	2,559
Total financing		4,302	4,793	5,198

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

Notes to the Company Financial Statements

Note 38 – Significant Accounting Policies

General
Where necessary, certain reclassifications have been made to the prior-year financial information and the related notes to conform to the current year presentation and to improve insights. These have had no impact on shareholders' equity and profit for the year.

Accounting policies
The financial statements of Wolters Kluwer N.V. are prepared in accordance with the Dutch Civil Code, Book 2, Title 9, with the application of the regulations of section 362.8 allowing the use of the same accounting policies as applied for the consolidated financial statements. These accounting policies are described in the *Notes to the Consolidated Financial Statements*. The Company Financial Statements have also been restated for the effect of IFRS 15 and IFRS 9, please refer to *Note 1 – General and Basis of Preparation* for more detail on these accounting standards.

Subsidiaries are valued using the equity method, applying the IFRS accounting policies endorsed by the European Union. Following the adoption of IFRS 9 by the group, and our interpretation of the Dutch Accounting Standard 100.107A, the company shall, upon identification of a credit loss on an intercompany loan and/or receivable, eliminate the carrying amount of the intercompany loan and/or receivable for the value of the identified credit loss.

Any related party transactions between subsidiaries, associates, investments, and with members of the Supervisory Board and the Executive Board, and the ultimate parent company Wolters Kluwer N.V. are conducted on an at arm's length basis with terms comparable to transactions with third parties.

For the following disclosures reference is made to the notes to the consolidated financial statements:
- *Note 27 - Long-term Debt;*
- *Note 31 - Capital and Reserves;*
- *Note 32 - Share-based Payments;*
- *Note 33 - Related Party Transactions,* including loans, advances and guarantees to Executive Board, Supervisory Board, and key employees;
- *Note 36 - Remuneration of the Executive Board and Supervisory Board;* and
- *Note 37 - Event after Balance Sheet Date.*

Note 39 – Financial Assets

		2018	2017*
Equity value of subsidiaries		6,183	5,827
Long-term receivable from subsidiaries		0	0
Derivative financial instruments	*Note 27*	21	–
Total		6,204	5,827

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation.*

Movement equity value of subsidiaries

	2018	2017*
Position at January 1**	5,818	6,147
Results from subsidiaries, net of tax	704	706
Dividend received from subsidiaries	(483)	(539)
Remeasurement gains/(losses) on defined benefit plans, net of tax	9	14
Foreign exchange differences	135	(501)
Position at December 31	6,183	5,827

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.
** Restated for IFRS 9 for an amount of €9 million, net of tax, at January 1, 2018. See *Note 1 – General and Basis of Preparation*.

Note 40 – Accounts Receivable

		2018	2017
Receivables from subsidiaries		307	717
Derivative financial instruments	*Note 27*	0	1
Current tax receivable		–	0
Other receivables		3	3
Total		310	721

Note 41 – Cash and Cash Equivalents

Cash and cash equivalents comprise cash balances and call deposits. Bank overdrafts are shown within *Note 42 - Current Liabilities*. There is no restricted cash.

All deposits are demand deposits that are readily convertible into cash.

Note 42 – Current Liabilities

		2018	2017
Debts to subsidiaries		1,439	918
Multi-currency rollover facility		144	–
Bank overdrafts		595	284
Derivative financial instruments	*Note 27*	0	–
Current tax payable		0	–
Interest payable		32	67
Share buyback commitment	*Note 31*	–	50
Other liabilities		28	27
Total		2,238	1,346

Note 43 – Long-term Debt to Subsidiaries

Long-term debt to subsidiaries consists of intercompany loans with interest at market-based rates.

The movement of the long-term debt to subsidiaries is as follows:

	2018	2017
Position at January 1	539	351
New debt	–	239
Redemptions	(274)	–
Reclassification to current liabilities	(254)	–
Foreign exchange differences	(11)	(51)
Position at December 31	0	539

Note 44 – Personnel Expenses

		2018	2017
Salaries and wages		29	27
Social security charges		(1)	3
Costs of defined contribution plans		0	0
Expenses related to defined benefit plans		1	1
Equity-settled share-based payment transactions	*Note 32*	22	23
Total		51	54
Employees			
In full-time equivalents at December 31		146	136
Thereof employed outside the Netherlands		39	33
In full-time equivalents average per annum*		147	134

* Average full-time equivalents per annum include temporary help and contractors, whereas full-time equivalents at December 31 only relate to staff on the payroll of the company.

Note 45 – Shareholders' Equity

			Legal reserves			Other reserves			
	Issued share capital	Share premium reserve	Legal reserve participations	Hedge reserve	Translation reserve	Treasury shares	Retained earnings	Undistributed profit	Shareholders' equity
Balance at December 31, 2016	36	87	72	(138)	524	(406)	1,957	489	2,621
Change in accounting policy (IFRS 15)							(62)		(62)
Restated balance at January 1, 2017	36	87	72	(138)	524	(406)	1,895	489	2,559
Items that are or may be reclassified subsequently to the statement of profit or loss:									
Exchange differences on translation of foreign operations*					(497)				(497)
Exchange differences on translation of equity-accounted investees					(1)				(1)
Reclassification of foreign exchange differences on loss of control					0				0
Net gains/(losses) on hedges of net investments in foreign operations				24					24
Effective portion of changes in fair value of cash flow hedges				(14)					(14)
Net change in fair value of cash flow hedges reclassified to the statement of profit or loss				14					14
Tax on other comprehensive income					0				0
Items that will not be reclassified to the statement of profit or loss:									
Remeasurements on defined benefit plans							27		27
Tax on other comprehensive income							(14)		(14)
Other comprehensive income/(loss) for the year, net of tax*				24	(498)		13		(461)
Profit for the year*								636	636
Total comprehensive income/(loss) for the year				24	(498)		13	636	175
Appropriation of profit previous year							489	(489)	0
Transactions with owners of the company, recognized directly in equity:									
Share-based payments							23		23
Cancellation of shares	(1)					358	(357)		0
Release LTIP shares						51	(51)		0
Cash dividend 2016							(172)		(172)
Interim cash dividend 2017							(57)		(57)
Repurchased shares						(300)			(300)
Other movements			2				(2)		0
Balance at December 31, 2017	35	87	74	(114)	26	(297)	1,781	636	2,228

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

			Legal reserves			Other reserves			
	Issued share capital	Share premium reserve	Legal reserve participations	Hedge reserve	Translation reserve	Treasury shares	Retained earnings	Undistributed profit	Shareholders' equity
Restated balance at December 31, 2017*	35	87	74	(114)	26	(297)	1,781	636	2,228
Change in accounting policy (IFRS 9)							(9)		(9)
Restated balance at January 1, 2018	35	87	74	(114)	26	(297)	1,772	636	2,219
Items that are or may be reclassified subsequently to the statement of profit or loss:									
Exchange differences on translation of foreign operations					134				134
Exchange differences on translation of equity-accounted investees					1				1
Reclassification of foreign exchange differences on loss of control					–				–
Cost of hedging - changes in fair value				(4)					(4)
Net gains/(losses) on hedges of net investments in foreign operations				(8)					(8)
Effective portion of changes in fair value of cash flow hedges				23					23
Net change in fair value of cash flow hedges reclassified to the statement of profit or loss				(10)					(10)
Tax on other comprehensive income					0				0
Items that will not be reclassified to the statement of profit or loss:									
Remeasurements on defined benefit plans							12		12
Tax on other comprehensive income							(4)		(4)
Other comprehensive income/(loss) for the year, net of tax				1	135		8		144
Profit for the year								657	657
Total comprehensive income/(loss) for the year				1	135		8	657	801
Appropriation of profit previous year							636	(636)	0
Transactions with owners of the company, recognized directly in equity:									
Share-based payments							22		22
Cancellation of shares	(1)					419	(418)		0
Release LTIP shares						55	(55)		0
Cash dividend 2017							(181)		(181)
Interim cash dividend 2018							(94)		(94)
Repurchased shares						(500)			(500)
Other movements			26				(26)		0
Balance at December 31, 2018	34	87	100	(113)	161	(323)	1,664	657	2,267

* Restated for IFRS 15. See *Note 1 – General and Basis of Preparation*.

The legal reserves and treasury shares reserve are not available for dividend distribution to the owners of the company.

Note 46 – Commitments and Contingent Liabilities

Guarantees
Pursuant to section 403 of the Dutch Civil Code, Book 2, the company has assumed joint and several liabilities for the debts arising out of the legal acts of several subsidiaries in the Netherlands. The relevant declarations have been filed with and are open for inspection at the Dutch Commercial Register for the district in which the legal entity respective to the liability has its registered office.

The company has the following outstanding guarantees at December 31:

	2018	2017
Bank credit facilities	196	191
Parental performance guarantees to third parties	13	13
Guarantee to subsidiary	20	8
Total guarantees outstanding	229	212

Of the guarantees issued for the bank credit facilities on behalf of several subsidiaries, €2 million had been utilized (2017: €5 million).

The company forms part of a Dutch fiscal unity and pursuant to standard conditions has assumed joint and several liabilities for the tax liabilities of the fiscal unity.

Note 47 – Details of Participating Interests

A list of subsidiaries and affiliated companies, prepared in accordance with the relevant legal requirements (Dutch Civil Code, Book 2, Part 9, Section 379) is filed at the offices of Chamber of Commerce of The Hague, the Netherlands.

Note 48 – Profit Appropriation

Article 29 of the Articles of Association
Paragraph 1
From the profit as it appears on the annual accounts adopted by the General Meeting, a dividend shall be distributed on the preference shares, whose percentage – calculated on the paid part of the nominal amount – is equal to that of the average of the interest rate on Basis Refinancing Transactions (Refi interest of the European Central Bank). These are weighted according to the number of days over which this rate of interest applies during the financial year over which the dividend was paid, increased by a debit interest rate to be determined by the large Dutch banks and also increased by a margin determined by the Executive Board and approved by the Supervisory Board of one percentage point (1%) minimum and four percentage points (4%) maximum. The dividend on the preference shares shall be calculated on an annual basis on the paid part of the nominal amount. If in any financial year the distribution referred to in the first full sentence cannot be made or can only be made in part because the profits are not sufficient, the deficiency shall be distributed from the distributable part of the company's equity. No further dividend shall be distributed on the preference shares.

Paragraph 2
Subsequently such allocations to reserves shall be made as the Executive Board shall determine, subject to the approval of the Supervisory Board.

Paragraph 3
Any balance remaining after that shall be distributed at the disposal of the General Meeting of Shareholders.

Paragraph 5
Distribution of profit shall be made after adoption of the annual accounts showing that it is permitted.

Paragraph 6
Subject to approval of the Supervisory Board, the Executive Board may resolve on distribution of interim dividend, provided the requirements of paragraph 4 have been met, according to an interim statement of assets and liabilities. It shall relate to the position of the assets and liabilities no earlier than on the first day of the third month before the month in which the resolution on distribution of interim dividend is made known. It shall be drawn up with observance of valuation methods considered generally acceptable. The statement of assets and liabilities shall include the amounts to be reserved by virtue of the law. It shall be signed by the Members of the Executive Board; if the signature of one or more of them is lacking this shall be stated with reasons. The statement of assets and liabilities shall be deposited at the office of the Commercial Register within eight days after the day on which the resolution on distribution is made known.

Paragraph 7
If a loss is suffered for any year, that loss shall be transferred to a new account for set-off against future profits, and for that year no dividend shall be distributed. Based on the proposal of the Executive Board that has been approved by the Supervisory Board, the General Meeting of Shareholders may resolve, however, to delete such a loss by writing it off on a reserve that need not be maintained, according to the law.

Article 30 of the Articles of Association
Paragraph 1
On the proposal of the Executive Board that has been approved by the Supervisory Board, the General Meeting of Shareholders may resolve that a distribution of dividend on ordinary shares shall be made entirely or partially not in money but in ordinary shares in the capital of the company.

Paragraph 2
On the proposal of the Executive Board that has been approved by the Supervisory Board, the General Meeting of Shareholders may resolve on distributions in money or in the manner as referred to in Paragraph 1 to holders of ordinary shares against one or more reserves that need not be maintained under the law.

in millions of euros	2018	2017
Proposed cash distribution	266	239

At the 2019 Annual General Meeting of Shareholders, Wolters Kluwer will propose a final dividend distribution of €0.64 per share, to be paid in cash on May 16, 2019. This will bring the total dividend for 2018 to €0.98 per share, an increase of 15% over the prior year.

Authorization for Issuance

Alphen aan den Rijn, February 19, 2019

Executive Board
N. McKinstry, CEO and Chairman of the Executive Board
K.B. Entricken, CFO and member of the Executive Board

Supervisory Board
F.J.G.M. Cremers, Chairman
D.R. Hooft Graafland, Vice-Chairman
B.F.J. Angelici
J.A. Horan
B.J. Noteboom
F. Russo
A. Ziegler

Other Information on the Financial Statements

Independent auditor's report

To the shareholders and the Supervisory Board of Wolters Kluwer N.V.

Report on the audit of the financial statements for the year ended December 31, 2018, included in the 2018 Annual Report.

Our opinion

We have audited the accompanying financial statements for the year ended December 31, 2018, of Wolters Kluwer N.V. ("the group" or "the company"), based in Alphen aan den Rijn. The financial statements include the consolidated financial statements and the company financial statements as set out on pages 77 to 176 of the annual report.

In our opinion:
- The accompanying consolidated financial statements give a true and fair view of the financial position of Wolters Kluwer N.V. as at December 31, 2018, and of its result and its cash flows for the year ended December 31, 2018, in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU) and with Part 9 of Book 2 of the Dutch Civil Code; and
- The accompanying company financial statements give a true and fair view of the financial position of Wolters Kluwer N.V. as at December 31, 2018, and of its result for the year ended December 31, 2018, in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:
1. The consolidated statement of financial position as at December 31, 2018;
2. The following statements for the year ended December 31, 2018: the consolidated statement of profit or loss, the consolidated statements of comprehensive income, changes in total equity and cash flows; and
3. The notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:
1. The company statement of financial position as at December 31, 2018;
2. The company statement of profit or loss for the year ended December 31, 2018; and
3. The notes to the company financial statements comprising a summary of the significant accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the "Our responsibilities for the audit of the financial statements" section of our report.
We are independent of Wolters Kluwer N.V. in accordance with the EU Regulation on specific requirements regarding statutory audits of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Materiality
Based on our professional judgment, we determined the materiality for the financial statements as a whole at €50 million. The materiality is based on 5.6% of profit before tax (2017 – 5.9%). We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

Materiality overview

Materiality for the financial statements as a whole	€50 million
Basis for materiality	5.6% of profit before tax
Threshold for reporting misstatements	€2.5 million

Audits of the group entities (components) were performed using materiality levels determined by the judgment of the group engagement team, taking into account the materiality of the financial statements as a whole and the reporting structure within the group. Component materiality did not exceed €22.5 million. We agreed with the Supervisory Board that misstatements in excess of €2.5 million, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the group audit

Wolters Kluwer N.V. is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of Wolters Kluwer N.V.

Our group audit mainly focused on significant group entities. Our assessment of entities that are significant to the group was done as part of our audit planning and was aimed to obtain sufficient coverage of the risks of material misstatement for significant account balances, classes of transactions, and disclosures that we have identified. In addition, we considered qualitative factors as part of our assessment. In establishing the overall group audit strategy and plan, we determined the type of work that needed to be performed at the components by the group engagement team and by component auditors. We responded to changes in 2018 following acquisitions and divestments in determining the components in our scope and the nature of procedures to be performed. This resulted among others in a rotation plan for non-significant components with one additional component in Europe being in scope. Where the work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those components to be able to conclude whether sufficient and appropriate audit evidence had been obtained as a basis for our opinion on the financial statements as a whole. The group engagement team directed the planning, reviewed the results of the work performed by component auditors and assessed and discussed the findings with the component auditors during conference calls and site visits. The component auditors conducted work for components in four key geographical segments (The Netherlands, Europe, North America, and Rest of the World). In the current year, the group engagement team visited components in several geographical segments.

The group consolidation, financial statement disclosures, and a number of complex accounting and/or reporting items were audited by the group engagement team. These items include impairment testing on goodwill and acquired identifiable intangible assets, the acquisition of eVision, the divestment of certain assets and business operations, group accounting for current and deferred income taxes, share-based payments, and critical accounting positions subject to management estimates. Specialists were involved amongst others in the areas of information technology, accounting, and valuation.

As part of our year-end audit procedures we have considered our assessment of significant group entities in order to ensure we have obtained appropriate coverage of the risks of material misstatement for significant account balances, classes of transactions, and disclosures that we have identified.

In summary, the group engagement team has:
- Performed procedures on group level on the centralized key audit matters;
- Performed audit procedures at company financial statements of Wolters Kluwer N.V.;
- Used the work of other Deloitte component auditors, or performed specific audit procedures, when auditing the components in Europe (18), the United States of America (10), and Rest of the World (1); and
- Performed analytical procedures on the other group entities.

The group entities subject to full-scope audits and audits of specified account balances and classes of transactions comprise approximately 79% of consolidated revenues, approximately 98% of profit before tax, and approximately 92% of consolidated total assets. For the remaining entities, we performed a combination of specific audit procedures and analytical procedures at group level relating to the risks of material misstatement for significant account balances, classes of transactions, and disclosures that we have identified.

Audit coverage

Audit coverage of consolidated revenues	79%
Audit coverage of profit before tax	98%
Audit coverage of consolidated total assets	92%

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

Our 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. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How the key audit matter was addressed in the audit
Valuation of goodwill and acquired identifiable intangible assets The group has €3,945 million of goodwill and €1,274 million of acquired identifiable intangible assets (December 31, 2017: €3,750 million and €1,322 million respectively), as disclosed in *Note 17*. Goodwill and acquired identifiable intangible assets represent 63% (2017 – 60%) of total assets and 230% (2017 – 227%) of equity. Goodwill is subject to an annual impairment test. The value-in-use of goodwill and acquired identifiable intangible assets is dependent on expected future cash flows from the underlying group Cash Generating Units ("CGUs") for goodwill and individual CGUs for acquired identifiable intangible assets. The impairment assessment prepared by management includes a variety of internal and external factors, which represents significant estimates that require the use of valuation models and a significant level of management judgment, particularly the assumptions related to the weighted average cost of capital and the perpetual growth rates. For the individual CGU, Tax & Accounting Brazil, the annual impairment assessment resulted in triggers for impairment. The impairment test performed resulted in an impairment of €16 million of acquired identifiable intangible assets and other intangible assets as outlined in *Note 17* to the financial statements.	We obtained an understanding of the process in place and identified controls in the impairment assessment of Wolters Kluwer N.V. for goodwill and acquired identifiable intangible assets as a basis for our mainly substantive audit approach. We obtained management's impairment assessment and have evaluated the impairment models. We involved valuation specialists to assess the models used and the key assumptions applied as outlined in *Note 17* to the financial statements. Our valuation specialists assisted us specifically in challenging the weighted average cost of capital, the perpetual growth rates and other rates applied by benchmarking against independent data and peers in the industry. We challenged management's key assumptions used for cash flow projections, weighted average cost of capital, and perpetual growth rates. We compared rates in use with historical trends and external data and performed sensitivity analyses. We reconciled forecasted cash flows per group CGU to authorized budgets and obtained an understanding how these budgets were compiled. For the individual CGU, Tax & Accounting Brazil, where impairment triggers were identified, these procedures were performed for Tax & Accounting Brazil. We also evaluated the adequacy of the disclosures provided by the group in *Note 17* in relation to its impairment assessment. ***Observations*** Our procedures did not identify material exceptions and we considered management's key assumptions, the weighted average cost of capital, and the perpetual growth rates, to be within a reasonable range of our own expectations.

Key audit matter	How the key audit matter was addressed in the audit
Acquisition accounting for significant new business combinations During the year ended December 31, 2018, the group made a number of acquisitions as detailed in *Note 7*. The most significant acquisition was eVision Holding B.V. for an initial consideration of $140 million (net of cash acquired, working capital adjustments, and assumed debt) and a deferred contingent consideration of up to $35 million. Also, management reassessed the preliminary purchase price adjustments that were prepared for the 2017 acquisitions. The company assessed, with the assistance of third-party valuation specialists, the fair value of identifiable assets acquired and liabilities assumed in the acquiree. This assessment also included the determination of the purchase price and the fair value of the deferred contingent consideration. The initial accounting for the eVision acquisition is not yet completed per December 31, 2018. Management has evaluated that no material adjustments are expected to the purchase price allocation. In 2019, within the measurement period, management might retrospectively adjust the provisional amounts included in the December 31, 2018 financial statements. The determination and recognition of the fair value of the acquired identifiable intangible assets required significant management judgment. The critical accounting judgment with respect to the identification of acquired identifiable intangible assets is disclosed in *Note 3*. Completeness of assets and liabilities identified in relation to the fair value adjustments applied to the book values of other assets acquired requires careful consideration, including the execution of due diligence studies. Further information with respect to completed and preliminary purchase price allocations is described in *Note 7*.	We have considered the main processes and procedures in place at the company for acquisitions and tested design and implementation of controls relevant to our audit. We assessed and evaluated for material business combinations the share purchase agreements and challenged the acquisition accounting assessment made by management with the assistance of third-party valuation specialists. Our audit procedures included the involvement of internal valuation specialists to assess the appropriateness of the methodology applied by management in determining the purchase price and the fair value of acquired identifiable intangible assets and other assets acquired and liabilities assumed. Key assumptions challenged were the discount rates, (terminal) growth rates, cash flow projections, net assets acquired, and useful lives assigned. We also assessed the completeness of the fair value adjustments recognized by reading, amongst others, sale and purchase agreements, board papers, and due diligence reports. We challenged and evaluated adjustments made to the preliminary purchase price allocation of the prior year, including the required disclosures. We have evaluated whether material adjustments are expected from completing the purchase price accounting of eVision by performing a sensitivity analysis. We also evaluated the adequacy of the disclosures provided by the group in *Note 7* in relation to its acquisitions. ***Observations*** Our procedures did not identify material exceptions and we considered management's key assumptions in the determination and recognition of the fair value of the acquired identifiable intangible assets to be within a reasonable range of our own expectations. The disclosures included in *Note 7* are adequate in the context of the financial reporting framework.
Internal controls over financial reporting The group has its businesses in a large number of countries and locations. The group operates various IT systems, processes, and procedures locally that are important for the continuity of its business operations and for the reliability of its financial reporting.	We have considered the group's internal controls over financial reporting as a basis for designing and performing the audit activities that are deemed appropriate for our audit. We are, however, not required to perform an audit on internal controls over financial reporting and accordingly we do not express an opinion on the effectiveness of the group's controls over financial reporting. We have tailored our audit procedures to the diverse (local) IT landscapes and the implemented internal controls. We have included specialized IT auditors in our audit teams to test the reliability and continuity of the automated data processing, solely to the extent necessary within the scope of the financial statement audit. Where relevant for the audit, we have tested the operating effectiveness of (IT) controls and performed additional audit procedures where deemed needed. We refer to section *Risk Management* of the annual report, where the Internal Control Framework for financial reporting is described. ***Observation*** We have reported our observations on internal controls over financial reporting to the Audit Committee and have performed additional audit procedures where deemed needed with satisfactory results.

Key audit matter	How the key audit matter was addressed in the audit
Revenue recognition As per January 1, 2018, the group adopted IFRS 15 Revenue from Contracts with Customers. In *Note 1*, the group describes the impact of implementing IFRS 15 on the 2018 financial statements and 2017 comparatives. Next to revised accounting policies and transition disclosures, IFRS 15 brings additional quantitative and qualitative disclosure requirements which are included in *Note 1, 2, 5,* and *23*. Revenue (transactions) may be subject to manual adjustments for open-end contracts at balance sheet date. There is a risk of material misstatement that these revenue transactions are based on non-valid, inaccurate and improper period allocation manual journal entries. The group's revenue recognition policies are disclosed in *Note 2*. Significant new and amended revenue arrangements may also require careful consideration and judgment in determining the correct revenue recognition pattern in accordance with IFRS 15. The group may fail to defer revenue recognition in accordance with IFRS 15 requirements associated with significant new and amended revenue arrangements.	We performed audit procedures on the opening balance sheet and the 2017 impact as part of the prior year's audit. We have extended the number of entities in scope for these procedures to obtain an understanding of the group's process and potential magnitude of implementing IFRS 15. Based on the outcome of these procedures, the scoping for IFRS 15 is included in our group audit scoping. In 2018, our audit procedures for IFRS 15 were embedded in our revenue recognition testing. In addition, we focused our procedures on the audit of the IFRS 15 disclosures in *Notes 1, 2, 5,* and *23*, including the processes of preparing those (transition) disclosures. These procedures included (substantive) analytical procedures and tests of details performed by the respective component auditor. Oversight over these procedures was ensured as part of our group audit approach. The revenue recognition testing procedures performed on existing contracts were focused on manual adjustments, which could impact the accuracy, occurrence, and cut-off of recorded revenue especially around period-end. We obtained an understanding of the revenue processes, tested design and implementation of controls in place, including segregation of duties, relevant to our audit. Analytical reviews were performed by segment, product category, and geographical location. Manual entries made were challenged with authorized source documents like contracts, third-party delivery confirmations, and customer acceptance forms. Component auditors were involved in assessing the accounting methodologies and revenue recognition policies applied for significant new and amended contracts. Revenue, contract assets, and contract liabilities including deferred income were challenged for recognition in accordance with the underlying contract, agreement, acceptance, usage or delivery form. ***Observation*** Our procedures did not identify any significant observations in manual adjustments to revenue and significant new and amended revenue arrangements. Additionally, our audit procedures did not result in material findings with respect to the disclosures provided in the annual report on the implementation of IFRS 15.
Accounting for complex current and deferred income taxes (including uncertain tax provisions) The group, due to its international and decentralized operating model, has a complex tax structure, mainly in the U.S. and Europe. The tax positions taken in the various income tax returns are subject to periodic reviews by local tax authorities. Insufficient understanding of the local requirements may result in tax positions that are not supported by local laws and regulations. New tax laws and regulations being issued or proposed may also impact the group's tax positions. The assessment process of the group's current and deferred income tax balances is complex and requires careful consideration and judgment. The current and deferred tax positions, including uncertain tax provisions, are disclosed in *Note 21*.	We involved our tax specialists to obtain an understanding of the group's tax strategy, including current transfer pricing arrangements, royalty agreements, and other agreements. We considered controls in place relevant to the assessments made by management in determining current and deferred income tax positions, including uncertain tax positions, and adopted a substantive audit approach. Our audit procedures included the involvement of tax specialists to assess the appropriateness of deferred and uncertain tax positions, from a tax accounting perspective both at group level and local level for significant entities. We analyzed the accounted permanent and temporary differences, (potential) tax risks, legislative developments, and the status of ongoing local tax authority audits. We challenged the group's positions by independently testing assumptions and estimates in use with correspondence from e.g. tax authorities, historical track records, and tax opinions. Contingencies were evaluated for triggers, including new tax laws and new information in the context of applicable tax laws, that could result in provisions for or reversals of uncertain tax positions. New positions taken were evaluated and discussed with tax experts on compliance with local laws and regulations and substance requirements. We also evaluated the adequacy of the disclosure on the current and deferred tax positions as included in *Note 21*. ***Observation*** Our audit procedures did not result in material observations in connection with the group's tax positions and disclosures as included in *Note 21*.

Report on the other information included in the Annual Report 2018

In addition to the financial statements and our auditor's report thereon, the annual report 2018 contains other information that consists of:
- Report of the Executive Board;
- Report of the Supervisory Board;
- Corporate Governance and Risk Management; and
- Other Information as required by Part 9 of Book 2 of the Dutch Civil Code.

Based on the following procedures performed, we conclude that the other information:
- Is consistent with the financial statements and does not contain material misstatements; and
- Contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard on Auditing 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements. Management is responsible for the preparation of the other information, including the Report of the Executive Board in accordance with Part 9 of Book 2 of the Dutch Civil Code, and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Engagement

We were engaged by the Supervisory Board as auditor of Wolters Kluwer N.V. on April 23, 2014, as of the audit for the year 2015, and have operated as statutory auditor ever since that financial year. In the General Meeting of Shareholders on April 19, 2018, we were reappointed for a period of four years for the financial years 2019 through 2022.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

Description of responsibilities regarding the financial statements

Responsibilities of management and the Supervisory Board for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS-EU and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit assignment in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit. 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. The materiality affects the nature, timing, and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgment and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included e.g.:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control;
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern;
- Evaluating the overall presentation, structure, and content of the financial statements, including the disclosures; and
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising, and performing the group audit. In this respect, we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identified during our audit. In this respect, we also submit an additional report to the Audit Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Amsterdam, February 19, 2019
Deloitte Accountants B.V.

B.C.J. Dielissen

Other Information

Report of the Wolters Kluwer Preference Shares Foundation

Activities
The Board of the Wolters Kluwer Preference Shares Foundation met twice in 2018. The matters discussed included the 2017 full-year results of Wolters Kluwer, the 2018 half-year results, the execution of the strategy, the financing of the company, acquisitions and divestments, developments in the market, and the general course of events at Wolters Kluwer. Mr. Cremers (Chairman of the Supervisory Board) and Mr. Entricken (CFO and member of the Executive Board) attended the meetings to give the Board of the Foundation information about the developments within Wolters Kluwer.

The Board of the Foundation also followed developments of the company outside of board meetings, amongst other through receipt by the board members of press releases. As a result, the Board of the Foundation has a good view on the course of events at Wolters Kluwer. The Board of the Foundation also closely monitored the developments with respect to corporate governance and relevant Dutch legislation and discussed that topic during the meetings. Furthermore, the financing of the Foundation and the composition of the Board of the Foundation were discussed. The Foundation acquired no preference shares during the year under review.

Exercise of the preference shares option
Wolters Kluwer N.V. and the Foundation have concluded an agreement based on which preference shares can be taken by the Foundation. This option on preference shares is at present a measure that could be considered as a potential protection at Wolters Kluwer against exercising influence by a third party on the policy of the company without the consent of the Executive Board and Supervisory Board, including events that could threaten the strategy, continuity, independence, identity, or coherence between the activities of the company. The Foundation is entitled to exercise the option on preference shares in such a way that the number of preference shares taken will be no more than 100% of the number of issued and outstanding ordinary shares at the time of exercise. Amongst others by the exercise of the option on the preference shares by the Foundation, the Executive Board and the Supervisory Board will have the possibility to determine their position with respect to, for example, a party making a bid on the shares of Wolters Kluwer and its plans, or with respect to a third party that otherwise wishes to exercise decisive influence, and enables the boards to examine and implement alternatives.

Composition of the Board of the Wolters Kluwer Preference Shares Foundation
The third term of Mr. Lindenbergh and the first term of Mr. Tiemstra expired in 2018. They were both reappointed.

The Foundation is a legal entity that is independent from the company as stipulated in clause 5:71 (1) sub c of the Act on financial supervision (Wet op het financieel toezicht). All members of the Board of the Foundation are independent from the company.

Alphen aan den Rijn, February 19, 2019

Board of Wolters Kluwer Preference Shares Foundation
R.P. Voogd, Chairman
P. Bouw, Vice-Chairman
J.H.M. Lindenbergh
J.S.T. Tiemstra

Additional Shareholder Information

Stock exchange listing
Wolters Kluwer ordinary shares are listed on Euronext Amsterdam under the symbol WKL. The Euronext exchange is the primary trading venue for the shares. In 2018, the average daily trading volume of Wolters Kluwer shares on Euronext Amsterdam was 754,864 shares (2017: 719,093), according to Euronext. Alternative trading venues include the marketplace operated by Cboe Europe Equities, Turquoise, and others. The shares are included in the AEX index and many other stock market indices.

Wolters Kluwer weight in selected indices

Index	Weight %
AEX	3.03%
Euronext 100	0.60%
EURO STOXX®	0.37%
EURO STOXX® MEDIA	20.1%
EURO STOXX® Select Dividend 30	2.80%
STOXX® Europe 600	0.19%
STOXX® Europe 600 Media	8.86%
STOXX® Europe 600 ESG-X	0.20%
STOXX® Global ESG Leaders	0.34%
MSCI Europe Commercial & Professional Services	10.94%

Sources: Euronext, STOXX, MSCI, and S&P.
Weighting as of December 31, 2018.

American Depositary Receipts (ADRs)
Wolters Kluwer has a sponsored Level I American Depositary Receipt (ADR) program. The ratio of ADRs to ordinary shares is 1:1. The ADRs are denominated in U.S. dollars and are traded on the over-the-counter (OTC) securities market in the U.S. The ADRs receive the same dividends as the ordinary shares converted into U.S. dollars at the prevailing €/$ exchange rate. The ADR price (quoted in U.S. dollars) has appreciated 107% over the five years to December 31, 2018.

ADR Depositary Bank:
Deutsche Bank Trust Company Americas, c/o American Stock Transfer & Trust Company, Peck Slip Station, P.O. Box 2050 New York, NY 10272-2050, United States.

Shares issued and outstanding
The number of issued ordinary shares on December 31, 2018, was 279.7 million (December 31, 2017: 290.3 million) following the cancellation of 10.6 million treasury shares on October 2, 2018.

During 2018, 11.5 million shares were repurchased. The number of issued ordinary shares outstanding, (excluding treasury shares) on December 31, 2018 was 271.2 million (December 31, 2017: 281.4 million).

The weighted average number of ordinary shares outstanding was 276.7 million in 2018 (2017: 285.1 million). The diluted weighted average number of ordinary shares used to compute the diluted per share figures was 278.8 million in 2018 (287.7 million in 2017).

Market capitalization
Based on issued ordinary shares (including 8.6 million treasury shares), the market capitalization of Wolters Kluwer as of December 31, 2018, was €14.5 billion (December 31, 2017: €12.6 billion).

Financial calendar

2019

April 18	Annual General Meeting of Shareholders
April 24	Ex-dividend date: 2018 final dividend
April 25	Record date: 2018 final dividend
May 8	First-Quarter 2019 Trading Update
May 16	Payment date: 2018 final dividend, ordinary shares
May 23	Payment date: 2018 final dividend, ADRs
July 31	Half-Year 2019 Results
August 27	Ex-dividend date: 2019 interim dividend
August 28	Record date: 2019 interim dividend
September 19	Payment date: 2019 interim dividend, ordinary shares
September 26	Payment date: 2019 interim dividend, ADRs
November 1	Nine-Month 2019 Trading Update

2020

February 26	Full-Year 2019 Results
March 11	Publication of 2019 Annual Report

Securities codes and ticker symbols

System	Ordinary shares	ADRs
ISIN	NL0000395903	US9778742059
SEDOL	5671519	2977049
Bloomberg	WKL:NA	WTKWY:US
Reuters	WLSNC.AS	WTKWY
CUSIP	-	977874205
Exchange	Euronext	OTC

5-Year Key Figures

	2018	2017*	2016	2015	2014
Revenues	4,260	4,368	4,286	4,208	3,660
Operating profit	961	830	766	667	569
Profit for the year, attributable to owners of the company	657	636	489	423	473
Adjusted EBITDA	1,200	1,179	1,129	1,073	908
Adjusted operating profit	980	970	950	902	768
Adjusted net financing costs	(70)	(109)	(107)	(119)	(113)
Adjusted net profit	683	639	618	583	470
Adjusted free cash flow	762	746	708	647	516
(Proposed) dividend/cash distribution	266	239	227	219	210
Acquisition spending	166	313	450	179	178
Capital expenditure	214	210	224	188	148
Amortization of other intangible assets and depreciation property, plant, and equipment, and impairments	220	209	179	171	140
Amortization and impairments of acquired identifiable intangible assets	175	187	181	214	192
Shareholders' equity	2,267	2,228	2,621	2,472	2,106
Guarantee equity	2,267	2,232	2,626	2,477	2,121
Net debt	1,994	2,069	1,927	1,788	1,897
Capital employed	4,983	4,845	5,637	5,329	4,943
Total assets	8,330	8,477	8,839	8,099	7,336
Ratios					
As % of revenues:					
Operating profit	22.6	19.0	17.9	15.8	15.6
Profit for the year, attributable to owners of the company	15.4	14.6	11.4	10.1	12.9
Adjusted EBITDA	28.2	27.0	26.4	25.5	24.8
Adjusted operating profit	23.0	22.2	22.2	21.4	21.0
Adjusted net profit	16.0	14.6	14.4	13.8	12.8
ROIC (%)	10.9	10.0	9.8	9.3	8.5
Dividend proposal in % of adjusted net profit	38.9	37.4	36.8	37.5	44.6
Dividend proposal in % of profit for the year, attributable to owners of the company	40.4	37.6	46.4	51.7	44.3
Cash conversion ratio (%)	104	100	100	100	100
Net interest coverage	14.0	8.9	8.9	7.6	6.7
Net-debt-to-EBITDA	1.7	1.8	1.7	1.7	2.1
Net gearing	0.9	0.9	0.7	0.7	0.9
Shareholders' equity/capital employed	0.45	0.46	0.46	0.46	0.43
Guarantee equity to total assets	0.27	0.26	0.30	0.31	0.29

	2018	2017*	2016	2015	2014
Information per share (€)					
Total dividend (proposal) in cash per share	0.98	0.85	0.79	0.75	0.71
Basic earnings per share	2.37	2.23	1.68	1.44	1.60
Adjusted earnings per share	2.47	2.24	2.12	1.98	1.59
Adjusted free cash flow per share	2.75	2.62	2.43	2.21	1.74
On the basis of fully diluted:					
Diluted earnings per share	2.35	2.21	1.66	1.42	1.58
Diluted adjusted earnings per share	2.45	2.22	2.10	1.96	1.57
Diluted adjusted free cash flow per share	2.73	2.59	2.40	2.18	1.72
Weighted average number of shares issued (millions)	276.7	285.1	291.6	293.6	295.9
Diluted weighted average number of shares (millions)	278.8	287.7	294.6	297.4	299.9
Stock exchange (€)					
Highest quotation	55.68	44.80	38.69	33.56	25.67
Lowest quotation	39.19	34.25	28.24	24.71	18.62
Quotation at December 31	51.66	43.48	34.42	30.97	25.35
Average daily trading volume Wolters Kluwer on Euronext Amsterdam nv, number of shares (thousands of shares)	755	719	912	1,232	781
Employees					
Headcount at December 31	18,553	18,830	18,807	18,692	19,266
In full-time equivalents at December 31	18,134	18,315	18,318	18,055	18,549
In full-time equivalents average per annum	18,687	18,982	18,910	19,296	19,397

* Restated for IFRS 15. *See Note 1 – General and Basis of Preparation.*

Glossary

Adjusted
'Adjusted' refers to figures from continuing operations, adjusted for non-benchmark items and, where applicable, amortization and impairment of goodwill and acquired identifiable intangible assets. 'Adjusted' figures are non-IFRS compliant financial figures but are internally regarded as key performance indicators to measure the underlying performance of the business.

Adjusted earnings per share
Adjusted net profit divided by the weighted average number of ordinary shares outstanding.

Adjusted EBITDA
EBITDA adjusted for non-benchmark items in operating profit.

Adjusted net financing results
Total financing results adjusted for non-benchmark items in total financing results.

Adjusted net profit
Profit for the period from continuing operations attributable to the owners of the company, excluding the after-tax effect of non-benchmark items, amortization of acquired identifiable intangible assets, and impairments of goodwill and acquired identifiable intangible assets.

Adjusted operating profit
Operating profit before amortization and impairment of acquired identifiable intangible assets and impairment of goodwill and adjusted for non-benchmark items.

Adjusted operating profit margin
Adjusted operating profit as a percentage of revenues.

Adjusted profit before tax
Sum of adjusted operating profit, adjusted financing costs, income from investments, and share of profit of equity-accounted investees (net of tax).

Allocated tax
Allocated tax is benchmark tax rate multiplied by adjusted operating profit.

Basic earnings per share
The profit or loss attributable to the ordinary shareholders of the company, divided by the weighted average number of ordinary shares outstanding during the period.

Benchmark tax rate
Tax on adjusted profit, divided by adjusted profit before tax.

Capital expenditure (CAPEX)
Sum of capitalized expenditure on property, plant, and equipment and other intangible assets less any carrying value of assets disposed of.

Cash flow: cash conversion ratio
Adjusted operating cash flow divided by adjusted operating profit.

Cash flow: adjusted free cash flow
Net cash from operating activities less capital expenditure, plus paid acquisition and divestment expenses, plus dividends received, and one-off cash tax items. Adjusted free cash flow is the cash flow available for payments of dividend to shareholders, acquisitions, repayments of debt, and repurchasing of shares.

Cash flow: adjusted operating cash flow
Adjusted EBITDA plus or minus autonomous movements in working capital, less capital expenditure.

Constant currencies
Income, expense, and cash flows in local currencies are recalculated to euros, using the average exchange rates of the previous calendar year.

Continuing operations
The results of the group, excluding the results of those components that have been presented as discontinued operations.

Diluted adjusted earnings per share
Adjusted earnings per share adjusted for the effect of all dilutive potential ordinary shares.

Shares conditionally awarded under LTIP plans are included in the calculation of the diluted weighted average number of ordinary shares outstanding if the vesting conditions are satisfied.

Diluted earnings per share
Basic earnings per share adjusted for the effects of all dilutive potential ordinary shares.

Shares conditionally awarded under LTIP plans are included in the calculation of the diluted weighted average number of ordinary shares outstanding if the vesting conditions are satisfied.

EBITA
EBITA (earnings before interest, tax, and amortization) is calculated as operating profit plus amortization and impairment of acquired identifiable intangible assets and impairment of goodwill.

EBITDA
Operating profit before amortization and impairment of acquired identifiable intangible assets and impairment of goodwill, and before amortization and impairment of other intangible assets and depreciation and impairment of property, plant, and equipment.

Guarantee equity
Sum of total equity, subordinated (convertible) bonds, and perpetual cumulative bonds.

Invested capital
Capital employed, excluding investments in equity-accounted investees, deferred tax assets, non-operating working capital and cash and cash equivalents, adjusted for accumulated amortization on acquired identifiable intangible assets and goodwill amortized, and goodwill written off to equity (excluding acquired identifiable intangible assets and goodwill impaired and/or fully amortized), less any related deferred tax liabilities.

Net debt
Sum of long-term debt, borrowings and bank overdrafts, and deferred and contingent acquisition payments minus cash and cash equivalents, divestment receivables, collateral deposited, and the net fair value of derivative financial instruments.

Net-debt-to-EBITDA ratio
Net debt divided by EBITDA, adjusted for divestment related results on operations.

Net gearing
Net debt divided by total equity.

Net interest coverage
Adjusted operating profit, divided by adjusted financing costs.

Non-benchmark items
Non-benchmark items relate to expenses arising from circumstances or transactions that, given their size or nature, are clearly distinct from the ordinary activities of the group, and are excluded from the benchmark figures.

Non-benchmark items in operating profit: results from divestments (including directly attributable divestment costs), additions to provisions for restructuring of stranded costs following divestments, acquisition related costs, additions to acquisition integration provisions, subsequent fair value changes on contingent considerations, and other.

Non-benchmark items in total financing results: financing component employee benefits, impairment and fair value changes of financial assets at fair value through profit or loss, and divestment-related results on equity-accounted investees.

NOPAT
Net operating profit after allocated tax. Adjusted operating profit less allocated tax.

Operating accounts receivable
Operating accounts receivables consist of prepayments and other receivables.

Operating current liabilities
Operating current liabilities consist of salaries and holiday allowances, social security premiums and other taxation, pension-related payables, royalty payables, and other liabilities and accruals.

Organic revenue growth
Calculated as revenue of the period, excluding the impact of acquisitions above a minimum threshold, divided by revenue of the period in the previous reporting period, adjusted for the impact of divestments of operations above a minimum threshold, all translated at constant currencies.

Tax on adjusted profit
Income tax expense adjusted for tax benefit on amortization and impairments of acquired identifiable intangible assets, tax on non-benchmark items, and the income tax effect of any material changes in (corporate income) tax laws and (corporate income) tax rates in the jurisdictions where the group operates.

Working capital
Current assets less current liabilities.

Working capital: non-operating working capital
Non-operating working capital is the total of receivables/payables of derivative financial instruments, collateral, the short-term part of the restructuring provision, deferred and contingent acquisition payables, interest receivables/payables, income tax receivables/payables, share buyback commitments, divestment receivables, and borrowings and bank overdrafts.

Working capital: operating working capital
Operating working capital is working capital minus non-operating working capital minus cash and cash equivalents.

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Chamber of Commerce
Trade Registry No. 33.202.517

Forward-looking statements and other important legal information

This report contains forward-looking statements. These statements may be identified by words such as “expect”, “should”, “could”, “shall” and similar expressions. Wolters Kluwer cautions that such forward-looking statements are qualified by certain risks and uncertainties that could cause actual results and events to differ materially from what is contemplated by the forward-looking statements. Factors which could cause actual results to differ from these forward-looking statements may include, without limitation, general economic conditions; conditions in the markets in which Wolters Kluwer is engaged; behavior of customers, suppliers, and competitors; technological developments; the implementation and execution of new ICT systems or outsourcing; and legal, tax, and regulatory rules affecting Wolters Kluwer’s businesses, as well as risks related to mergers, acquisitions, and divestments. In addition, financial risks such as currency movements, interest rate fluctuations, liquidity, and credit risks could influence future results. The foregoing list of factors should not be construed as exhaustive. Wolters Kluwer disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

About this report

Sustainability information is integrated within the 2018 Annual Report. For more information on sustainability, visit *www.wolterskluwer.com*.

This Annual Report is also available as a PDF on our website *www.wolterskluwer.com* and in limited edition print version.

Cover image: Our customer Jakub Kubalski, Senior Associate at DZP, and Anna Furtak, Business Analyst, and Tomasz Wojewódka, Senior Software Developer, both of Aspire Systems Poland, participating in the Global Legal Hackathon 2018 with Wolters Kluwer in Poland.

Photo cover image by Sebastian Małachowski.

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