Freedom as a Service

2018

ANNUAL REPORT

KEY FIGURES

in € millions (unless otherwise stated)	2018	2017	+/– as %	+/– as % acc[1]	Q4 2018	Q4 2017	+/– as %	+/– as % acc[1]
Revenue	**865.7**	**879**	**–2**	**2**	**264.6**	**268.4**	**–1**	**–2**
Licenses	249.4	250.1	0	2	105.0	113.4	–7	–8
Maintenance	415.4	420.2	–1	3	106.6	103.3	3	3
SaaS	17.6	9.1	93	97	5.0	2.6	91	89
Digital Business Platform (DBP) (including Cloud & IoT)	464.7	456.5	2	5	148.1	145.0	2	2
Adabas & Natural (A&N)	218.3	223.7	–2	2	68.7	74.6	–8	–8
Operating EBITA (non-IFRS)	**272.9**	**279.5**	**–2**		**96.4**	**98.4**	**–2**	
as % of revenue	31.5	31.8			36.5	36.7		
DBP segment earnings	147.0	150.9	–3	1	51.3	57.4	–11	–11
Segment margin as %	31.6	33.1			34.6	39.6		
A&N segment earnings	155.4	156.5	–1	5	51.0	55.7	–8	–8
Segment margin as %	71.2	70.0			74.2	74.6		
Net income (non-IFRS)	**195.0**	**177.3**	**10**		**71.5**	**56.7**		
Earnings per share (non-IFRS)[2]	**2.64**	**2.38**	**11**		**0.97**	**0.77**		
Free cash flow	**184.1**	**161.9**	**14**		**59.1**	**40.6**		
CapEx[3]	11.0	27.5			2.3	2.8		
Balance sheet	**Dec. 31, 2018**	**Dec. 31, 2017**						
Total assets	**2,007.9**	**1,907.5**	**5**					
Cash and cash equivalents	462.3	365.8	26					
Net liquid assets/(net debt) as per IFRS	149.0	55.2	170					
Employees (FTE)	**4,763**	**4,596**	**4**					

[1] acc = At constant currency
[2] Based on weighted average shares outstanding (basic) Q4 2018:74.0 mn / Q4 2017:74.0 mn / 12M 2018: 74.0 mn / 12M 2017:74.6 mn
[3] Cash flow from investing activities adjusted for acquisitions and investments in debt instruments

In some cases, rounding could mean that values do not add up to the exact sum indicated or that percentages do not equal the values presented.

2018 at a Glance

€865.7
million
Total Revenue

4,763
Employees
(+4% year-on-year)

31.5%
Operating Profit Margin
(EBITA, non-IFRS)

>400
Partner Ecosystem
Alliances and Channel Partners

+120%
Annual Recurring Revenue
DBP Cloud & IoT (acc)

€0.65
Per Share
Record Dividend

Software AG believes in data. It is in our DNA. Fifty years ago our Company was founded on a belief that data would one day change the world. That day has come. Today, any business that can harness, study and shape the data it holds has the power to unlock truly limitless possibilities for growth. We exist to offer our customers the freedom to explore those possibilities. Born as software pioneers, today we are data pioneers: a trusted, progressive and truly independent partner, empowering our customers to unlock their data, turn it in to value and shape a better future.

That is freedom.
That is Software AG.

#freedomasaservice

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Get to know Software AG

For more information on Software AG, please refer to the Image and Strategy Brochure, a supplement to this Annual Report: www.software.ag/ar

FOR OUR SHAREHOLDERS

In some cases, rounding could mean that values do not add up to the exact sum given or percentages do not equal the values presented.

LETTER FROM THE MANAGEMENT BOARD

In 2018 we delivered solid results. In 2019 we are embarking upon a new, exciting pathway to sustainable, profitable growth

Dear Ladies and Gentlemen,
Dear Shareholders,

On behalf of the entire Management Board, I am proud to present this report to you. It reflects on a year in which we delivered solid results and strong profitability, while at the same time defined a bold plan to shape our future success.

Since joining in August 2018, I have spent many hours in the company of our people, our customers and partners. My belief in how special this Company is has only strengthened as a result. These many engagements have brought me and the team clarity on our strengths, our challenges and our remarkable potential.

As we enter our fiftieth year, we have translated this clarity into Helix: a strategy that will evolve a Company born as a software pioneer into a data pioneer, following a new pathway to deliver sustainable profitable growth for the benefit of all our stakeholders.

Strong position, bold steps, proud achievements

We embark upon our new pathway from a robust starting position. In 2018 total Group revenue was €865.7 million: a 2 percent increase at constant currency. Within that, total product revenue increased 4 percent to €682.3 million. Our organization continues to generate strong free cash flow, this year amounting to €184.1 million: a 14 percent increase. We delivered net income growth of 18 percent, closing the period at €165.2 million, or €2.64 per share.

Our strong cash flow enabled us to push on with strategic acquisitions which are delivering returns. Our acquisition of Built.io stands as a clear signal of our ambition to go hard after the high-growth iPaaS market and has already helped us to secure an important deal with Cisco. At the same time, our Trendminer acquisition brought us an industrial analytics platform that is unparalleled in the marketplace.

We are translating our strengths into success. Coca-Cola European partners chose our hybrid integration platform to help it achieve true economies of scale. In IoT we are partnering with Dell Technologies, bundling our Cumulocity IoT Edge product with its servers to enable high-performance, industry-agnostic IoT connectivity. Additionally this year we announced a partnership with SAP to develop an open Smart City platform and also expanded our relationship with AWS so that we can now offer our products to small and medium-sized business customers via the vibrant AWS Marketplace.

Each of these achievements is a mark of how we see our future. They embolden our belief in our potential and inform our new strategy for growth.

Helix: a pathway to sustainable, profitable growth

This is a strong Company. We have market-leading products, unmatched by any competitor or alternative. We serve high-growth markets in which some of the most exciting business issues of our time can be addressed by our technologies. We also have a unique culture, imbued in a 4,700-strong global family and enriched by the most powerful diversity of ideas and interactions.

We have gotten in our own way, but that is going to change—and change has already begun. Helix is our new strategy for unlocking our true potential. Created by our people, **Helix** sets us on a journey toward sustainable, organic profitable growth, delivered through three levers:

Focus: we will bring a coherent feel to our product portfolio, define the markets that have the potential to deliver most growth, and chase these with passion and focus. We will, where it makes sense, augment this organic growth focus with targeted M&A that accelerates our ambitions.

Execution: we will implement a new matrix operating model, improve our go-to-market approach. We will drive success by winning new logos and through cross and upselling digital products into our Adabas & Natural base. We will also ready our organization to sell more of our solutions on a subscription basis, in step with customer demand.

Team: we will sharpen our employee value proposition, building on our diversity, and ensuring Software AG is known as a powerful, innovative, growth-focused environment.

Fifty years bold—time to re-imagine integration

Integration is the key business challenge for all organizations, everywhere. It is only getting more pronounced through the proliferation of connected devices, mobile-first business models, and Industry 4.0. The opportunity for us to make our impact on solving this challenge is real—and it is also large. We stand before a total addressable market of €24 billion until 2023, enveloping technologies such as IoT, self-service analytics and digital twin. These are technologies where our position is strong, our vision is clear, and where we feel certain we have a right to win.

When Software AG was set up in 1969 we were the first software company in Germany. In fact, this Company was right there at the start of the whole software industry. The entrepreneurial spirit of that time remains a powerful part of our DNA and something we will harness as we evolve from software pioneers to data pioneers, in support of our customers.

This pioneering spirit is embodied by the team I am building, and it is particularly pronounced in our new leadership team: Our new CRO, John Schweitzer, joins us from high-growth, subscription-first software company, Workday, complementing the product passion embodied in our CPO, Stefan Sigg, and unparalleled industry knowledge and financial expertise of our CFO, Arnd Zinnhardt. Our new CTO, Bernd Gross, brings vast technology expertise, while our new CMO, Paz Macdonald, adds the deep understanding of our markets and drivers. Together, we will deliver on our potential.

Let me take this opportunity to thank you for your trust and loyalty. With your continued support, we go forward from here a trusted, progressive and truly independent player. We wake every day to empower our customers to unlock their data, turn it into value and shape a better future for their organizations. By doing that we will move Software AG along a bold path to sustainable profitable growth.

Yours Sincerely,

Sanjay Brahmawar
Chief Executive Officer

SANJAY BRAHMAWAR
Chief Executive Officer (CEO)

ARND ZINNHARDT
Chief Financial Officer (CFO)

DR. STEFAN SIGG
Chief Product Officer (CPO)

JOHN SCHWEITZER
Chief Revenue Officer (CRO)

For more information on the Management Board members, please refer to Note [38] of the Notes to the Consolidated Financial Statements. p. 215

HIGHLIGHTS

Change in Leadership

Sanjay Brahmawar assumed his position as Chief Executive Officer of Software AG on August 1, replacing Karl-Heinz Streibich after more than 14 on the job. With Sanjay Brahmawar, Software AG signed on a top executive with more than 18 years of professional experience in the high-tech sector. He most recently served as general manager for global revenue at IBM's Watson Internet of Things with a focus on data analytics and artificial intelligence software products.

Under the leadership of its new CEO, Software AG realigned its strategy and laid the foundation for further profitable growth with its Helix project in the second half of 2018. For more information on Software AG's transformation, please refer to the **Letter from the Management Board** on p. 8 and the **Forecast** on p. 100.

Acquisitions

Software AG cemented its claim to leadership in the IoT market with its takeover of TrendMiner and Built.io. The fast-growing TrendMiner offers a Web-based platform for visualizing measurement data and industry processes. With Built.io, Software AG can open its integration Platform as a Service (iPaaS) offering to SMEs and its integration and API portfolio to a rapidly growing developer community. For more information on **capital investments**, please refer to p. 47.

New Management Board Member

John Schweitzer joined Software AG's Management Board on November 1, 2018. As Chief Revenue Officer, he replaced the former Chief Customer Officer, Eric Duffaut. His appointment brings new strength to Software AG's sales organization in the context of the Company's growth-driven strategic realignment. John Schweitzer is a distinguished expert with more than 20 years of experience in software sales. For more information on the **members of the Management and Supervisory Boards,** please refer to p. 214.

Trade Shows

Software AG presented its comprehensive IoT portfolio at partner booths at the Hannover Industrial Fair in April. These included Siemens, EdgeX Foundry, Huawei and Deutsche Telekom. Software AG's CEBIT presence in June was themed "Industry 4.easy." Eight interactive showcases demonstrated innovative use cases for IoT—from smart home devices to a connected factory of tomorrow.

At the Smart Country Convention held in November in Berlin, SAP and Software AG announced their collaboration on an open smart city platform. It will enable cities, towns and counties to implement individual smart city and smart country projects independently and to offer citizens new and intelligent services. For more information on **sales activities,** please refer to p. 39.

Strength in Partnerships

Software AG and its partners collaborate to create innovative solutions that will relieve the burden on customers when it comes to software development. A1 Digital was developed jointly in 2018 to accelerate IoT projects through cloud-based IoT modules that enable organizations to monitor devices and services in real time. Software AG and Dell Technologies designed a plug-and-play solution for rapid deployment and simple configuration of IoT. For more information on **partners**, please refer to p. 42.

Record Dividend

Software AG opted for dividend-oriented use of its net retained profits from fiscal 2017 again in 2018. Shareholders voted in favor of a record dividend of €0.65 per share at the Annual Shareholders' Meeting in May. All other items on the agenda were approved by majorities above 90 percent at the Annual Shareholders' Meeting. For more information on **Software AG's share**, please refer to p. 12.

Product Portfolio

Market research companies and industry analysts have recognized Software AG in their publications for many years. Forrester, for example, positioned the webMethods platform for API management as a "leader" in "The Forrester Wave™: API Management Solutions, Q4 2018." MachNation cited Software AG's Cumulocity IoT tools for device and platform management as market leading as well. For more information on **market positioning**, please refer to p. 36.

Innovation Tour 2018

Software AG's Innovation Tour made stops in Stuttgart, Munich, Hamburg, Düsseldorf, Vienna and Zurich between May and September 2018. The event series conveys the latest in IoT trends and business opportunities to business and IT decision makers. Customers from manufacturing, logistics and commerce showcased their success stories with IoT solutions illustrating how real-life implementaion works.

SOFTWARE AG'S SHARE

The Year on the Stock Market

Political factors influence global financial markets

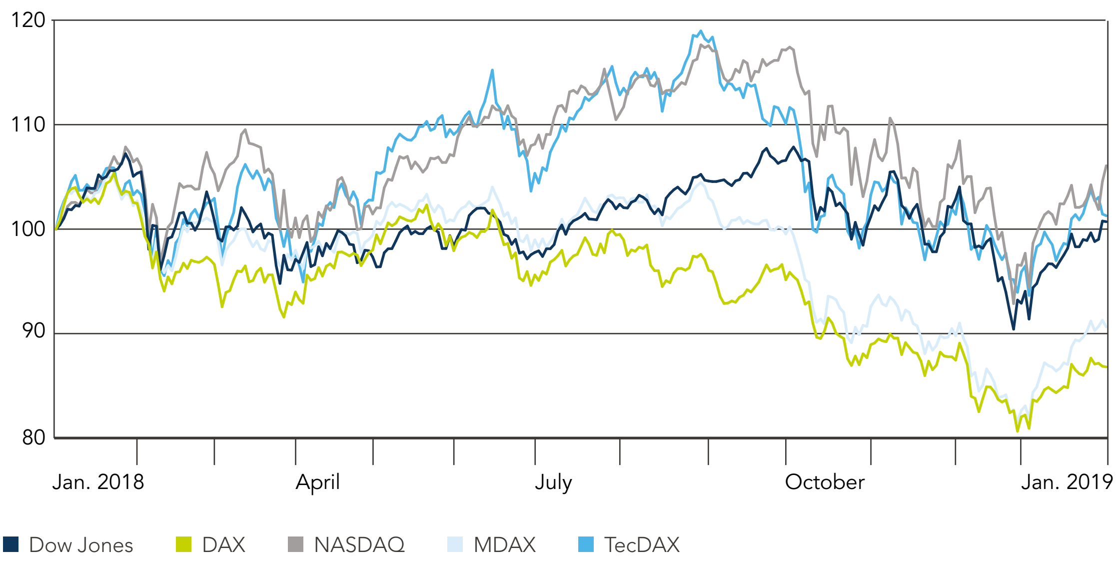
Stock markets saw a turbulent year in 2018. More than anything else, political factors were at the root of the capital markets' uncertainty. The U.S. president's decision to impose tariffs on imports led to a further escalation in the trade war between China and the USA. The budget crisis in Italy as well as the growing likelihood of a hard Brexit fomented uncertainty about the stability of the European Union. Various early indicators bridled growth euphoria during the year. Both the IMF's growth forecast and the Ifo Institute's estimate on global economic climate signaled a cooling of the global economy.

Software AG operates in more than 70 countries and generates the majority of its revenue in the U.S. and core European countries. Changing political conditions, exchange rates and unforeseeable events in these regions can influence business at national levels. Software AG's customers are diversified across many industries. Its software is firmly anchored in customers' systems. And a large percentage of sales are recurring maintenance revenues. Thanks to these factors, Software AG's business model and share price are relatively resistant to macroeconomic effects. A natural hedging relationship exists between exchange rate fluctuations and the relatively high percentage of local costs.

Software AG's share returns to the MDAX

Software AG's share was listed on the MDAX, Germany's index for medium-sized companies, from 1999 to 2003. As a result of the burst of the dot.com bubble, a new market segment, known as the Prime Standard, was launched on January 1, 2003, enforcing stricter disclosure and transparency requirements on corporations. This went hand in hand with an overall restructuring of the index landscape. Since then, Software AG has been included in the Prime Standard. On March 24, 2003, Software AG was moved from the MDAX to the newly established TecDAX to improve its appeal and stability. The indices were reorganized again, and, as of September 24, 2018, Software AG returned to the MDAX, which had been expanded from 50 to 60 listed shares. Software AG's share also continues to be listed on the TecDAX, Germany's high-tech index.

Stock Index Performance Comparison Jan. 2, 2018–Jan. 31, 2019 (indexed)



Stock market indices under pressure

Germany's DAX benchmark index started off the year at 12,898 points. Fueled by an initial tailwind, it reached its peak early in the year on January 23, 2018 at 13,559 points. It closed out 2018 at 10,558 points. This reflects a drop of about 18 percent for the year.

Losses on the American Dow Jones industrial were more moderate, down 6 percent over the last 12 months and ending 2018 at 22,878 points.

The U.S.-based NASDAQ-100, which lists digital companies, kicked off the year on a positive note before descending into negative territory in the final quarter. This index saw losses of about 3.5 percent in 2018.

The TecDAX performed similarly. Surpassing 3,000 points during the year, Germany's high-tech barometer then corrected its gains in the last quarter to finish the year at 2,450 points. This marked an overall loss of 4.1 percent.

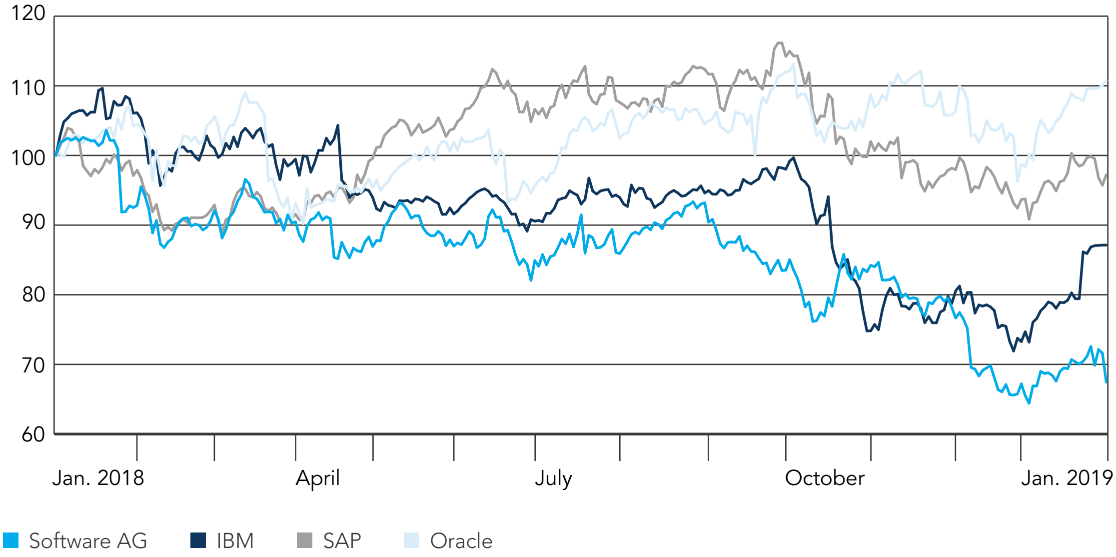
Software AG hit by high-tech skepticism

After opening the fiscal year at €47 on January 2, 2018, Software AG's share price could not elude the misgivings and the negative trend sweeping across the markets. Despite strong growth in the Internet of Things segment and the resulting upward adjusted outlook for the year after Q1 2018, Software AG stock corrected by around 15 percent in the first half of the year.

The downward trend was temporarily halted by the release of Software AG's third-quarter results and the announcement of the strategy overhaul (Helix project) by the new CEO, Sanjay Brahmawar. But tech stocks were being met with growing skepticism from investors at the end of 2018. Despite numerous buy recommendations for Software AG's share, it followed the sector trend and hit its trough for the year on December 21, 2018 at €30.83. It concluded trading in 2018 at €31.59. Software AG's market capitalization was €2.34 billion at the end of the 2018 fiscal year.

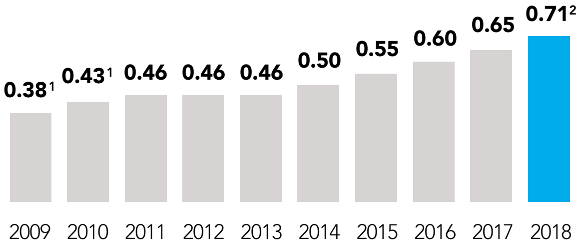
Software AG again exceeded the German stock market's prime standard liquidity requirement in 2018 with an Xetra average daily trading volume of 253,038.

Software AG Share Price Performance Compared to Peer Group Jan. 2, 2018–Jan. 31, 2019 (indexed)



Dividend Development Since 2009

in € per share



[1] Adjusted after 3-for-1 stock split (May 2011), rounded
[2] Dividend proposal, subject to shareholder approval in May 2019

Key Figures

	2018	2017
Closing price in €	31.59	46.86
Year high in €	48.69	47.54
Year low in €	30.83	31.63
Total number of shares at year end	74,000,000	76,400,000
Treasury shares held by Software AG	20,111	2,423,761
Market capitalization at year end in € millions	2,337.7	3,580.1
Free float as %	66.27	64.2

Consistent dividend policy

Software AG's Annual Shareholders' Meeting took place on May 30, 2018 in Darmstadt, Germany. The shareholders in attendance accounted for approximately 64 percent of voting rights and shared the Supervisory and Management Boards' optimism in a positive future outlook. All items on the agenda were met with strong approval of over 90 percent.

CEO Karl-Heinz Streibich's farewell was accompanied by resounding applause. The Supervisory Board and remaining members of the Management Board thanked him for his many years of service to Software AG.

A further increase was approved for a dividend of €0.65 per dividend-bearing share for fiscal 2017. This reflects a continuation of Software AG's value-oriented dividend policy. The total payout sum increased to a record-breaking €48.1 million. (The treasury shares held by Software AG are not entitled to a dividend.) Based on the closing share price on the date of the Annual Shareholders' Meeting (May 30, 2018: €41.31), this corresponds to a dividend yield of 1.57 percent (2017: 1.44 percent).

Software AG will be able to continue its value-driven dividend policy for the concluded 2018 fiscal year. The dividend is paid from Software AG's earnings and cash flow, both of which increased in 2018. The dividend ratio is usually between one-fourth and one-third of the Company's average earnings and free cash flow. The Management Board and Supervisory Board will propose a dividend in the amount of €0.71 for fiscal 2018 to the Annual Shareholders' Meeting on May 28, 2019. This sets a new record in the history of Software AG's dividends.

Share redemption

On March 27, 2018 Software AG redeemed 2,400,000 of its 2,423,761 treasury shares (3.17 percent of its share capital prior to the redemption and capital decrease). This was approved by Software AG's Management Board by way of its authorization granted on May 31, 2016.

As of December 31, 2018, Software AG held 20,111 treasury shares representing 0.03 percent of its share capital.

Changing shareholder structure

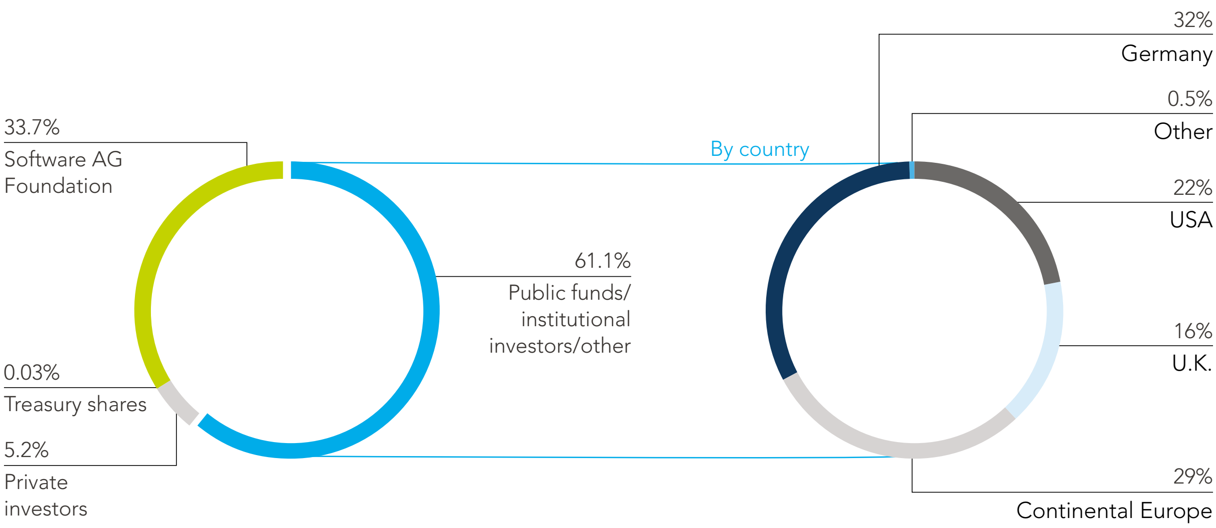
Software AG's positioning as a sustainable investment is increasingly reflected in its investor structure. Its profitable growth is convincing numerous new investors. Software AG's share is driven by dividends that have increased continually over many years, its technology leadership in the digitalization business and its solid position in the growing IoT market. The Software AG Foundation continues to be Software AG's largest shareholder and key anchor investor. Due to Software AG'S decreased share capital resulting from the share redemption, the Software AG Foundation's share in the Company went up about 1 percent to 33.7 percent. The Software AG Foundation is an independent, non-profit organization under civil law based in Darmstadt, Germany. It is committed to projects in support of education, children, the disabled and the elderly. The foundation also sponsors a variety of scientific and environmental fields.

After deducting the balance held by the Software AG Foundation and the Company's treasury shares, Software AG's free float is about 66 percent. This is calculated as defined by the Deutsche Börse as the percentage of a stock corporation's shares that can be traded freely on the stock market because they are not held by long-term investors.

A regional analysis of the identified free float shows that 28 percent is held in Germany, 12 percent in the USA, 10 percent in the U.K. and 6 percent in Scandinavia. A further 9 percent of Software AG's total equity capital is managed in France and Benelux and 1 percent in Switzerland.

	Before share redemption (Dec. 31, 2017)	Share redemption on March 27, 2018	After share redemption on March 28, 2018	Dec. 31, 2018
Share capital	76,400,000	–2,400,000	74,000,000	74,000,000
Software AG Foundation's holding in shares	24,960,000		24,960,000	24,960,000
as %	32.7		33.7	33.7
Software AG's holding in shares	2,423,761		23,761	20,111
as %	3.2		0.03	0.03

Shareholder Structure



Ongoing dialog with investors

In addition to engaging in an ongoing dialog with existing shareholders, active investor relations work also involves adapting the base in targeted ways. Addressing specific potential investors is a challenging aspect of investor relations work and requires the precise analysis of financial markets.

Software AG's Investor Relations team conducted numerous meetings with investors and analysts in 2018. Software AG participated in a total of 15 capital market conferences in Germany and abroad. In addition, roadshows and analyst visits in Germany, the U.K., France, Finland, Sweden, Spain and the U.S. were also an important medium for engaging the investor community.

Software AG enjoyed a high degree of attention from financial analysts in the fiscal year under review. This was reflected in the continuing high number of well-known securities brokerage firms in Germany and abroad tracking Software AG's share. Software AG's Capital Market Day was on held on March 12, 2018. Numerous investors and financial analysts from Germany, the U.K., France and Switzerland were invited to learn about Software AG's strategy and trends in digitization. The avid interest among investors and financial analysts was also reflected in the number of attendees that participated in Software AG's investor relations activities and events program at this year's Hannover Fair and CeBIT.

Analysts from 21 investment banks currently cover Software AG and regularly publish study results. Software AG's stock received a positive or neutral rating from 16 of them at the end of 2018. Analysts' overall average price target was €42.55.

Top Investors[1]

Disclosure of voting share changes pursuant to section 26 (1) of WpHG	**Voting share**	**Date threshold met**
Software AG Foundation	32.7	4/30/2015
BlackRock, Inc.	5.0	12/27/2017
Deutsche Asset Investment GmbH	4.9	10/20/2017
Norges Bank	3.4	10/5/2017
Axxion S.A.	3.3	3/13/2018
Software AG (treasury shares)	0.03	3/27/2018

[1] Balance as of Dec. 31, 2018

Professional investor relations work

Software AG's Investor Relations team continued its commitment to comprehensive and prompt communication with all capital market participants in 2017. These high standards require: All investors must have access to the same information, and any potential misunderstandings in the capital market must be dispelled promptly. Feedback from target audiences must be embraced to continuously optimize communication.

A wide array of events, meetings, telephone conferences, the Annual Shareholders' Meeting and the IR website are all essential elements of Software AG's communication with investors. Members of the capital market can find key up-to-date information at https://investors.softwareag.com/en.

Selected Indices

MDAX, TecDAX
Prime All Share
LTecDAX
Technology All Share
HDAX
CDAX
EURO STOXX
TecDAX Kursindex
DAXglobal Sarasin Sustainability Germany Index
EUR DAXglobal Sarasin Sustainability Germany

Key Share Data

ISIN	DE 000A2GS401
WKN	A2GS40
Symbol	SOW
LEI	529900M1LIO0SLOBAS50
Reuters	SOWGn.DE
Bloomberg	SOW:GR
Stock exchange	Frankfurt
Market segment	Prime Standard
Index	MDAX, TecDAX
IPO on April 26, 1999	€10[1]

[1] After 3-for-1 stock split (May 2011)

CORPORATE GOVERNANCE REPORT

Statement on Corporate Governance

All information contained in this statement on corporate governance reflects the situation as of February 7, 2019.

Basic understanding

Good corporate governance is a core component of management at Software AG. The Management Board and the Supervisory Board are committed to it, and all business lines are guided by it. Responsible, qualified and transparent corporate governance focuses on a company's long-term success. It includes both compliance with the law and extensively following generally accepted standards and recommendations. The focus is on values such as sustainability, transparency and value orientation.

Software AG's corporate bodies

Management Board

The Management Board leads the Company with the goal of sustainable value creation. The members of the Board share responsibility for management of the Company. The guidelines for the work of Software AG's Management Board are elaborated in the **Rules of Procedure of the Management Board**. Above all, they define the members' individual responsibilities, the tasks assigned to the Board as a whole, adoption of resolutions and the rights and obligations of the Chief Executive Officer. The Management Board of Software AG currently consists of four members. The Supervisory Board resolved that members of the Management Board are not permitted to be older than 65. As of the release date of this report, the members of the Management Board were Sanjay Brahmawar (since August 1, 2018), John Schweitzer (since November 1, 2018), Dr. Stefan Sigg and Arnd Zinnhardt.

Sanjay Brahmawar, born in 1970 (nationality: Belgian), holds an MBA in finance and marketing from the University of Leeds (U.K.) and a bachelor's degree in civil engineering from Delhi College of Engineering (India) and has been CEO of Software AG since August 1, 2018. His term is in effect until 2023.

John Schweitzer, born in 1968 (nationality: American), holds a Bachelor of Science in economics and finance from Northern Arizona University and has been a member of Software AG's Management Board since November 2018; as Chief Revenue Officer, he oversees Global Sales and Consulting Services. His term is in effect until 2023.

Dr. Stefan Sigg, born in 1965 (nationality: German), holds a degree in mathematics and has been a member of Software AG's Management Board since April 2017; as Chief Product Officer, he oversees Product Management, Research & Development and Global Support. His term is in effect until 2022.

Arnd Zinnhardt, born in 1962 (nationality: German), holds a degree in business administration and has been a member of Software AG's Management Board since May 2002; as Chief Financial Officer, he oversees Global Finance & Controlling, Corporate Investor Relations, Treasury, Global Procurement, Mergers & Acquisitions, Taxes and Business Operations. His term is in effect until 2021.

Mr. Zinnhardt is a member of the advisory board of the Hessian Landesbank (Helaba).

Diversity concept for the Supervisory Board and Management Board

In its meeting on October 8, 2018, the Supervisory Board reviewed the diversity concept for the Supervisory Board and Management Board, which was created in 2017. The Supervisory Board is certain that diversity is critical to Software AG's successful development. And, promoting diversity in the Company, specifically when appointing members of the Supervisory and Management Boards, is an important factor in ensuring Software AG's sustainable success. The concept covers age and term caps, gender quotas (as described below in Target Percentages for Women) and the explicit need to establish a sensible and broad mix of backgrounds with respect to education and experience (professional experience) as well as international experience/cultures on the boards.

The Supervisory Board determined the following targets for caps on age and term length and the percentage of women:

Objective	**Supervisory Board**	**Management Board**
Age cap	70 (optionally 65)	65
Maximum term	15 years (for all members first appointed after July 30, 2015)/20 years	unlimited
Target female percentage	16.70%	0%

Moreover, the Supervisory Board established targets for its member composition, which, supplemented by the following requirements that: a) a member of the Supervisory Board must have knowledge of financial reporting or financial auditing; b) the members as a whole must be informed on the sector to which the Company pertains (enterprise software), form a skill profile for the Supervisory Board and represent a component of the diversity concept for the Supervisory Board:

1. Members' professional backgrounds should be in one or more of the following fields:
   a. ICT + media
   b. Direct or indirect experience with enterprise IT and/or understanding of digitalization and enterprise software solutions
   c. CTO or CR&DO of a large high-tech company
   d. Knowledge of the demands of a medium-sized company
   e. In-depth expertise in financial reporting or financial auditing
2. Members of the Supervisory Board should be familiar with the requirements and duties associated with the two-tier governance structure of German Stock Corporation Law.
3. International experience

The Supervisory Board also determined that half of its members (currently three) should be independent. In the estimation of the Supervisory Board, its independent members are currently: Dr. Bereczky, Ms. Park, Mr. Wulf and Mr. Ziener. The Supervisory Board does not consider Mr. Ziener's employment with the Software AG Foundation to be a dependency.

In summary, based on ongoing consideration of current business and strategic priorities, the Supervisory Board strives to achieve the widest possible spectrum of backgrounds in the composition of its boards so that they can use their diversity to form opinions and make the best possible decisions for Software AG. The Supervisory Board considers its skill profile and concrete targets for its composition to be met.

The Supervisory Board sees no reason to define a rigid skill profile for the Management Board. The Committee for Compensation and Succession Issues regularly evaluates the composition of the Management Board and compares the skills and experiences represented on the the Management Board with its current requirements. It is the judgment of the Committee for Compensation and Succession Issues of the Supervisory Board as to how the results of this comparison are handled. In selecting John Schweitzer as Software AG's new Chief Revenue Officer, the Committee for Compensation and Succession Issues also made sure that, based on current and future business development, an optimal range of skills and experiences is represented by the Management Board as a whole. Moreover, the Management Board targets for age limit and female percentage (for more details, continue reading) were met.

Target percentages for women

In its meeting on May 17, 2017 the Supervisory Board established 0 percent as the target percentage for female members on the Management Board. The deadline for meeting this target is April 30, 2022. The current composition of the Management Board meets these targets.

Pursuant to section 76 IV of the German Stock Corporation Act (AktG), the Management Board defined targets for the quota of first and second-tier female managers below the Management Board in its meeting on July 20, 2017: 12 percent female managers in the first tier and 15 percent in the second tier below the Management Board. The deadline for meeting this target is June 30, 2022. The first level of management below the Management Board consisted of 9.4 percent (2017: 15.2 percent) women and the second consisted of 16.9 percent (2017: 13.4 percent) women as December 31, 2018.

Supervisory Board

The Supervisory Board appoints, monitors and advises the Management Board. The Management Board reports to the Supervisory Board regularly, in a timely manner and comprehensively on the Company's performance, strategy, planning, the risk situation, risk management and compliance. The Supervisory Board determines the remuneration of the members of the Management Board in accordance with the proposal of the Committee for Compensation and Succession Issues, decides on the Management Board's remuneration system and reviews it regularly. The chairperson of the Supervisory Board coordinates the work of the Supervisory Board, leads its meetings and maintains contact with the CEO between Supervisory Board meetings to discuss strategy, planning, business performance, the risk situation, risk management and compliance. The CEO informs him/her without delay of any important events, which are relevant to the assessment of the Company's position and performance and to the leadership of Software AG. Transactions that require the approval of the Supervisory Board are listed in the Rules of Procedure of the Management Board. If necessary, the Supervisory Board meets without the Management Board.

Composition

The Supervisory Board of Software AG is composed in accordance with the regulations of the One-Third Participation Act. Representatives elected to the Supervisory Board by the employees of the Software AG Group entitled to vote on January 2, 2015 are Guido Falkenberg (Deputy Chairman, employee of Software AG) and Christian Zimmermann (employee of Software AG). Their term began upon conclusion of the Annual Shareholders' Meeting on May 13, 2015. Of the shareholder representatives, Dr. Andreas Bereczky (CEO, production director at ZDF), Eun-Kyung Park (CEO, SevenOne AdFactory GmbH), Alf Henryk Wulf (CEO, GE Power AG) and Markus Ziener (Director, asset management, Software AG Foundation, Darmstadt) were elected to the Supervisory Board during the Annual Shareholders' Meeting on May 13, 2015. The term of the shareholder representatives began on May 27, 2015 upon entry of the amendment to the Articles of Incorporation in the Commercial Register regarding the composition of the Supervisory Board pursuant to the One-Third Participation Act.

The Supervisory Board held a total of six regular meetings during the year under review. At least one session took place each quarter. In addition, the Supervisory Board held three extraordinary meetings. For two of them the Supervisory Board took advantage of the option permitted by the Articles of Incorporation to hold meetings by telephone.

Committees

The guidelines for the work of the Supervisory Board of Software AG are described in the **Rules of Procedure of the Supervisory Board.** In addition to the duties and powers of the chairperson of the Supervisory Board, they define the structure of meetings, the adoption of resolutions, and the formation of committees. The Management Board, Supervisory Board and committees work together closely with the objective of sustainably enhancing Software AG's value.

The Supervisory Board established three committees to efficiently carry out its duties: the Audit Committee, the Committee for Compensation and Succession Issues and the Nominating Committee.

The **Committee for Compensation and Succession Issues** prepares personnel-related decisions made by the Supervisory Board when they affect the remuneration, appointment, reappointment or dismissal of the members of the Management Board. The Committee for Compensation and Succession Issues has three members, one of whom is an employee representative. In the past fiscal year, the Committee for Compensation and Succession Issues met ten times.

The **Audit Committee** deals with issues related to monitoring the financial reporting process, risk management, half-year and quarterly reports, financial statement audits—particularly the independence of the auditor, the internal audit and compliance. The Audit Committee has three members, one of whom is an employee representative. The Audit Committee met three times in the year under review.

The **Nominating Committee** nominates qualified candidates for election to the Supervisory Board at the Annual Shareholders' Meeting. It consists of three shareholder representatives. The Nominating Committee met once in the year under review.

The members of the Supervisory Board evaluate the efficiency of their work annually. Each individual member completes a questionnaire to assess all areas of the Supervisory Board's work. They discuss the results of the annual efficiency audit in detail and, if necessary, agree on measures to increase efficiency.

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For more information on the Supervisory Board's work and its committees, please refer to the Report of the Supervisory Board. For more information on the current members of the Supervisory Board, including their curricula vitae and committee membership, please visit www.softwareag.com/in/company/management/svb/default.html. The CVs are updated regularly—at least once per year.

The Supervisory Board defined the following targets for its membership composition: Members should be actively engaged in their careers when appointed and should not exceed the age of 65; they should work in the fields of ICT/media or enterprise IT and, as an R&D board member of a large technology company, they should know the needs of medium-sized enterprises or possess in-depth knowledge in financial reporting and/or financial auditing. Moreover, members of the Supervisory Board should be familiar with the requirements and duties associated with the two-tier governance structure of German Stock Corporation Law. The composition of the Supervisory Board is intended to meet the respective skill profile that the Supervisory Board has defined for itself. The limit on the terms of Supervisory Board members (for members elected in the future) is 15 years and 20 years for existing members. In its meeting on January 28, 2016, the Supervisory Board determined the number of independent Supervisory Board members as defined in point 5.4.2 of the German Corporate Governance Code to be three, which still corresponds to 50 percent of the Supervisory Board members. The composition of the Supervisory Board reflects this target. The Supervisory Board considers Dr. Bereczky, Ms. Park, Mr. Wulf and Mr. Ziener to be independent.

In its meeting on July 30, 2015, the Supervisory Board established 16.67 percent as the target percentage for female members on the Supervisory Board in accordance with section 111 (5) of the German Stock Corporation Act (AktG). The deadline for meeting this target was June 30, 2017. Through the election of Supervisory Board members, including Eun-Kyung Park, at the Annual Shareholders' Meeting on May 13, 2015, one woman was elected to the Supervisory Board, and thus the target of 1/6 was met within the allotted period of time. The Supervisory Board renewed 16.67 percent at its target in its meeting on May 17, 2017. The deadline for meeting this target is April 30, 2022.

Aside from agreements related to employment contracts with the employee representatives, Software AG maintains no direct or indirect business relationships with Supervisory Board members. In particular, no mutual consulting agreements or other contracts for work or services exist.

Shareholders and Annual Shareholders' Meeting

The **Annual Shareholders' Meeting** is one of Software AG's main corporate bodies through which shareholders can exercise their rights and their voting rights. Software AG invites its shareholders to participate in its Annual Shareholders' Meeting. Important decisions are made at the meeting, including ratification of the actions of the Management and Supervisory Boards, election of the Supervisory Board and external auditors, amendments to the Articles of Incorporation and measures that change the Company's capital. Not least, the shareholders decide on profit distribution. In accordance with a binding financial calendar, shareholders are informed regularly of Software AG's business developments, financial performance, assets and financial position four times per year. The most recent Annual Shareholders' Meeting was held on May 30, 2018 in Darmstadt. Approximately 63.8 percent of voting shares were present. The next Annual Shareholders' Meeting will convene on May 28, 2019 in Darmstadt.

Pursuant to the recommendations of the Corporate Governance Code, Software AG conducts the Annual Shareholders' Meeting in an expedient manner, preferably within a time frame of four hours. To conduct the Annual Shareholders' Meeting efficiently, the chairperson has the option to cut short speakers who stray from the topic at hand and to refer to detailed information already published on the website. Shareholders who do not wish to exercise their voting rights may authorize a member of the Company to vote by proxy in accordance with the shareholder's instructions. Portions of the Annual Shareholders' Meeting will also be broadcast via the Internet. The invitation to the Annual Shareholders' Meeting and related documents and information such as the agenda are readily available on the Software AG website (https://investors.softwareag.com/en/events/annual-general-meeting) along with the date of the Meeting. The resolutions adopted by previous shareholders' meetings as well as the quarterly reports of preceding fiscal years can also be found there.

Compliance management system

Software AG has an effective and efficient compliance management system that serves as part of Software AG's Global Code of Business Conduct and Ethics. The Compliance Board reports to the CEO. It initiates and orchestrates measures to ensure strict compliance management at Software AG.

Code of Business Conduct and Ethics

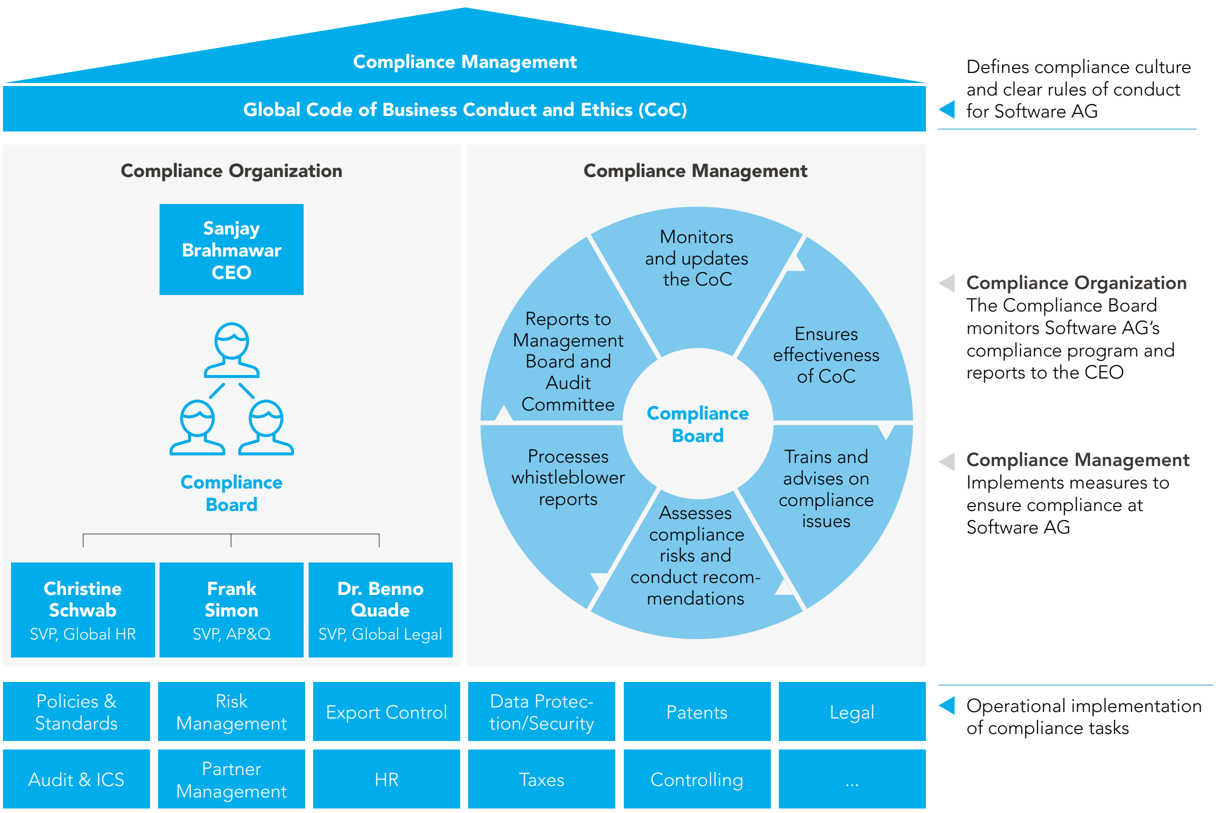
Software AG established a Code of Business Conduct and Ethics in fiscal year 2011. It includes ethical standards applicable to the Company worldwide and is available on Software AG's website at https://investors.softwareag.com/en/corporate-governance/csr The code includes specific regional aspects. The code is binding for all employees of Software AG and its subsidiaries. In the year under review, 605 (2017: 585) employees received certificates of successful completion of a course on the subject of the code. The Compliance Board meets monthly and makes decisions about questionable cases.

Compliance Board

In total, employees of Software AG filed 68 (2017: 59) inquiries and external parties filed two inquiries with the Compliance Board in 2018. The Compliance Board consisted of Ms. Christine Schwab (Senior Vice President, Global HR), Mr. Frank Simon (Senior Vice President, Audit, Processes and Quality) and Dr. Benno Quade (Senior Vice President, Global Legal) in the year under review.

There is an email address on the Software AG Intranet and Internet for anyone who wishes to send an (anonymous) message to the Compliance Board. Both internal and external parties made use of this option during the year under review.

Software AG's Compliance Management System



Financial reporting and auditing

The 2018 Annual Shareholders' Meeting again appointed BDO Wirtschaftsprüfungsgesellschaft, Hamburg (hereinafter referred to as BDO AG), as **Company auditor**.

BDO AG also advises the Company on individual tax matters in connection with tax returns and tax audits. Non-audit services subject to approval may only be rendered by BDO AG after January 1, 2017 if and provided they have been approved by the Audit Committee in accordance with the legally binding approval process. No business, financial, personal or other relationships that could cast doubt on the independence of the audit firm have existed at any time between BDO AG, its corporate bodies or audit managers and Software AG or the members of its corporate bodies.

Pursuant to the Annual Shareholders' Meeting resolution, the Supervisory Board, represented by the Chairman of the Audit Committee, appointed the auditor and agreed on the fee. In connection with the awarding of the contract, the Chairman of the Audit Committee has also agreed with the auditor to comply with the reporting duties pursuant to the German Corporate Governance Code. BDO AG participates in meetings of the Supervisory Board's Audit Committee concerning the financial statements and consolidated financial statements and reports on key audit findings. The Audit Committee had no doubt as to BDO AG's independence before it commissioned the firm.

Primary auditors' fees and services

Software AG Group

Software AG's general and administrative expenses include expenses for auditors' fees paid to BDO AG, the Group auditor, totaling €932 thousand (2017: €887 thousand). Of this amount, €867 thousand (2017: €821 thousand) relates to the audit of the domestic entities' and the Group's financial statements, €34 thousand (2017: €38 thousand) to other testation services and €31 thousand (2017: €28 thousand) to tax advisory services.

Separate financial statements of Software AG (parent company)

Total expenses for the financial auditors and Group financial auditors from BDO AG Wirtschaftsprüfungsgesellschaft were €932 thousand (2017: €887 thousand) in fiscal 2018. These fees consist of €867 thousand (2017: €822 thousand) for the audit of the financial statements, €34 thousand (2017: €38 thousand) for miscellaneous testation services and €31 thousand (2017: €28 thousand) for tax advisory services. To ensure comparability, last year's figures were adjusted to the allocation requirements of the IDW HFA 36 (IDW = Institute of Public Auditors in Germany).

Capital market communication

Open and transparent communication

Software AG communicates openly, transparently, comprehensively and in a timely manner with all market participants. The Company participated in numerous investor conferences, road shows and other capital market events in fiscal year 2018.

A globally consistent corporate message is required to earn the trust of investors, analysts and journalists. Regulatory bodies and the media review publications and press releases for consistency and to ensure that laws and regulations are upheld. Software AG's communications guidelines define how it handles corporate communication. They are published on the Software AG Investor Relations website under Corporate Governance. Software AG provides information to investors, analysts and journalists in accordance with standard criteria. This information is transparent for all capital market participants.

The Management Board immediately publishes insider information that affects Software AG, unless, after having met waiver requirements in specific cases, it is exempt from the disclosure requirement. In accordance with legal stipulations, Software AG maintains electronic registries of persons with insider information who have been informed of their corresponding legal obligations by the Company.

Software AG uses a suitable service provider for publicizing mandatory disclosures throughout Europe. All ad hoc releases are published in German and English.

Software AG is also in full compliance of the Act on Electronic Commercial Registers, Registers of Cooperatives, and Business Registers (EHUG), which came into force on January 1, 2007. All documents requiring publication in electronic form are sent to the operator of the electronic version of the Federal Gazette, as required.

All ad hoc disclosures, press releases, as well as presentations given at press and analysts' conferences and road shows are published promptly to the Investor Relations section on the website of Software AG. The corresponding dates can be found in the financial calendar, which is also published on the website https://investors.softwareag.com/en/events/financial-calendar.

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Software AG commissions an independent consulting firm to carry out an annual study evaluating how investors and financial analysts perceive its financial communication. Criticism and suggestions provide motivation for further improvement. Its performance in the most recent study, conducted in October 2018, received a good overall rating of 2.38.

Changing voting shares (pursuant to section 40 (1) of the Securities Trading Act [WpHG])

For information on Software AG's shareholder structure, please refer to the section on Software AG's Share. Disclosures on changes to voting shares in fiscal 2018 pursuant to section 40 (1) of the Securities Trading Act (WpHG) are published on the Software AG website at https://investors.softwareag.com/en/financial-news

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Directors' dealings (pursuant to art. 19 of MAR)

Software AG also discloses personal business dealings conducted by any individuals who carry out management duties and by those closely related (natural or legal) to them, pursuant to the provisions of art. 19 MAR (directors' dealings). These transactions can be viewed on the website within the legally required period of time.

One reportable transaction was declared during the 2018 calendar year. For more information, please visit the Internet at https://investors.softwareag.com/en/financial-news/managers-transactions.

Opportunities and risks

Software AG deals with opportunities and risks responsibly, aided by a comprehensive opportunity and risk management process that identifies and monitors all significant risks and opportunities. It is consistently refined and adjusted to correspond to changing conditions. Software AG's risk management system is presented in the Risk and Opportunity Report of the 2018 Annual Report. Opportunities that are strategic to the Company are described in the Outlook section of the Management Report. Please refer to the Notes to the Consolidated Financial Statements for information on the Group's consolidated financial reporting.

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Stock option plans

For details on Software AG's stock option plans and similar equity-based incentive programs, please refer to the complete Remuneration Report in the Management Report of the 2018 Annual Report.

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Shareholdings of the members of the Management Board and Supervisory Board

Management Board

Members of the Management Board	Number of shares
Sanjay Brahmawar	0
John Schweitzer	0
Dr. Stefan Sigg	0
Arnd Zinnhardt	25,353

Supervisory Board

Members of the Supervisory Board	Number of shares
Dr. Andreas Bereczky	0
Alf Henryk Wulf	400
Eun-Kyung Park	0
Markus Ziener	0
Guido Falkenberg	0
Christian Zimmermann	0

Compliance with the German Corporate Governance Code

Declaration of Compliance pursuant to section 161 of AktG submitted by the Management Board and Supervisory Board of Software AG, Darmstadt on the German Corporate Governance Code (GCGC)

The Management Board and Supervisory Board hereby declare that, since the last declaration of compliance was submitted on January 31/February 1, 2018, the recommendations of the government commission's GCGC dated February 7, 2017 were followed and the recommendations from the code dated February 7, 2017 will be followed in the future, with the following exceptions:

(a) In deviation of point 4.2.3, paragraph 2, p. 6 of the GCGC, there are no caps in absolute terms on variable remuneration components in place, but rather caps are expressed as percentages, from which an absolute amount can be calculated. There is no explicit cap expressed as an absolute amount on total remuneration; for this reason, Software AG is declaring a deviation from point 4.2.3, paragraph 2, p. 6 of the GCGC as a precautionary measure.

(b) In deviation of point 4.2.3, paragraph 4, p. 1, p.3 and paragraph 5 of the GCGC, the annual target salary in all Management Board members' contracts is the basis for calculating the severance caps (including severance caps in the event of a change in control), so as to provide a straightforward basis for calculation in the event someone leaves the company mid-year.

(c) In deviation of point 4.2.3, paragraph 4, p. 1 of the GCGC, until October 31, 2018, the severance payment in one Management Board member's contract was not limited to the remaining term of the contract.

Darmstadt, January 30/ February 1, 2019

Software AG

The Management Board	The Supervisory Board
Sanjay Brahmawar Chief Executive Officer	**Dr. Andreas Bereczky** Chairman of the Supervisory Board

REPORT OF THE SUPERVISORY BOARD

DR. ING. ANDREAS BERECZKY,
Chairman of the Supervisory Board
For more information on the members of the Supervisory Board, please refer to Note [38] in the Notes to the Consolidated Financial Statements.

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Fiscal 2018 was a year of change for Software AG, closely overseen by the Supervisory Board. The selection and appointment of our new Chief Executive Officer, Mr. Sanjay Brahmawar, was conducted in an intense, meticulous and confidential manner by all members of the Supervisory Board under the leadership of the Committee for Compensation and Succession Issues. The board arrived at a unanimous decision after numerous interviews and discussions, both in and outside of meetings. The acquisitions of TrendMiner and Built.io strengthen Software AG in the areas of IoT/analytics and integration respectively. The Supervisory Board played an active role in the handover of official business to the new CEO, Sanjay Brahmawar, but also in the staff-related changes on the Management Board and preparations for the strategic transformation.

Collaboration between the Management Board and Supervisory Board

In fiscal year 2018, the Supervisory Board fulfilled all duties required of it by law and the Company's Articles of Incorporation. It advised the Management Board in running the Company and supervised its management. In doing so, the Supervisory Board was directly involved in all decisions of key relevance to Software AG. Via oral and written reports, the Management Board informed the Supervisory Board regularly, comprehensively and promptly about all important aspects of strategy, the status of strategy implementation, planning, business development, the risk situation and risk management, as well as compliance, and was available to the Supervisory Board in meetings for questions and discussions. Deviations from planned business developments were explained in detail.

The Supervisory Board Chairman was in regular contact with the CEO and consulted with him about Software AG's strategy, planning, business development, risk situation, risk management and compliance. The CEO informed him immediately of important occurrences. The relationship between the Management Board and Supervisory Board was based on close, trusting cooperation and an open, constructive dialog.

The Supervisory Board's deliberations included the Company's strategic direction, measures for strategy rollout and risk management as well as staff changes on the Management Board. The Supervisory Board and the Management Board discussed the quarterly and half-year results and reports and analyzed ongoing business development in detail. Any transactions requiring Supervisory Board approval in accordance with the Articles of Incorporation or applicable legislation were reviewed and approved. Documents relevant for decisions were forwarded to the Supervisory Board in due time before the relevant meeting.

Supervisory Board meetings

The Supervisory Board held a total of six regular meetings during the year under review. At least one session took place each quarter. In addition, the Supervisory Board held three extraordinary meetings. For two of them the Supervisory Board took advantage of the option permitted by the Articles of Incorporation to hold meetings by telephone. If a member of the Supervisory Board was unable to attend a session, he or she had the option of participating via telephone or casting ballots in writing. All Supervisory Board members attended at least half of the Supervisory Board meetings that took place during the year under review.

The table on the next page illustrates the attendance of members at Supervisory Board meetings held in fiscal 2018.

In its first meeting of the fiscal year on **January 31, 2018**, after preparing and at the recommendation of the Committee for Compensation and Succession Issues, the Supervisory Board discussed the appointment of a new chief executive officer as part of Management Board matters and appointed Mr. Brahmawar as member of the Management Board and CEO, effective as of August 1, 2018.

Supervisory Board Meetings in 2018

	1/31/2018	2/13/2018	3/15/2018	5/30/2018	7/19/2018	9/5/2018	10/8/2018	10/25/2018	12/3/2018
		(via telephone)				(via telephone)			
Bereczky	x	x (tel.)	x	x	x	x (tel.)	x	x	x
Falkenberg	x	x (tel.)	x	x	x	x (tel.)	x	x	x
Park	x	x (tel.)	x (tel.)*	x	x	x (tel.)	x	x	x
Wulf	x	x (tel.)	x	x	x	x (tel.)	x	x	x
Ziener	x	x (tel.)	x	x	e	x (tel.)	x	x	x
Zimmermann	x	x (tel.)	x	x	x	x (tel.)	x	x	x

e = Excused tel. = Attended via phone * = Partially = Extraordinary meeting

The Supervisory Board also defined the objectives for the members of the Management Board for fiscal 2018. In its meeting on January 31, 2018, the Supervisory Board discussed, among other topics, the 2017 preliminary results and approved the 2018 budget.

In its extraordinary meeting on **February 13, 2018**, the Supervisory Board approved Karl-Heinz Streibich's appointment to the supervisory board of Siemens-Healthineers AG.

At the accounts meeting on **March 15, 2018**, in the presence of financial auditors, the 2017 financial statements and consolidated financial statements were discussed in depth and then approved by the Supervisory Board at the recommendation of the Audit Committee and following its own thorough audit. At this meeting, the Supervisory Board also approved the proposed resolutions for the Annual Shareholders' Meeting agenda. With regard to Management Board issues, the Supervisory Board determined the Management Board members' achieved variable remuneration for fiscal 2017 after the financial auditors' verification of the accuracy of the calculations.

On **May 30, 2018**, the day of the Annual Shareholders' Meeting, the Supervisory Board met once to discuss the financial results of the first quarter of 2018. The Supervisory Board also consulted on the acquisition of all shares in TrendMiner NV.

Topics dealt with at the Supervisory Board's meeting on **July 19, 2018** included the financial results of the second quarter and first half of 2018; additionally, the Supervisory Board discussed key points of the status of the strategy rollout and preparations for the acquisition of Built.io.

In a telephone meeting held on **September 5, 2018**, the Supervisory Board further discussed the Built.io M&A project and, following thorough deliberation, approved the acquisition of the Built.io business.

One of the topics of the extraordinary Supervisory Board meeting held on **October 8, 2018** were the results of the new CEO's evaluation of the state of affairs and the strategy transition project ("Helix").

Following preparations and at the recommendation of the Committee for Compensation and Succession Issues, the Supervisory Board consulted on the appointment of Mr. John Schweitzer as the new Chief Customer Officer and agreed on the terms of termination of Mr. Eric Duffaut's contract in its meeting on **October 25, 2018**. Furthermore, the Supervisory Board dealt with the results of the third quarter of 2018, discussed the status of the Helix project and the development of the strategic ADAMOS partnership. At this meeting, the Supervisory Board devoted special attention to the antitrust case in Spain and was informed by the Management Board of all measures taken to prevent anti-competitive violations. The Supervisory Board concluded that the compliance measures taken were comprehensive and appropriate.

In its last meeting of the year, on **December 3, 2018**, the Supervisory Board addressed the first interim results of the Helix project, the recommendations on changes proposed by the Government Commission on the German Corporate Governance Code and the end of Dr. Wolfram Jost's Management Board appointment. Furthermore, the Supervisory Board informed itself of all legal disputes and compliance cases relating to Software AG.

Committees

In order to efficiently carry out its duties, the Supervisory Board established a Committee for Compensation and Succession Issues, an Audit Committee and a Nominating Committee. The committees prepare the Supervisory Board's resolutions and topics to be discussed by the plenum. Decision-making powers are transferred to the committees to the extent allowable. The committee chairs report to the Supervisory Board plenum about the results of the respective committee meetings. All members of the Supervisory Board attended all meetings of the committees to which they belonged during the reporting year.

The **Committee for Compensation and Succession Issues** prepares personnel-related decisions made by the Supervisory Board provided they affect the remuneration policies for the members of the Management Board or appointment resolutions. It has three members and is constituted based on one-third co-determination. It was chaired by Andreas Bereczky. The Committee for Compensation and Succession Issues met ten times in fiscal year 2018. The Committee for Compensation and Succession Issues dealt with personnel matters related to the Management Board, particularly the Management Board members' defined targets for fiscal 2018, preparation of the Supervisory Board's decision regarding their achievement of these targets and the resulting determination of their achieved variable remuneration for fiscal 2017. Futhermore, the Committee for Compensation and Succession Issues prepared the appointment of Mr. Brahmawar as the new CEO and of Mr. Schweitzer as the new CCO. The Committee for Compensation and Succession Issues was actively and closely involved in the staff-related changes on the Management Board.

The following table shows meeting attendance of the members of the Committee for Compensation and Succession Issues:

The **Audit Committee** deals with issues related to monitoring the financial reporting process, risk management, half-year and quarterly reports, financial statement audits—particularly the independence of the auditor, the internal audit and compliance. The Audit Committee also prepares the Supervisory Board's discussion and vote to approve the annual and consolidated financial statements. It has three members and is constituted based on one-third co-determination. The Audit Committee was chaired by Mr. Eun-Kyung Park. The Audit Committee met three times in fiscal year 2018. In a meeting on March 13, 2018, and in the presence of auditors, it dealt with the annual financial statements and the management report, the consolidated financial statements and Group management report, the Management Board's proposal on the appropriation of profits, the selection and independence of the financial auditor for fiscal 2018 and the Supervisory Board's respective resolution recommendation to the Annual Shareholders' Meeting. The Audit Committee also informed itself on the internal audit and compliance matters at this meeting. On July 13, 2018, the Audit Committee discussed the key points of the 2018 audit, revisions to IFRS 15 and corporate social responsibility reporting (non-financial reporting). On December 3, 2018, the Audit Committee discussed the results of the preliminary audit and risk report in the presence of auditors. It also considered and approved specific non-audit services rendered by the auditors.

The following table shows meeting attendance of the members of the Audit Committee:

Audit Committee 2018

	3/13/2018	7/13/2018	12/3/2018
Park	x	x	x
Ziener	x	x	x
Zimmermann	x	x	x

Committee for Compensation and Succession Issues 2018

	1/25/2018	1/31/2018	2/13/2018	3/15/2018	4/19/2018	5/30/2018	7/19/2018	10/8/2018	11/25/2018	11/26/2018
Bereczky	x	x	x	x	x	x	x	x	x	x
Falkenberg	x	x	x	x	x	x	x	x	x	x
Wulf	x	x	x	x	x	x	x	x	x	x

The task of the **Nominating Committee** is to nominate qualified candidates for election to the Supervisory Board at the Annual Shareholders' Meeting. All three members of the Nominating Committee (Dr. Andreas Bereczky, Alf Henryk Wulf and Markus Ziener) are shareholder representatives. The Nominating Committee was chaired by Andreas Bereczky. It convened on July 19, 2018 in fiscal year 2018.

Annual audit

In accordance with a resolution adopted at the Annual Shareholders' Meeting, the Supervisory Board appointed BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg (referred to hereinafter as BDO AG), to audit the financial statements and the consolidated financial statements of Software AG for fiscal year 2018. BDO AG has been Software AG's financial auditor since 1997.

BDO AG examined the financial statements and consolidated financial statements for the year ended December 31, 2018, as well as the Management Report and the accounting books and records. The auditor issued an unqualified audit option. Mr. Ralf Pfeiffer and Mr. Klaus Eckmann are the signers of the auditor's certificate and responsible for the audit at BDO AG. Mr. Klaus Eckmann is responsible for the audit for the second time; Mr. Ralf Pfeiffer participated for the first time in the audit of the 2015 financial statements.

The audit reports were presented to the Supervisory Board, and the head of the audit team explained the results in person to the Audit Committee, the Supervisory Board as a whole and the Management Board. The Audit Committee and the Supervisory Board thoroughly reviewed the audit reports in their meetings on March 22, 2019. The Supervisory Board concurred with the results of the audit and approved the financial statements and consolidated financial statements. This constitutes formal approval and acceptance of the annual financial statements. We, the Supervisory Board, uphold the recommendation of the Management Board with respect to the appropriation of profits.

The Non-Financial Statement for fiscal 2018 was audited with a limited scope by BDO AG.

Corporate Governance Code

The Supervisory Board thoroughly addressed the subject of corporate governance and the German Corporate Governance Code (GCGC) again in fiscal year 2018. In its meeting on February 1, 2019, the Supervisory Board approved the annual declaration of compliance (GCGC).

Remuneration of Management and Supervisory Board members is again reported individually for fiscal year 2018 (refer to the Remuneration Report). The corresponding model tables as per the GCGC dated February 7, 2018 were used. The remuneration system for the members of the Management Board did not change in 2018. p. 124

No conflicts of interest on the part of members of the Supervisory Board arose in the year under review. No agreements were concluded with members of the Supervisory Board.

Detailed reports from the Management Board and the Supervisory Board about the implementation of the GCGC can be found in the Corporate Governance Report. The Declaration of Compliance is published on the Company's website at www.softwareag.com/compliance_en. p. 18

Changes to the Management Board and Supervisory Board

Sanjay Brahmawar became a member of the Management Board and CEO of Software AG as of August 1, 2018. John Schweitzer became a member of Software AG's Management Board as of November 1, 2018. Mr. Streibich left the Management Board on July 31, 2018. Mr. Duffaut ended his term as of October 31, 2018. Dr. Jost ended his term as of December 31, 2018. There were no other personnel changes on the Management Board or Supervisory Board of Software AG in 2018.

The Supervisory Board would like to thank the Management Board and all employees for their high degree of commitment and excellent work during fiscal year 2018.

Darmstadt, March 22, 2019

The Supervisory Board

Dr. Andreas Bereczky
Chairman of the Supervisory Board

For more information on the members of the Supervisory Board, please refer to Note [38] in the Notes to the Consolidated Financial Statements or visit www.softwareag.com/corporate/company/management/svb/default. p. 214

COMBINED MANAGEMENT REPORT

In some cases, rounding could mean that values do not add up to the exact sum given or percentages do not equal the values presented.

FUNDAMENTAL ASPECTS OF THE GROUP

Organization and Group Structure

Legal corporate structure

The Software AG Group is managed globally by the parent company, Software AG, acting as a holding company. The financial position of Software AG is shaped by the financial position of the Group. For this reason, the Management Board of Software AG combines the management reports of the Group and of Software AG into one consolidated management report. Unless otherwise stated, "Software AG" will hereinafter refer to the Software AG Group.

Software AG was founded on May 30, 1969 in Darmstadt, Germany. It has been listed on the Frankfurt Stock Exchange since April 26, 1999.

Software AG has control and profit transfer agreements with its three German subsidiaries: SAG Deutschland GmbH, SAG Consulting Services GmbH and SAG LVG mbH. Otherwise, the Group is structured as a matrix organization reflected in its reporting lines, global policies and committees. The family of Software AG companies currently consists of 82 affiliated companies, ten of which are domestic entities, while the remainder are distributed worldwide. Software AG's scope of consolidation is outlined in Note [2] of the Notes to the Consolidated Financial Statements. p. 156

Major Locations

A global company with a far-reaching sales and partner network, Software AG strives to maintain proximity to its customers by serving customers in more than 70 locations in all continents worldwide. The Company's corporate headquarters are located in Darmstadt, Germany. Its largest subsidiaries are in Darmstadt (Germany), Bangalore (India), Madrid (Spain), Or-Yehuda (Israel) and Reston (USA). Software AG is positioning itself both in established as well as in emerging and high-potential locations as part of its global geographic strategy

Employees

The number of Software AG employees worldwide rose to 4,763 (2017: 4,596) full-time equivalents, which reflects 4 percent growth. The employees can be separated in four business areas: Consulting and Services, Research and Development, Sales and Marketing, and Management. Software AG's global staff was distributed according to function and country as follows:

Headcount by Function and Country

Full-time employees	Dec. 31, 2018	Dec. 31, 2017	+/– as %
Total	**4,763**	**4,596**	**4**
Consulting and Services	1,901	1,935	–2
R&D	1,310	1,176	11
Sales and Marketing	926	861	8
Administration	626	624	0
Germany	1,243	1,201	3
India	895	823	9
USA	580	575	1
Other countries	2,045	1,997	2

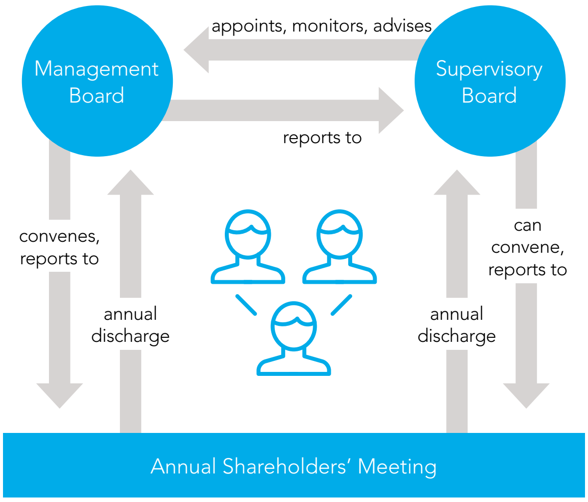
The number of employees in the key area of Research and Development (R&D) rose by 11 percent, with the new R&D employees primarily deployed in ongoing new product development. The acquisition of Built.io, a market leader in hybrid and cloud integration, as well as continued expansion of Indian R&D locations led to a 9 percent increase in employees in India.

Management and Control

Software AG's Management Board consists of the Chief Executive Officer (CEO) Sanjay Brahmawar, the Chief Financial Officer (CFO) Arnd Zinnhardt, the Chief Revenue Officer (CRO) John Schweitzer and the Chief Product Officer (CPO) Dr. Stefan Sigg. All Board members as well as the personnel changes in fiscal year 2018 are presented in Note [38] of the Notes to the Consolidated Financial Statements. The Management Board is appointed, supervised and advised by the Supervisory Board. p. 215

The Supervisory Board of Software AG is composed in accordance with the stipulations of the One-Third Participation Act. It was comprised of six members in fiscal 2018: four shareholder representatives and two representatives of the employees of Software AG. For more information about the members of the Supervisory Board, please refer to Note [38] in the Notes to the Consolidated Financial Statements. p. 214

Corporate Governance Structure



Business Activities

Business model

Software AG supports enterprise digital transformation. To deliver on this objective, the Company must build its own software expertise for differentiation, innovation and growth in the digital world. As a technology service provider for every industry, Software AG offers a vendor-neutral, leading solution portfolio that enables its customers to protect their investments in their existing IT architecture. At the same time, Software AG products are empowering companies to modernize their business models with technology. The customized solutions focus on the customer's needs, building on existing IT landscapes and improving usage flexibility so that processes and applications can be adapted quickly and easily to changing market conditions. Furthermore, Software AG supports its customers in their digital transformation with custom consulting services and comprehensive IT expertise. The business model is separated into the following revenue types: licenses, maintenance, Saas and services. These lay the foundation for the financial success. For more information on Software AG's strategy, please refer to Strategy and Goals. p. 45

Business lines

Software AG's operations in fiscal 2018 can be divided into the three following business lines. They also reflect its corporate structure:

- Digital Business Platform (DBP)
- Adabas & Natural (A&N)
- Consulting

The DBP and A&N business lines generate license and maintenance revenues from Software AG's software products. The Consulting segment provides customer-specific consulting services primarily for Software AG's own products. For a summary of the business lines' performance in fiscal 2018, please refer to Segment Reporting in the Financial Performance section of the Economic Report. p. 68

Digital Business Platform

Software AG launched the world's first end-to-end platform for digital transformation based on open standards. The platform integrates five building blocks: business & IT transformation, analytics & decisions, process & applications, integration & API, and devices. With the DBP, businesses and public organizations can drive their digitalization by optimizing processes, implementing innovations, developing agile business applications, boosting efficiency and taking advantage of sales opportunities in real time. Revenue from the pioneering IoT business will be reported as a separate item in this business line. DBP builds on existing systems with modular, vendor-neutral solutions so that innovative applications can be developed and integrated faster and with greater flexibility. This business line is Software AG's growth driver and is being expanded through extensive Research & Development measures as well as targeted technology acquisitions.

Adabas & Natural

Software AG's business line consisting of A&N-based applications represents the Company's origins. These applications—and thus A&N—remain an indispensable key technology for a large customer base including many well-known major enterprises and public institutions. Adabas is a long-established, efficient database management system for all platforms. Adabas is able to process more than 320,000 calls or 80,000 transactions per second. Natural is a development environment and is the basis of hundreds of thousands of software applications that support the core processes of major companies across all industries. A&N is optimized for digital business models; it enables the use of all modern development standards and tools and can operate on any infrastructure—from mainframe to the cloud. Software AG's capabilities for application digitalization in this business line was enhanced with its acquisition of CONNX Solutions Inc. in August 2016. With this step, Software AG is protecting the investments of many long-time customers and accelerating the digitalization of their business models. The A&N products have been established for nearly 50 years in the IT landscapes of major companies and public administrations.

Consulting

The Consulting business line focuses primarily on projects and services involving the Company's own software products. With their proven market experience and industry expertise, Software AG's consultants provide crucial support for product sales in the DBP and A&N lines and support customers in implementing the systems and digital process organization. Through these efforts, Software AG ensures comprehensive support for its customers in their transformation to the digital enterprise.

Product and brand portfolio

The ARIS, Alfabet, Apama, Built.io, Cumulocity, Terracotta, TrendMiner, webMethods and Zementis product families form the DBP business line. Adabas and Natural form the product offering of the A&N business line. The entire product portfolio is designed to comprehensively support customers as they transform to a digital enterprise. Using a clearly structured brand architecture, the individual product families have been separated into six modules, which represent the core themes of digital enterprise transformation:

- **Business & IT Transformation:** ARIS products optimize business processes—from strategy and analysis to design and controlling. Alfabet software streamlines the complete transformation of business processes at all levels with the resulting modifications to the IT systems.

- **Data & Analytics:** This platform combines Terracotta and Apama Streaming Analytics for real-time big data analytics. The Zementis product family enables predictive analytics with artificial intelligence (AI) and machine learning capabilities. The TrendMiner product family that specializes in visual data analysis has been part of this module since June 2018. TrendMiner is an intuitive Web-based analytics platform for flexible visualization of industrial processes and process data.

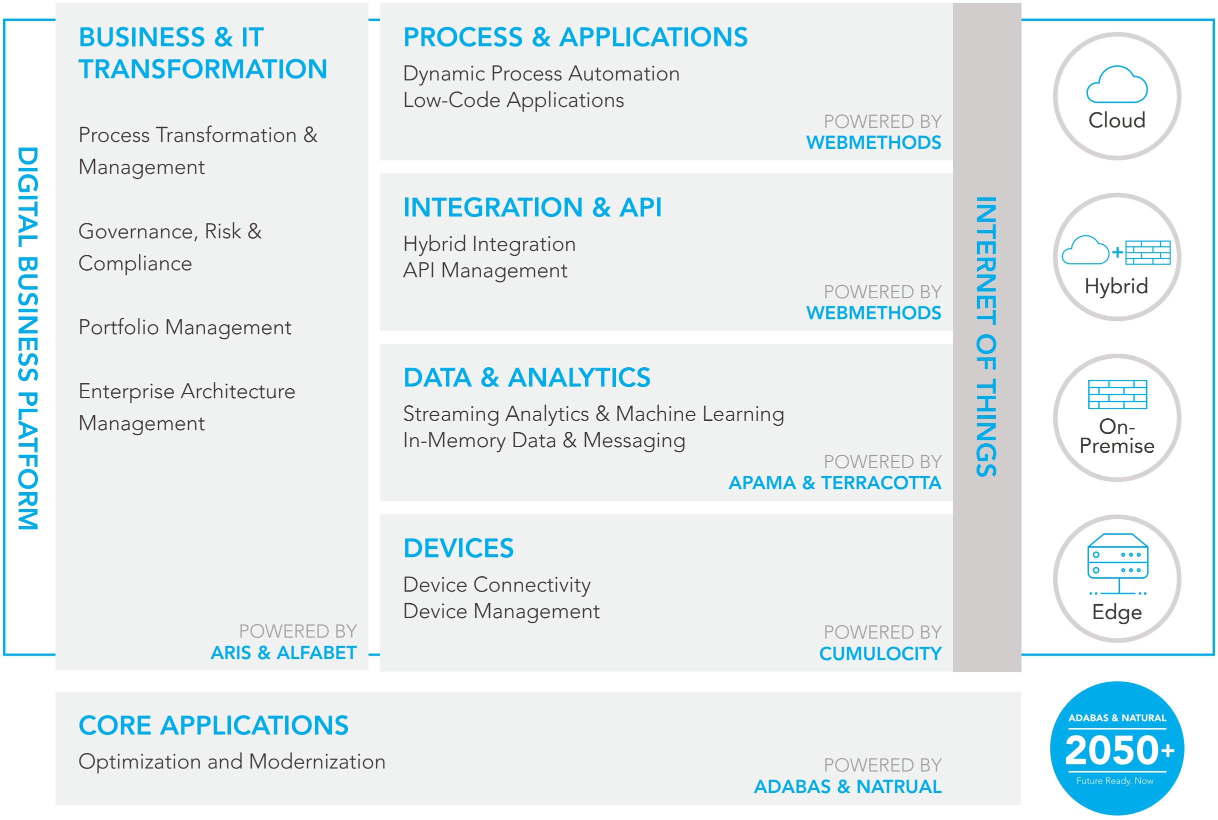
- **Process & Applications:** webMethods Business Process Management and webMethods Agile Apps products enable management of the agile applications.

- **Integration & API:** The webMethods Integration and webMethods API Management solutions integrate systems and processes via application programming interfaces (APIs). The acquisition of Built.io in September 2018 made the integration functions of webMethods and the API portfolio accessible to a fast-growing developer community, thus tapping into a nearly inexhaustible potential for innovation.

- **Devices:** The Cumulocity product portfolio contains a series of preconfigured products and solutions for condition monitoring, predictive maintenance and track & trace as well as functions for fast and uncomplicated management of devices and sensors for IoT.

- **A&N:** This product offering is made complete with A&N transaction processing. With its Adabas & Natural 2050+ agenda, Software AG delivers support and ongoing development for its A&N product portfolio through the year 2050 and beyond. The innovation focus includes mainframe optimization, digitalization of business-critical A&N applications as well as DevOps support with NaturalONE.

Product Portfolio



The DBP portfolio is cloud-ready and can run both on-premise as well as in a hybrid environment. Software AG unveiled its Software AG Cloud in November 2018: a cutting-edge open cloud platform that businesses can use to create, test, implement and manage apps ranging from very simple to highly complex cloud-capable enterprise and IoT applications.

Product portfolio ratings

Software AG considers the recognition of independent research firms as confirmation of its strategy and quality of products and services. For years, the Company's portfolio has received leading positions in market analyst evaluations.

Software AG was recognized in 2018 as follows:

A leader

The following **Gartner**[1] research recognized Software AG as a Leader:

- "Magic Quadrant for Full Life Cycle API Management"[2]
- "Magic Quadrant for Enterprise Architecture Tools"[3]
- "Magic Quadrant for Integrated IT Portfolio Analysis Applications"[4]

[1] Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. The Gartner Report(s) described herein, (the "Gartner Report(s)") represent(s) research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner, Inc. ("Gartner"), and are not representations of fact. Each Gartner Report speaks as of its original publication date (and not as of the date of this Annual Report) and the opinions expressed in the Gartner Report(s) are subject to change without notice.
[2] Gartner, Inc., "Magic Quadrant for Full Life Cycle API Management," Paolo Malinverno, Mark O'Neill., April 30, 2018.
[3] Gartner, Inc., "Magic Quadrant for Enterprise Architecture Tools," Samantha Searle, Marc Kerremans, October 22, 2018.
[4] Gartner, Inc., "Magic Quadrant for Integrated IT Portfolio Analysis Applications," Daniel B, Stang, Stefan Van Der Zijden, November 28, 2018.

A leader

The following **Forrester** reports recognized Software AG as a Leader:

- "The Forrester Wave™: Operational Intelligence for B2B Integration, Q1 2018"[5]
- "The Forrester Wave™: API Management Solutions, Q4 2018"[6]

A strong performer

In addition, the following **Forrester** report named Software AG a Strong Performer:

- "The Forrester Wave™: Industrial IoT Software Platforms, Q3 2018"[7]

A niche player

Gartner names Software AG a "Niche Player" in the following research:

- "Magic Quadrant for Industrial IoT Platforms"[8]

Software AG also took first place in the "2018 IoT Application Enablement Scorecard" international ranking by IoT analyst **MachNation**.[9]

Market positioning

Sales markets

Software AG has global market coverage. The Company optimized its regional sales and market structure to further leverage synergies in the economic area of Europe, Middle East and Africa (EMEA). As of January 1, 2018, the EMEA region is divided into the DACH and remaining non-German-speaking EMEA regions. The geographic sales markets are now divided into the following five regions:

Regions	Sales markets
North America	USA Canada
South America	Latin America (LATAM)
DACH	Germany Austria Switzerland
Europe, Middle East, Africa (EMEA)	All non-German-speaking EMEA countries
Asia-Pacific and Japan (APJ)	Australia Japan Asia and China

As the world's biggest IT market, the North American market continues to be a key driver for Software AG's business and the largest of all its geographic sales markets. Measured by percentage of total revenue, the EMEA, DACH, APJ and LATAM regions follow in that order. In the EMEA region, Great Britain and France are the most important sales markets. Software AG is positioning itself both in established as well as in emerging, high-potential locations as part of its global geographic strategy.

In addition to the geographic perspective, target markets can also be separated by industry. Thanks to a continuously expanding, extremely loyal customer base including many leading companies, Software AG is exceedingly well-established in the public, financial and IT service sectors (including outsourcing). The manufacturing industry, services, transport and logistics, and telecommunication and media industries are also key market segments for Software AG. For more information on product revenue by region and product revenue by industry in 2018, please refer to the Financial Performance section of the Economic Report. p. 62

Software AG complies with business ethics and refrains from selling products and services that are not permitted in certain markets. Nor does it sell products or services which are called into question by stakeholders or are the subject of public debate.

[5] The Forrester Wave™: Operational Intelligence For B2B Integration, Q1 2018, Forrester Research, Inc., January 27, 2018.
[6] The Forrester Wave™: API Management Solutions, Q4 2018, Forrester Research, Inc., October 29, 2018.
[7] The Forrester Wave™: Industrial IoT Software Platforms Q3 2018, Forrester Research, Inc., August 9, 2018.
[8] Gartner, Inc., "Industrial IoT Platforms," Eric Goodness, et al., May 10, 2018.
[9] MachNation: 2018 IoT Application Enablement Scorecard, January 2018.

Competitive situation

The market for enterprise software is in the midst of a fundamental transformation. The development of new business models has brought new, innovative competitors onto the scene with technology startups and former industry outsiders. At the same time, customer market power has grown. Established companies are facing major innovative pressure. In light of this situation, portfolio quality and ongoing development as well as differentiation from the competition with unique solutions are key criteria for success.

p. 35 Numerous analysts confirm that Software AG has established itself as one of the world's leading providers of digital business platforms under these tough conditions. The combination of its software and service portfolio for digitalization, automation and integration of business processes as well as for machines and devices along with the development of new adaptive apps is unique in the global market at this level of specialization. Software AG can provide its customers with comprehensive support for their companywide digital transformation like no other company—from planning and integration to evaluation, analysis and automated decision-making.

The Company clearly sets itself apart from the competition through its independent position, giving it an excellent competitive position in a tough software market. Its key **differentiators** can be summarized as follows:

Software AG's Unique Selling Points

Vendor-neutral portfolio	Software AG enables the integration of different systems and technologies from different providers—now and in the future.
Integrated platform	DBP is already integrated at the detail level. Thus the focus is on company-level integration right from the start to uncover new knowledge and opportunities.
Reliable and proven	For almost 50 years, Software AG has been a trusted partner for thousands of top companies in more than 70 countries. Gartner, Forrester and other market analysts name Software AG a technology leader every year because of its innovative power.
The right size	Software AG is large enough to support major companies and agile enough to be able to focus on individual customer requirements.
Fast return on investment (RoI)	Digitalization is just the starting point for Software AG because the goal is to recognize and fully exploit the potential of market differentiation at the intersection of technologies. Software AG supports its customers on this journey.
Consistent customer focus	Software AG's goal is to co-innovate with its customers and work closely with them at the management level.

With these key differentiators, Software AG can address customers' growing need for custom solutions of the highest quality. The Company is also positioning itself in the most important growth markets with its products for process improvement, digital transformation and IoT technologies.

Software AG's **market access** has continued to improve particularly in Europe's core markets, in which Software AG has reached critical mass. Moreover, the Company has established a basis for effective market cultivation and higher sales productivity through a focused, scalable go-to-market model. Extending the partner network and close collaboration with universities and research institutions support this direction. For more information about strategic partnerships and alliances, please refer to the following sections, Sales, Customers and Partners. For p. 38
more information about Software AG's Scientific Advisory Board, please refer to the Research and Development p. 51
section.

Industry environment and influencing factors

Software AG's growth is influenced by a variety of factors. Key external influencing variables include the global economy, particularly in the major markets of Europe and North America, as well as developments in the international IT market. How these factors impacted Software AG's business during the 2018 reporting year is presented in the Business Summary section of the Economic Report.

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In addition, macroeconomic uncertainty and exchange rate fluctuations affect Software AG's global business, as they do all players in the free economy. For more information on the impact of exchange rate fluctuations on the Group, please refer to Financial Operating Risks in the Key Individual Risks and Opportunities section of the Opportunity and Risk Report.

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Sales

Software AG further solidified its strong market position in 2018 with its customer-centric, value-driven sales approach and its ever-expanding global partner network. Software AG is a trusted advisor for digital transformation, creating real customer value and long-term success with more than 1,800 consultants and Sales specialists.

Software AG also introduced a new pricing and licensing structure in 2018 that reflects the changing market. More than 250 products were bundled into user-friendly and manageable solution packages. The new pricing provides greater flexibility for customers. It also gives them complete freedom not only to select their preferred implementation method (on-premise, cloud, hybrid systems), but also to choose the way they want to buy specific products (perpetual, subscription-based or useage-based). This is yet another step in Software AG's customer-centric model.

Sales and marketing activities also encompass numerous tradeshows and customer events. Software AG takes advantage of these opportunities to present its innovative product portfolio and engage with customers, prospects, partners and industry experts.

- **IoT Innovation Tour:** Software AG joined forces with Siemens, Telekom, Dell and other partners to present its portfolio to more than 600 customers during its 2018 IoT Innovation Tour through Germany, Austria and Switzerland. The tour made stops in Hamburg, Stuttgart, Munich, Düsseldorf, Vienna and Zurich.

- **35th International Supply Chain Conference:** One of Europe's largest supply chain conferences took place October 17-19 in Berlin. The motto was "Digitalization meets reality." More than 3,500 trade visitors, 200 exhibitors and 180 industry journalists discussed the challenges of digitalization in the industry. Software AG was one of the largest exhibitors at the event. Four showcases provided in-depth information on smart goods, digital supply chain, mobility of the future and blockchain as well as the "Cloud of Things," a joint offering with T-Systems. Many logistics experts took the opportunity to talk and share experiences with the experts from Software AG.

- **SPS IPC Drives:** With its unique concept, SPS covers the entire spectrum of smart and digital automation—from simple sensors to intelligent solutions, from what is feasible today to the vision of a fully digitalized industrial world. The SPS serves as a breeding ground for ideas and is an innovation platform. The 2018 event was once again the highlight of the automation industry with around 1,600 exhibitors and 66,000 attendees. Software AG was represented at its own stand as well as at the stands of its partners, Dell EMC, Pepperl+Fuchs and ADAMOS. Starting in 2019, SPS IPC Drives will have a new name: SPS – Smart Production Solutions.

- **Bosch ConnectedWorld:** IoT is and remains the number one topic. Market leaders will intensify their collaboration to help artificial intelligence and machine learning penetrate the remaining IoT platforms. As a provider of strategic software components for leading IoT platforms, Software AG presented at Bosch Connected World and demonstrated how its DBP supports digitalization and (I)IoT projects in every phase.

- **Smart Country Convention:** Software AG partnered with SAP to present a joint solution for implementing smart city initiatives at the Smart Country Convention in Berlin. The smart city platform from the two companies enables cities, communities and counties to implement their own smart city projects and offer their citizens new smart services in areas including energy, environment, traffic, healthcare and eGovernment.

- **Hannover Industrial Fair:** On April 23–27, visitors attended the tradeshow with the motto "Integrated Industry—Connect & Collaborate" to learn about all the latest trends in Industry 4.0 and gain insights into real-world application scenarios. Software AG had a prominent presence at the Hannover Fair as a partner in the Siemens MindSphere Lounge. Software AG also gave insights into its comprehensive IoT portfolio at the stands of its partners, Deutsche Telekom, Huawei and EdgeX Foundry.

Customers

Successfully serving customers as a trusted partner with innovative technologies to enable transformation to an agile digital enterprise is Software AG's primary objective. The Company therefore leverages the concept of co-innovation: collaborating with users to continue developing solutions. Multiple analyst awards confirmed the innovative power of Software AG's product portfolio in 2018.

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User groups serve as one of the most valuable instruments for strengthening customer relationships. These groups bring the users of Software AG's primary product lines together on a regular basis to share experiences. Customers discuss how products can evolve with representatives of Software AG. The international user groups comprise almost 1,700 members from more than 1,100 companies and 70 countries. From April 9–13, 2018, 500 attendees from 258 organizations in 38 countries came together in Berlin for the annual meeting of Software AG's international user group. The next meeting will be held on June 3–7, 2019, in Riga, Latvia. Software AG welcomed around 250 attendees from 90 companies to the meeting of German-speaking user groups in 2018.

Software AG's relevance as a global player of digital transformation is reflected in its ever-expanding international customer base and long-term customer relationships. The

Software AG's Target Markets

customer base continued to grow in fiscal 2018. Based on the number of deals closed, 13 percent (2017: 10 percent) of software orders received were deals with new customers. This development reflects the notable rise in relevance of Software AG products which is already resulting from the spread of digitalization around the world.

Customer Segmentation

Segments by Sector
Banking and Securities
Communication Media and Services
Education
Energy and Natural Resources
Government
Healthcare
Insurance
Manufacturing
Retail
Transportation
Utilities

Partners

The importance of having an effective partner network to promote Software AG's profitable growth continued to rise in 2018. Partners address the fast-growing market segments of enterprise integration and industrial IoT and strengthen Software AG's performance. They cover additional geographic markets or industry sectors, expand existing services or offer ancillary services based on Software AG products and technologies. The Company also increased its partnerships that focus on bringing together the core competencies of Software AG and the partner company to offer better and more-relevant solutions and services.

In this context, Software AG emphasized easier partner access to product, method and market knowledge during fiscal year 2018. More than 1,823 partner employees received introductory and in-depth training on Software AG products in 2018.

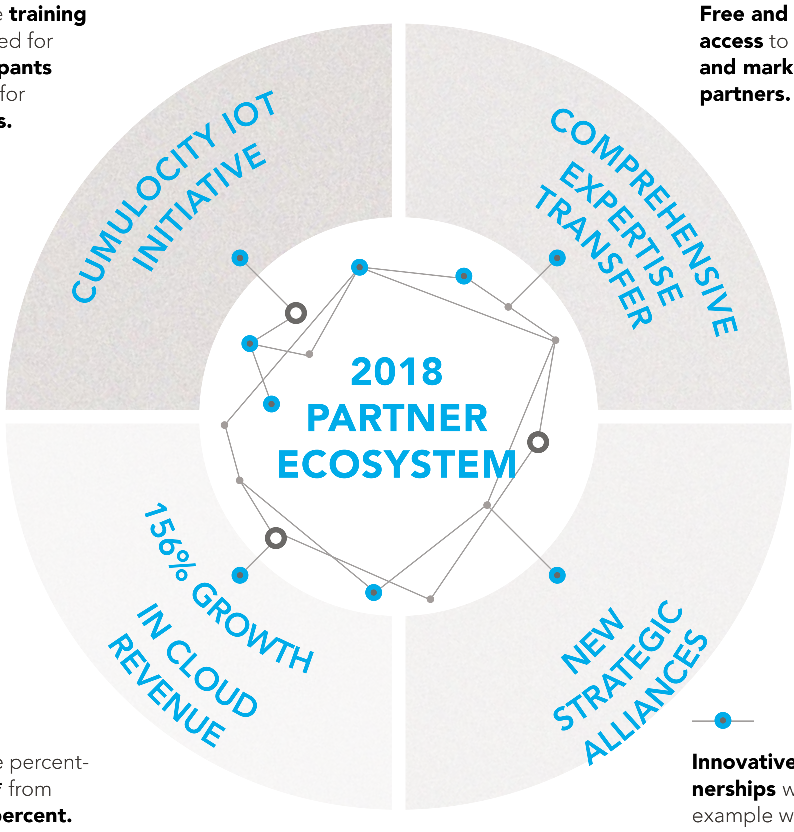
When building partnerships, Software AG continues to pursue innovative ways to provide solutions for its customers that add even more value. After Software AG entered a strategic alliance with leading machinery manufacturers in 2017 to bundle industry expertise and excellent IT functions to create ADAMOS, Bilfinger and Software AG launched a partnership in 2018 that focuses specifically on the process industry.

The strategic partnership established with Dell in 2018 aimed to give customers easier access to IoT and boost its value potential quickly and efficiently. A combination of hardware from Dell EMC and Software AG's market-leading IoT solution, Cumulocity, addresses the growing customer demand for edge-based IoT solutions from a single source. The partnership with Dell also shows that Software AG's core competencies for the integration of traditional information technology (IT) and operational technology (OT) for logistics and manufacturing are increasingly being integrated as key technology building

Dynamic Partner Network Growth: 2018 Highlights

A customized, intensive **training program** was established for partners. **2,626 participants** seized the opportunity for **webinars** and **trainings.**

Free and comprehensive access to **product, method and market knowledge for partners.**



In **fiscal year 2018,** the percentage of **cloud business*** from partners grew by **156 percent.**

* New orders

Innovative and **strategic partnerships** were established, for example with Bilfinger in the process industry and with Dell in **edge**-based **IoT solutions,** as well as with Siemens and Telefónica.

blocks in partner solutions. The strategic partnerships established in the previous year with telecommunication providers including NTT, KPN, and Deutsche Telekom as well as leading industrial companies like Siemens have proven to be very effective for growing Software AG's market access.

Rapidly growing interest among global and regional system integrators and IT consultants highlights just how important Software AG's investments in its product portfolio have been. For these partners, the microservices-based product technology from Software AG is especially relevant due to their customers' increased efforts to transform their IT architectures.

Supplier relationships and supply chain

Software AG and its subsidiaries buy goods and services necessary for internal processes from a large number of suppliers in different countries according to clearly defined guidelines. Operational purchasing is handled locally by the relevant subsidiary. The overarching procurement process, however, is the responsibility of the corporate Purchasing department. The Purchasing department analyzes all procurements worldwide using a reporting system, verifies compliance with defined guidelines through the Audit, Processes and Quality department and initiates strategic measures. The goal is to ensure that procurement only occurs with the necessary approval, thereby keeping costs under control at all times.

Investment and Expenditure policy

The provisions of the procurement process are defined in the Investment and Expenditure policy. This policy describes purchasing principles, rules for ordering and selecting suppliers and the global approval process.

Global Sourcing

The entire approval and procurement process and reporting policy for the Purchasing department can be found in the digital Global Sourcing approval and order system for Software AG and its subsidiaries. The process is broken down in the system as follows:

Global Sourcing Process

Request

Request
For goods and services needed by a department

Approval

Approval Matrix
- Role
- Cost type
- Commodity group
- Limit

Purchase

Investment and Expenditure policy
- Selection of supplier
- Order/contract
- Purchase principles

Supplier Code of Conduct

Reporting

Report Generation
- Purchase value
- Relative savings
- Absolute savings
- Supplier evaluation
- Order processing times

Supplier Code of Conduct

The **Supplier Code of Conduct** defines guidelines for responsible and sustainable conduct of Software AG suppliers with regard to economic, ecological and social aspects. It is currently available in eight languages (German, English, Hebrew, Japanese, Polish, Portuguese, Slovakian, Spanish). Suppliers must accept the applicable conditions prior to every order. There is a guideline that defines how the Supplier Code of Conduct is to be applied with a checklist to ensure compliance with all requirements. The Supplier Code of Conduct defines the following points:

- Interaction with employees (child labor, discrimination, forced labor, employee rights, compensation and working hours, health protection and occupational safety)
- Environmental laws, standards and policies
- Conduct in business situations (e.g., combating corruption, avoiding conflicts of interest, free competition)

Significant changes in the organization and its supply chain

There were no significant changes in the organization or its supply chain in the year under review.

Recruiting and staff development

Software AG's highly qualified and committed staff plays a key role in the Group's success. Their expertise and personal skills are a crucial factor in customers', investors' and business partners' decision to choose Software AG. Particularly when competition for the best talent is so fierce, strategic HR measures such as individual staff development and high-value training are a key competitive advantage. Only employees with excellent education and training are able to stay on top of the dynamic digital sector and develop the best customer solutions. Against this backdrop, Software AG pursues a comprehensive employee recruitment, retainment and development program to manage the Company's culture and strengthen employer branding.

Software AG's Corporate University is an integral component of Human Resources. It offers employees all over the world a comprehensive training portfolio—in the form of e-learning, face-to-face training and increasingly in new, digital and interactive formats as well. In addition to technical expertise, training programs focus on talent and management development and particularly on leadership and social skills. iLearn, Software AG's digital learning platform, provides all employees worldwide with job-specific training, available around-the-clock.

The University Relations Program plays a key role in the search for the best rising talent thanks to its close ties to colleges, universities and graduates. Software AG provides software products for teaching and research purposes to more than 1,760 universities in over 70 countries. To date, more than 21,780 students have benefited from this program, learning about solutions from Software AG. Since 2017, students have the option of receiving ARIS certification online. The 960-plus downloaded certificates enable the young specialists to verify their newly acquired expertise when applying for jobs. Software AG began expanding its activities into schools through the University Relations Program in 2017. This reflects the fact that digitalization is affecting ever-more facets of life at an earlier age.

With the help of differentiated employer branding activities—including the Faces campaign in which employees act as ambassadors—Software AG is solidifying its position as an attractive employer and creating an innovative, performance-oriented work environment at the same time. To strengthen its position as market leader, Software AG must not only find and hire the most talented experts and leaders, it needs to retain, motivate and support existing employees with their many years of knowledge about products, customer needs and processes. The Company's deep respect for its employees is manifested in individual recognition, competitive compensation, comprehensive social benefits and a flexible working environment.

Software AG's corporate culture is shaped by highly dedicated individuals, an international, open-minded staff and a global yet family-like environment. Promoting a diverse workforce, their leadership strengths and their expert knowledge while strengthening a global as well as individual identity is vitally important at Software AG. Modern, ergonomic workspaces as well as holistic health management add to Software AG's attractive working environment. In 2018, Software AG was the first IT company in Germany to be awarded the Platinum Label, the highest honor for the Healthy Company award.

Strategy and Goals

For more information about Software AG's new strategic focus starting in fiscal 2019, please refer to the Forecast. p. 100
The following information reflects the status as of December 31, 2018.

Vision and business strategy

Software AG's long-term vision is to secure its position as a global market leader in digital business platforms for application infrastructure and middleware software and expand that position with innovative solutions. Following this guiding theme, Software AG works to deliver the best support to customers in every industry worldwide in their digital transformation and to steadily grow the value of the Company. To achieve this goal, the Company is combining established longtime business activities with innovation and commitment in promising new market segments and regions.

Accordingly, Software AG's business strategy focuses on long-term, profitable growth in selected market segments and countries. An essential component of Software AG's success strategy is the ongoing development of its own product portfolio including the integration of technologies acquired in previous years and co-innovation with its customers and partners. To strengthen its own technology leadership and gain market share, Software AG is propelling its own growth on one hand and making selected investments in innovation-driven businesses on the other. Another important success factor is increasing new license business. License sales in the software sector are considered a key indicator of future growth, because they typically lead to long-term, recurrent maintenance revenues which, in turn, generate positive cash flow. Because of the significant potential for growth and higher earnings compared to services, the product business is the backbone of Software AG's strategic approach.

Financial objectives

Based on its business model, the Company's high target EBITA profit margin (non-IFRS) is well above 30.0 percent. Given stable margins in the A&N business line, organic growth in the traditional DBP business and ongoing acceleration in market activities for IoT serve as the essential basis for improved margins. Productivity improvements in sales and a growing partner network will further support the margin. With respect to growth in DBP licenses, Software AG expects annual growth rates ranging between mid to high single digits, while the IoT business is expected to see dynamic growth. Recurring revenues in DBP maintenance with growth rates in the low to mid-single digits and dynamic growth revenue in Software as a Service (SaaS) will particularly promote margin growth.

Non-financial objectives

Software AG is focusing on long-term, sustainable growth. An essential component of Software AG's success strategy is the ongoing development of its own product portfolio including the integration of technologies acquired in previous years and co-innovation with customers and partners. Software AG has identified factors for sustainable, continued development to drive profitable growth.
p. 50 These factors are discussed under Non-Financial Performance Indicators in the Internal Corporate Control System section. For more information about the key drivers of sustainable corporate governance, please refer to the
p. 80 Combined Non-Financial Statement.

Strategic direction of business lines

Digital Business Platform (DBP)

With regard to the business lines, Software AG is focusing strategically on heavily expanding the pioneering DBP line, which has become the Company's top revenue generator in recent years. The reason: The transition to the digital enterprise also requires transformation of the internal IT architecture. Today everything focuses on an event-driven real-time platform that is needed in practically every field, from product development to customer interaction. This business line's goal is to deliver a comprehensive, cloud-based, consistent, flexible platform that is built on modern architecture elements (API, microservices, containers, events)—and with technology that is always one step ahead of the competition. To this end, Software AG is constantly developing the different DBP building blocks as part of its own R&D work as well as making targeted acquisitions to strengthen its technology leadership in this area. For more information on this topic,
p. 47 please refer to Equity Interests and Research and Devel-
p. 51 opment.

Internet of Things (IoT)

For many companies, IoT has become a strategic element of new business models. Software AG further expanded its leading position in the emerging IoT market with its acquisition of Cumulocity GmbH in March 2017. Adding Cumulocity's IoT solutions to the Software AG portfolio enables businesses to integrate their IT applications more quickly and easily with operating IoT devices. This enables Software AG to deliver leading solutions for the integration, networking and management of IoT components as well as data analysis and prediction of future events based on AI. This has already led to numerous project deals in the IoT sector. In light of this development, Software AG began reporting revenues from the growing IoT business separately as part of the DBP business line in January 2018.

Adabas & Natural (A&N)

The A&N business line provides a solid, highly profitable base for enabling flexible, strategic investments in innovative emerging fields. Moreover, the Company can rely on an established customer base that offers promising sales potential for DBP products in this segment. The **Adabas & Natural 2050+** agenda provides the strategic roadmap for the A&N segment. The Company announced the agenda in summer of 2016, reaffirming its decision to continue to develop and support the A&N product portfolio through the year 2050 and beyond. This is an unprecedented commitment in the industry to long-term viability and investment security for customers. It is Software AG's response to an independent survey, which showed that 98 percent of A&N customers employ the high-performance platform to render strategic, mission-critical enterprise applications. By pursuing this long-term agenda, the Company also aims to support its customers through the generational shift that is facing the entire software industry. Software AG wants to help its customers to secure and expand the expertise built up during decades of development work on enterprise applications. The goal is to provide customers with a single, integrated platform for digitalization that they can use to develop the next generation of future-proof business applications.

Consulting

Sustainable profitability and high service quality are Software AG's two strategic targets for its **Consulting** business line. The Company therefore focuses its activities on projects and services that comprehensively support its product business. Furthermore, Software AG is reducing its presence in regions with low profit expectations.

Equity interests

Mergers & Acquisitions (M&A) strategy

Corporate acquisitions and participating interests are a strategic instrument at Software AG for opening up new markets while solidifying its technology leadership. Throughout almost 50 years of company history, Software AG has succeeded in reinventing itself and transforming time and again—a key prerequisite for staying successful in today's IT world with its changes at breakneck speed and shrinking innovation cycles. With its technology acquisitions in recent years, Software AG has picked up new impetus and expertise and integrated it. The Company acquired 19 companies between 2007 and 2017 to grow and develop its product portfolio. In addition, Built.io LLC and TrendMiner NV were acquired in fiscal 2018.

The headquarters of Software AG's M&A department is in California. Through the multitude of leading global IT companies located there and California's distinctive startup culture, the Company can recognize future IT trends early on, to test, harness and develop them. Whether in Europe, Silicon Valley or other promising locations, Software AG will continue to keep a close eye on the technology development market in order to enhance its product portfolio through targeted acquisitions and expand its global presence.

Statement on corporate acquisitions

On June 12, 2018, Software AG announced the acquisition of TrendMiner NV based in Hasselt, Belgium. The company is developing a platform for innovative, AI-based solutions for visual analysis of historical process and manufacturing data. After the acquisition of Zementis, an AI specialist, in 2016 and Cumulocity in 2017, Software AG's acquisition of TrendMiner is expanding its leading position in the IoT growth market. TrendMiner uses advanced analytics such as diagnostics, visual and predictive analytics based on all available IoT time series data and delivers the results in a user-friendly format. For Software AG, the acquisition consolidates its technological market leadership in the IoT and Industry 4.0 growth markets. The acquisition price was €34.6 million.

Software AG announced the acquisition of Built.io LLC on September 28. Built.io is a leading integration Platform as a Service (iPaaS) provider located in San Francisco, California, USA. The integration of Built.io Flow with Software AG's market-leading IoT, API Management and B2B solutions opens up entirely new opportunities for customers to master their integration challenges. Built.io's products, Flow and Embed, will become a single integrated solution with Software AG's world-renowned webMethods integration platform. Customers will benefit from user-friendly, robust integration solutions that will play a key role in the success of IoT and digitalization solutions. With the expanded offering including Built.io products, Software AG can deliver industry-leading functions in an elegant, cloud-based integration solution that can be seamlessly integrated with any SaaS application. The acquisition price was €17.1 million. For more information, please refer to Note [4] Business Combinations in the Notes to the Consolidated Financial Statements. p. 171

Internal Corporate Control System

Performance indicators and monitoring

Software AG's internal control system enables it to meet strategic corporate objectives. Software AG focuses on continued profitable growth and strengthening its financial power so that it can help customers master digital transformation and increase its own enterprise value. To this end, Software AG has established a comprehensive **internal corporate control system** that measures both hard and soft performance indicators of success.

For targets that were not reached or just barely reached during the year, Software AG will readjust in the following period. To do so, the Company has established a standard process between the local Commercial teams and Controlling that is conducted on a quarterly basis. A financial scorecard model is the foundation and starting point of this process. Suitable measures are developed and initiated if deviations from goals are detected, then the results are incorporated directly into a rolling forecasting and budgeting process. At the heart of this rolling process is a new planning horizon that has been expanded by two quarters to a total of six quarters. This enables Software AG to map out the effects from those measures beyond the current calendar year. In this case, rolling means that the planning horizon shifts from quarter to quarter.

Targets Met in 2018

as %	Bottom range	Top range	KPI 2018
Digital Business Platform product revenue (not incl. Cloud & IoT)[1]	+3	+7	+1
DBP Cloud & IoT product revenue[1, 2]	+100	+135	+106
Adabas & Natural product revenue[1]	–6	–2	+2
Operating profit margin (non-IFRS)[3]	30.0	32.0	31.5

1 At constant currency
2 Original forecast of €25-€30 million was revised upward in April 2018 to €30–€35 million
3 Before adjusting for non-operating factors (see non-IFRS results)

Group financial indicators

DBP revenue at constant currency (excl. Cloud & IoT), **DBP Cloud & IoT revenue**, **A&N product revenue** as well as **operating profit margin** (non-IFRS) are key strategic indicators for managing the Company. The operating profit margin (non-IFRS) is the focus of internal controlling. These performance indicators are calculated as follows:

Operating margin (EBITA, non-IFRS)

Earnings before interest and taxes (EBIT)

+ Acquisition-related depreciation of intangible assets
+ Acquisition-related decreases in product revenue due to purchase price allocations
+/– Other acquisition-related effects on earnings
+/– Income/expense resulting from share price-based remuneration
+ Restructuring/severance/litigation

= EBITA (non-IFRS)

The **operating profit margin (EBITA, non-IFRS)** is calculated by dividing EBITA (non-IFRS) by Group revenue adjusted for acquisition-related product revenue decreases.

As is typical across the software sector as a whole, capital-oriented financial indicators play a minor role for Software AG. This is due to the fact that the business model's commitment of capital is low. Software AG's largest expense block is for personnel costs, as described in Note [14] of the Notes to the Consolidated Financial Statements. Other key indicators are provided by the segments and types of revenue on which Software AG's business model is based. p. 175

Operating EPS (non-IFRS) was added as an additional key indicator for fiscal year 2018 to account for tax-related factors.

These performance indicators are calculated as follows:

Operating earnings per share (non-IFRS)

Earnings before income taxes

+ Other taxes
+/– Net financial income/expense

EBIT (before all taxes)

+ Acquisition-related amortization of intangible assets
+ Acquisition-related decreases in product revenue due to purchase price allocations
+/– Other acquisition-related effects on earnings
+/– Income/expense resulting from share price-based remuneration
+ Restructuring/severance/litigation

EBITA (non-IFRS)

+/– Net financial income/expense
– Other taxes

Earnings before income taxes

– Income tax based on Company's income tax rates

Net income (non-IFRS)

Divided by average number of shares outstanding

= Operating earnings per share (non-IFRS)

For more information and the definition of Software AG's **non-IFRS financial indicators**, please refer to https://investors.softwareag.com/en/corporate-governance/non_ifrs_key_figures.

Segment performance indicators

The key performance indicators for the product business are those reflecting sales efficiency. Efficiency is portrayed through the **cost of sales ratio**, which reflects the sales and marketing expenses of a product in relation to the associated product revenue. The factors influencing optimization of the cost of sales ratio are determined using additional efficiency indicators such as revenue performance per Sales employee and average deal size trends.

The **segment margin** (revenue less cost of sales and sales and marketing expenses) is reported in the segment report and is an especially important performance indicator for the Consulting line. It is influenced primarily by the capacity utilization of staff in the Delivery department, sales and marketing expenses and the cost per employee. The last factor can be optimized by controlling on/offshore high/low cost percentages.

Monitoring types of revenue

Up to December 31, 2017, Software AG reported the revenue types: licenses, maintenance and services, whereby the **license revenue** represented the key growth driver for maintenance and service revenue. As a result of the growing importance of subscription-based license models in the software sector, Software AG added the revenue type "SaaS/usage-based" (Software as a Service) in the DBP segment as of the beginning of fiscal 2018. With Software as a Service, the customer purchases a time-limited user license that includes software hosting.

Because the share of subscription-based license models with pro rata revenue recognition (in contrast to immediate revenue recognition at the start of a permanent license agreement) is on the rise, monitoring sales performance solely on the basis of revenue is no longer sufficient. For that reason, the Company implemented annual recurring revenue (ARR) as a performance indicator to serve as an additional monitoring component in the DBP segment in 2018. This performance indicator shows the sum of annualized new orders[1] from the following contract types:

- Limited licenses/subscription licenses
- Maintenance from limited and unlimited licenses
- SaaS licenses
- Usage-based licenses[2]

[1] New orders from all active contracts at period end (without one-time effects) divided by the contract length in months multiplied by 12
[2] Realized monthly revenue of usage-based license agreements at period end multiplied by 12

Software AG also employs a multidimensional matrix structure to continuously monitor **changes in EBITA** for every profit and cost center. The matrix is broken down further according to business lines and revenue types and, within the business, by region. Furthermore, Software AG constantly observes the operating income of its service business with respect to specific projects, from the time a quote is prepared through to project conclusion. One of the most important goals is the constant improvement of **sales efficiency.** Software AG achieves this through its customer-centric go-to-market model. A cross-regional sales and service structure and steady expansion of the partner network offer additional potential for market coverage and growth.

Cost and cash flow management

All cost items in the Group are subject to stringent budget control and are assigned to clearly defined controlling areas depending upon their business segment (R&D, Sales, Management). On a monthly basis, the individual profit and cost centers are reviewed to determine whether budgets were adhered to, how forecast costs evolved, and how cost growth compares to revenue growth. Software AG uses a **dynamic budget model,** ensuring that key components of the cost budget remain flexible in relation to sales growth. The cost budget is adjusted as needed throughout the year in order to achieve or surpass profit targets.

Receivables management has a significant effect on cash flow. It is controlled centrally by Software AG and executed locally by subsidiaries. Receivables management is monitored by way of various internal controlling processes.

Software AG's cash management is a centralized function and is carried out at corporate headquarters in Darmstadt using a global, standardized **cash management system.** It enables Software AG to optimize its investment strategy and minimize investment risk.

Non-financial performance indicators

Software AG's enterprise value is defined not only by financial indicators, but also by non-financial performance indicators. Software AG strongly believes that they are an element of long-term business success. To clarify how the Company measures the individual performance indicators, the table below illustrates examples of operationalizing practices.

Performance Indicator	Operationalization Examples
Strategic product positioning in the market	External analyst ratings
Customer satisfaction and loyalty, as well as feedback	Average deal sizes, maintenance agreement termination rates, regional trends, customer satisfaction analyses
Employee satisfaction and retention	Performance-based compensation, length of service, turnover
R&D	Number of product release cycles, analyst ratings
Focus of sales activities	Sales efficiency and effectiveness
Partner network	Number of sales and technology partners, revenue influenced by partners or through partners
Anti-corruption	Training rate on the Code of Conduct

Company-specific early warning indicators

The early warning indicators used by Software AG are separated into **cross-departmental** and **department-specific indicators**.

The key cross-departmental early warning indicator is **license revenue growth,** because license sales directly impact the Company's profitability and indirectly affect it through the resulting maintenance and consulting business. At the beginning of a reporting period, the existing qualified project pipeline is the essential early warning indicator for licensing business growth. In this qualified project pipeline, existing opportunities are evaluated in size and probability and placed in relation to expected revenues. Since opportunities naturally become disqualified, delayed, lost or contracted during the sales process, the relation between the pipeline and revenues is not fixed. Rather, it is subject to constant change until the end of the reporting period. To actively manage the complexity of this early warning indicator, Software AG uses an appropriate customer relationship management tool that shows the correlation between the existing pipeline and anticipated revenue in real time. Therefore, at the start of a quarter the value of that quarter's opportunities equals at least three times the expected revenue volume. If this is not the case, activities in license sales need to be intensified accordingly.

In fiscal 2018, the ARR performance indicator was added as a department-specific early warning indicator for future revenue development that represents the anticipated recurring cash flow in the product business. Furthermore, order intake plays a role in Consulting as well as in some areas of the product business to be a key indicator of future business development. In the Consulting line, a report on order intake for consulting projects is submitted monthly. Work orders typically define clearly quantifiable order intakes, whereas service agreements only stipulate an anticipated volume. Since neither the size of orders nor the date they are received are evenly distributed, order intake can fluctuate considerably. For this reason, Software AG assigns greater importance to the Consulting line's **order backlog** than to its order intake. The order backlog at the end of a period is defined as: the order backlog during a period plus all new orders during that time period minus all new projects realized in that period (completed). The order backlog for a reporting period should increase by about the same rate as the target revenue growth for the next periods. Should that not be the case, the Consulting business line has to intensify its sales activities.

Another department-specific early warning indicator is the **maintenance agreement termination rate.** Due to contractually defined cancellation periods, terminations received during the course of the year combined with anticipated licensing revenues allow the Company to draw conclusions about maintenance revenue growth for the subsequent reporting periods. With low termination rates of 7–8 percent in industry comparison, experience has shown that Software AG can expect single-digit percentage growth in maintenance revenues of 1 to 4 percent (2018: 3 percent) compared to the previous year (at constant currency) if licensing revenue growth remains positive (assuming other conditions remain constant).

Integrated management system

The integrated management system implemented in 2016 is a supplemental control system that currently includes the areas of **Quality Management** and **Business Continuity Management**. Both of these were initiated to provide an adequate answer to the growing compliance requirements on the customer side.

By defining internal quality goals and continuously monitoring compliance with them through management reviews and key quality indicators, Software AG is creating a corporate culture that is committed to maintaining high quality standards. Its successful **certification to ISO 9001:2015** is evidence of this commitment.

Software AG has performed a targeted analysis of its business processes and the accompanying IT systems to develop strategies that enable it to preserve the most critical processes from a customer's perspective in crisis situations, or be able to restore them as quickly as possible. This also includes concepts for redundant data storage. The Company is further securing its constant preparedness through ongoing training of the global Incident Response Team and testing crisis scenarios. The Company's successful **ISO 22301:2012 certification** (business continuity management) confirms the effectiveness of these measures.

For more information about quality assurance and the **ISO 27001-certified cloud information management system** (Cloud IMS), please refer to Customer Concerns in the Aspects section of the Combined Non-Financial Statement. p. 94

Research & Development

Strategic focus

Digital transformation is the driving force behind ongoing product development and bringing new solutions to market. To Software AG, innovative power and operational excellence continue to be the cornerstones of successful R&D. Targeted technological acquisitions, in-house Research & Development as well as the resulting innovations form the basis for long-term success for Software AG.

Ongoing portfolio development, partnerships and co-innovation projects with customers as well as joint research projects with academia, research centers and startups ensure that Software AG is always able to address the practical needs of customers based on the latest trends in technology.

The goal of R&D activities is to continually develop the Company's product portfolio while considering customer requirements as well as business concerns. The Industry 4.0 and Internet of Things (IoT) mega trends are of particular focus.

Innovations and expertise

As part of Software AG's **co-innovation strategy,** its R&D unit collaborates closely with customers and strategic partners including Siemens and Google, participates in various **research programs** and also established a **Scientific Advisory Board** in 2017.

Innovative **technology acquisitions** are another key component for gaining expertise. Further information about the corporate structure, M&A strategy and the Company's own venture capital program can be found in Fundamental Aspects of the Group. In addition, Software AG legally protects its knowledge and expertise with **patents**. Details on Software AG's patent practices are covered under legal risks in the Key Individual Risks and Opportunities section of the Opportunity and Risk Report. p. 32 p. 47 p. 118

A security system based on OpenSAMM ensures the security of software development. Maintaining common security processes even during development is a guarantee for a robust software security. Furthermore, the Company contracts with external security consultants that inspect the software for weak points to continually improve its security. In Germany, R&D also collaborates with the Fraunhofer Institute for Secure Information Technology (SIT) on the process aspects of secure software development.

R&D performance indicators

Software AG performs an ongoing **breakeven analysis for products** in the R&D unit as part of this process and optimizes its innovative power by combining technological acquisitions and in-house solutions.

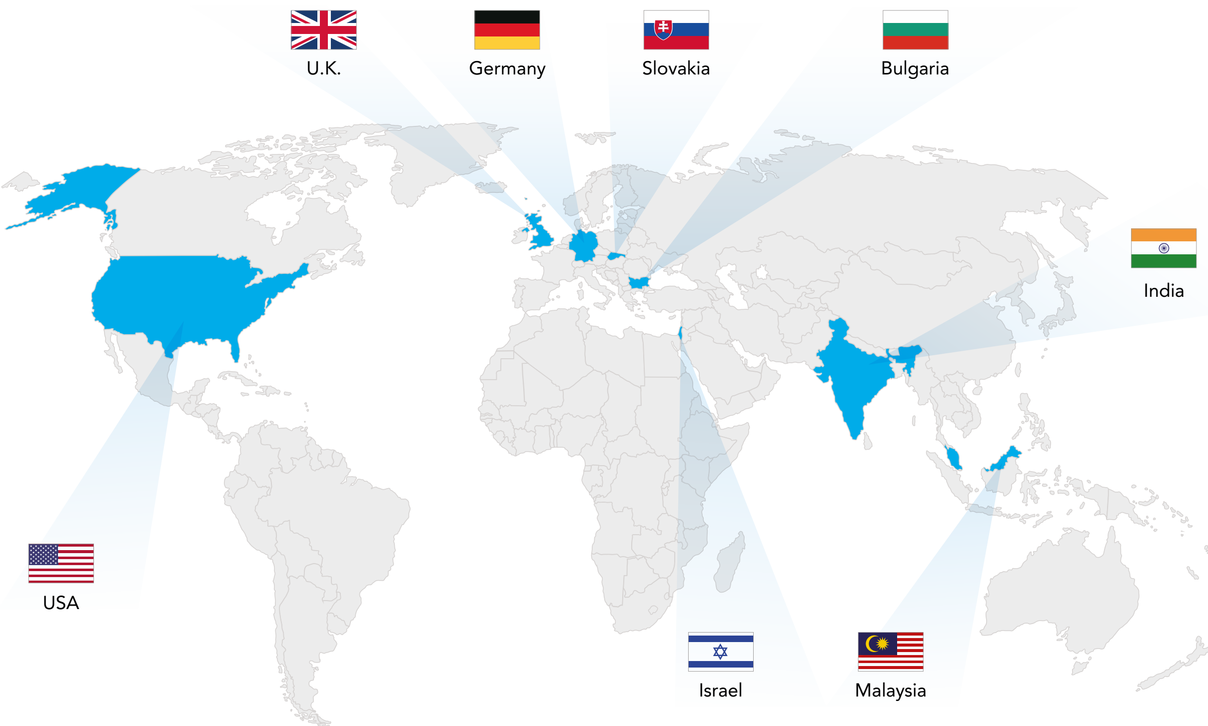
With the **Customer Value Navigator,** Software AG is making use of a tool based on its own technology for analyzing concluded customer contracts. The findings regularly yield new knowledge that can help R&D and Sales in particular to optimize the value that Software AG's product portfolio adds for its customers.

Employees and locations

Thanks to its intensive R&D activities, Software AG has always been a pioneer and innovation leader in the software industry. The Company set a new standard with its first Digital Business Platform in late 2014 and is working continuously on developing its product portfolio. In 2018, Software AG released comprehensive product updates and focused intently on IoT, a substantial growth area.

Considering the strategic importance of R&D for the Group, the number of employees in this area has been growing accordingly since 2014 and reached a record high of 1,310 employees in 2018 (2017: 1,176). Software AG has R&D centers in the following countries:

R&D Locations



Ongoing product portfolio development

In 2018, R&D worked primarily on customer-centric DBP development, with a particular focus on a complementary product portfolio, integration of new partners' and acquired companies' technologies into the DBP and A&N product lines as well as implementing the co-innovation strategy. Key R&D topics in the DBP line were the digital enterprise (analytics, process management, data integration and API management) and IoT (platform services, device management and data streaming). A&N focused primarily on rehosting and hardware optimization. Approaches such as scrum, design thinking and test automation are employed in the innovation process.

p. 34 For more information about innovations that were market ready in fiscal 2018, please refer to the Product Portfolio section.

Partnerships and co-innovation

AWS is the preferred infrastructure provider (IaaS) for Software AG's cloud products. Over 90 percent of customer cloud solutions managed by Software AG are hosted by AWS, as well as all public cloud offerings and free trials. In September 2018, Software AG extended its contract with AWS for two more years with increased volumes. In addition, Software AG was one of the first vendors on the AWS Container Marketplace. Software AG already had 10 products listed there (ARIS, webMethods API, Apama, TrendMiner, etc.) for the launch on November 28 during the re:Invent Conference in Las Vegas. Two more have since joined them (webMethods Microgateway, Teracotta). All listings are currently offered as a docker container, free trial or BYOL (bring your own license). Software AG is also planning more joint activities with AWS in 2019.

R&D expenses and internal strategy

Expenditures for R&D rose by 3 percent in 2018 to €124.4 million (2017: €120.6 million). Accordingly, R&D expenses as a percentage of product revenues (licenses, maintenance and SaaS) increased from 17.8 percent in 2017 to 18.2 percent in the year under review. This rise is due to higher R&D investments totaling €100.6 million (2017: €96.9 million) in the high-growth DBP line. To strengthen its position as an innovation leader, Software AG is committed to digital products and markets—as a long-term investment in the future. Software AG is dedicated to evaluating and developing technologies for the digital enterprise and thus to a sustainable and customer-centric investment strategy. An additional reason for the rise in R&D expenditures in fiscal 2017 was the strategy introduced at the end of 2016 to continue developing and supporting the A&N database business through 2050 and beyond. This innovation program was reflected in the growth in A&N license revenue in 2018.

Expenditures for near and offshore capacities also went up, primarily in the area of staffing. This reflects Software AG's strategy of efficient distribution of R&D spending, whereby R&D capacities in various countries are taken into consideration. Over time, the Company has established three large, high-performance R&D centers in India, in the cities of Bangalore, Chennai and Hyderabad. Software AG's location strategy is based on global availability of outstanding talent and distributes product responsibility accordingly across R&D locations. Furthermore, Software AG allocates its resources optimally by combining technology acquisitions and in-house development.

Due to these factors, the number of employees (full-time equivalents) working in R&D rose to 1,310 (2017: 1,176) as of December 31, 2018. This is an 11 percent increase year-on-year and reflects the Company's sustainable long-term strategy. R&D specialists were distributed across 15 countries, with the majority based in Germany, India, the U.S. and Bulgaria in the year under review.

Multi-Period Summary for R&D

in € millions	2018	+/– as %	2017	2016	2015	2014
R&D expenditures for A&N	23.8	0	23.8	22.5	20.7	24.3
R&D expenditures for DBP	100.6	4	96.9	89.9	85.7	84.7
Total	**124.4**	**3**	**120.6**	**112.4**	**106.4**	**109.0**
as % of product revenue	18.2	—	17.8	16.7	15.7	17.0
as % of total revenue	14.4	—	13.7	12.9	12.2	12.7
R&D headcount (FTE)	**1,310**	**11**	**1,176**	**1,110**	**992**	**968**

Collaboration with science and research

Software AG's Scientific Advisory Board once again contributed important ideas on technology trends in 2018. This strengthens the development of the product portfolio and, in turn, brings customers significant benefits. The task of the Scientific Advisory Board is to support Software AG's R&D activities in an advisory capacity; it is not a corporate controlling body in the legal sense. Members of the board determine what its areas of focus will be at least once per year. In addition to Software AG executives, the board consists of external members of the scientific and research communities who are appointed for a term of at least three years.

Software AG participated in collaborative research projects with universities, research institutes and other companies as part of many publicly funded research projects in fiscal 2018. Sharing knowledge with partners from science and research leads to early identification of market and technology trends. Software AG employs these insights to offer customers a broad range of best-in-class innovations. The following is a summary of current research projects:

- The goal of **Data Tanken** (English: Fueling Data) is to build a grid-compatible public charging infrastructure for electric vehicles in Dresden, Germany. The charging stations will offer discounted—even free, where appropriate—electricity in exchange for vehicle data that will enable the development of valuable services. These services could include predictive maintenance for the vehicles, optimized route and charge management, or stabilizing the power grid. Not only will selling these services cover the cost of discounted power delivery, but as an additional income source it will also enable sustainable operation of the charging infrastructure.

- **SAUBER** (English: CLEAN) taps into satellite data and converts it into digital services for sustainable city and regional development. SAUBER will deliver a comprehensive and detailed overview of current conditions and use AI to provide air quality forecasts as well. This way the location and level of air pollution can be predicted and reduced through quick countermeasures or predictive planning—or even prevented entirely under certain conditions.

- Innovative approaches to data protection are in demand in the digital business world, where added value is increasingly driven by data. The goal of **Inverse Transparenz** (English: Inverse Transparency) is to make the use of personal data within a company as transparent as possible and inform employees which data about them is generated and what happens with this data. This strengthens the informational self-determination of employees. At the same time, companies are establishing new participation-oriented approaches for employee data protection in the digital business world.

- **I-BiDaaS** aims to empower normal users without extensive knowledge to easily implement complex big data technologies so that analyses can be performed without data scientists. Removing these barriers will drive the use of big data in both speed and scope of the data used. Small and midsized enterprises will benefit in particular from the self-service offering.

- The objective of **LOGISTAR** is to drastically reduce the number of delivery trucks making empty runs. Around one out of four trucks in Europe is currently traveling without a load. This project not only saves valuable resources, but also prevents the environment and infrastructure from being overloaded. To remedy this problem, a real-time visualization and decision tool is being developed based on supply chain data. This tool will enable logistics companies to plan transports more effectively and respond proactively to disruptions. Automated negotiated procedures and AI are deployed in this tool.

Other R&D activities

Software AG is also active in many German and European committees, associations and organizations. This involvement enables the Company to react quickly to new challenges, set standards and positively influence digital transformation and its impact on society. The Industry 4.0 Platform is an example of Software AG's involvement. This platform grapples with not only the technological aspects, but also the social and legal aspects of Industry 4.0. Software AG is represented on the platform's steering committee, collaborates in several workgroups and provides the co-chair of the research advisory committee.

Network Memberships and Political Involvement

Organization	Additional Information
acatech—German National Academy of Science and Engineering	acatech.de
BDI—National Association of German Industry	bdi.eu
BDVA—Big Data Value Association	bdva.eu
Bitkom—Germany's Digital Association	bitkom.org
DKFI—German Research Center for Artificial Intelligence	dfki.de
GI—Society of Computer Science	gi.de
House of IT e.V.	house-of-it.eu
Initiative D21 e.V.	initiatived21.de
NESSI—The Networked European Software and Services Initiative	nessi-europe.com
Industry 4.0 Platform	plattform-i40.de
Self-Learning System Platform	plattform-lernende-systeme.de
SDIL—Smart Data Innovation Lab	sdil.de
Software Campus	softwarecampus.de
Software Cluster	software-cluster.org

ECONOMIC REPORT

Business Summary

General economic conditions

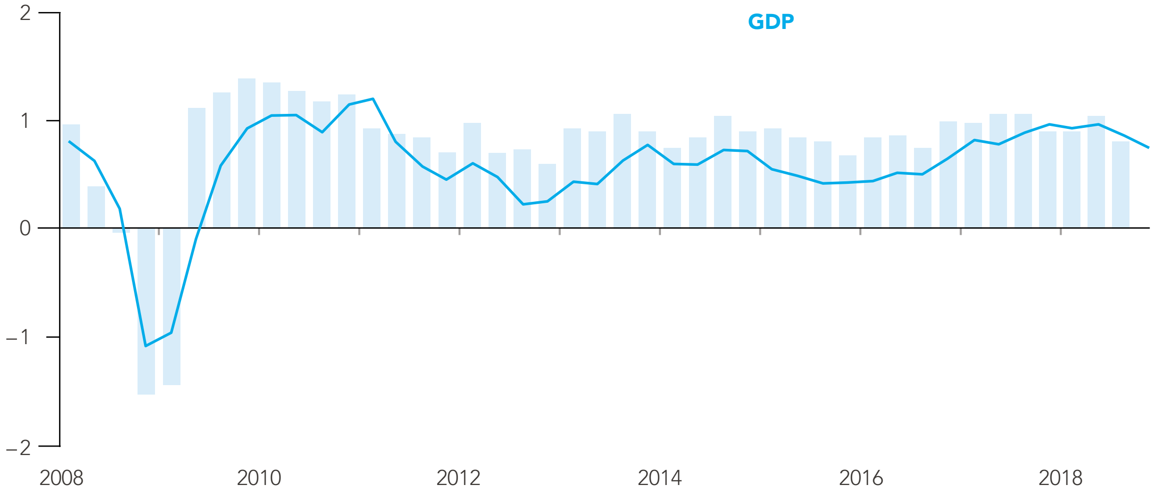
Expansion of the global economy slowed once again in the course of 2018. After having picked up pace again in 2017, it noticeably lost speed towards the end of the reporting year. Accordingly, economic mood has declined significantly almost everywhere. The Institute for the World Economy in Kiel, Germany (IfW) still assumes, however, that global production for 2018 as a whole increased by 3.7 percent, as in 2017. Among the major national economies, the U.S. economy proved to be relatively robust. U.S. gross domestic product grew by 1.1 percent in the second quarter and by 0.9 percent in the third quarter, with private consumption as the key driver for the growth. The pace of investment, however, declined significantly after mid-year in the USA, just as it did elsewhere. For the year as a whole, economic output rose once again, to the projected 2.9 percent (2017: 2.3 percent).

In contrast, the economic upswing in the eurozone can be expected to have peaked in 2018. After the strong upward trend in 2017, momentum slowed considerably in the reporting year. This is reflected, among other things, in the decline in gross domestic product to 1.9 percent (2017: 2.4 percent) in the eurozone.

In Germany, the boom of the previous years also slowed. According to the IfW, the anticipated increase in GDP, at 1.5 percent (2017: 2.2 percent), is much lower than originally projected. In the emerging economies as well, economic expansion slowed. The upswing that started in 2017 is threatening to end after just a short period of time. Economic expansion in the emerging economies of Asia remains strong; however, global trade has lost momentum overall. In particular, the eurozone experienced a weak trend in foreign trade.

Global Economic Activity From 2008–2018

Percentage



Quarterly data; seasonally adjusted; indicator calculated based on sentiment index in 42 countries;
GDP: adjusted for price, change re. previous quarter, 46 countries.
Source: Institute for the World Economy in Kiel, Germany (IfW), Economic Reports, World Economy in Winter 2018 No. 49 (2018|Q4), Dec. 11, 2018

Sector environment and influencing factors

Software AG's business is closely linked to the growing digitalization of the economy and of society. This is because software is the fundamental raw material and driver of the next industrial revolution (Industry 4.0 and IoT). Economic competitiveness will depend to a significant extent on the ability to create software-based products and services at the highest level of quality. Software expertise will also be the prerequisite if Germany is to maintain its position as a leader in engineering and consolidate its position as an export nation. A dynamic and successful German software industry gives a strong impetus to all economic sectors, and thus to the competitiveness of the German economy as a whole. In the future, innovative products and services will no longer be conceivable without software. In 2018, these factors once again had a positive impact on Software AG's business performance. In turn, however, it is vital that the software industry be able to rely on a stable, secure, high-performance infrastructure. In addition to clear legal framework conditions, for example in regard to the security of cloud services, this calls for the expansion and development of fast broadband networks with sufficient capacity. Regulatory and political changes and uncertainties in the countries and markets in which Software AG operates are thus further important factors that can have an impact on business performance. The opportunities and risks that arise
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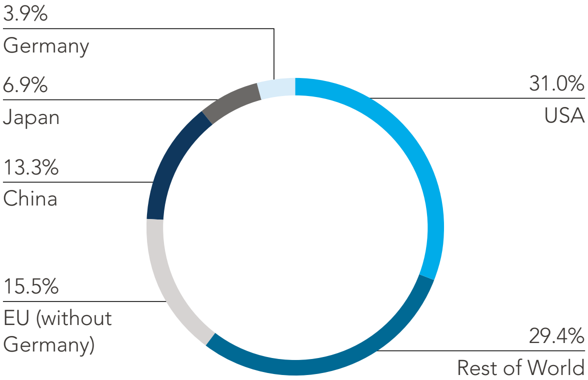
in this connection are described in Key Individual Risks and Opportunities in the Opportunity and Risk Report.

The ICT Market: 2018 Revenue Shares by Country/Region



Note: ICT revenue does not include consumer electronics, business consulting or BPO.
Source: EITO, IDC

Sector-specific conditions

The growth trend in the IT market continued in 2018. According to the U.S.-based market research firm Gartner, worldwide IT expenditures rose to an estimated $3.65 trillion in 2018 (2017: $3.5 trillion). Software AG's market segments generated especially high demand among companies in 2018 as well. Spending for enterprise software was up 7.6 percent to $397 billion (2017: $369 billion). Companies invested $983 billion (2017: $931 billion) in IT services, representing growth in 2018 of 5.6 percent.

Worldwide sales in information and communication technology (ICT) products and services also showed a positive trend in the fiscal year 2018. According to forecasts of the European Information Technology Observatory (EITO), sales grew by €100 billion to a level of €3.3 trillion (2017: €3.2 trillion), an increase of 3.1 percent over the previous year. The USA continues to generate the largest share in global ICT sales, at 31 percent, or over €1.0 trillion. The EU accounted for one fifth of worldwide sales. In Germany as well, the ICT market continued to grow. According to EITO and the German Association of Information, Telecommunications and New Media (Bitkom), total revenue in this market rose to €166 billion (2017: €162.7 billion), representing growth of 2.0 percent. Information technology remained the largest segment with the strongest growth, generating sales of €89.9 billion (2017: €87.2 billion) and growth of 3.1 percent.

Key events affecting business performance

At a meeting on January 31, 2018, Software AG's Supervisory Board appointed Sanjay Brahmawar as the new Chief Executive Officer of Software AG as of August 1, 2018, for a period of five years. Sanjay Brahmawar took over the position from Karl-Heinz Streibich, who duly left the Company, after more than 14 years as CEO, upon reaching retirement age. Sanjay Brahmawar was previously general manager of IBM Watson Internet of Things. Based in Munich, he was responsible for global software sales with a focus on data analytics and artificial intelligence (AI).

On June 12, 2018, Software AG announced the takeover of the fast-growing company TrendMiner NV. The company, founded in Belgium in 2008, is specialized in visual data analytics in the manufacturing and processing industry and rounds out Software AG's product portfolio in the areas of IoT and Industry 4.0. A Web-based analytics platform with an intuitive user interface, TrendMiner allows flexible visualization of industrial processes and measurement data. It enables companies to quickly and easily identify patterns and trends in their process data, to immediately recognize production irregularities, and to carry out the necessary process adjustments in a timely manner, all without the assistance of IT specialists or data scientists. TrendMiner's plug-and-play software generates measurable added value as soon as it goes into operation. For evaluation, the company uses advanced analytics such as diagnostic, visual and predictive analytics on the basis of all available IoT time series data and presents the results in a user-friendly format. TrendMiner has particular strengths in the development of pattern recognition and analysis functions for the oil and gas, life sciences and manufacturing sectors and the related consulting services.

In addition, on September 28, 2018, Software AG acquired Built.io, a leading iPaaS provider based in San Francisco, CA, USA. Built.io has been on the market with its proprietary iPaaS product Built.io Flow since 2015. The acquisition makes Software AG's B2B integration and API portfolio available to a rapidly growing developer community and opens up almost unlimited potential for innovation. On October 11, 2018, Software AG announced an expanded partnership with Dell Technologies. As part of this partnership, Software AG's Cumulocity IoT Edge will be bundled with a selection of Dell servers to create a joint plug-and-play solution that enables quick deployment and simple configuration of IoT. The high-performance, industry-ready package of IoT hardware, software and services lets customers immediately launch and connect their IoT projects. Customers can connect an unlimited number of devices and sensors in just minutes. Functions such as integrated streaming analytics, intelligent rules and fieldbus connectivity make it possible to quickly and smoothly implement complex IoT solutions.

At a meeting on October 25, 2018, Software AG's Supervisory Board resolved to appoint John Schweitzer to the Management Board as of November 1, 2018. His appointment as Chief Revenue Officer underscores the importance of a strong sales organization in the framework of the Company's strategic realignment. Schweitzer is considered a manager with proven experience in managing dynamic growth, at both young and established software companies.

Management's general statement on business performance and financial position

In fiscal 2018, demand for Software AG's solutions in the global fast-growing Internet of Things (IoT) market was especially high. Our Cloud and IoT business continued its highly dynamic growth trend in 2018, achieving sales growth of over 100 percent. Driven by high market demand for independent, open and cloud-based platforms, our annual recurring revenue (ARR) in the Cloud and IoT business also rose by well over 100 percent. At the same time, we increased revenue in the Digital Business Platform (DBP, including Cloud and IoT) business line at constant currency in 2018. The positive trend in our database business with Adabas & Natural (A&N) continued as well, with slight sales growth in this area at constant currency. In addition to increasing product sales, we also increased profitability on a consolidated basis. Earnings before interest and taxes (EBIT) and earnings after taxes both improved significantly in 2018. Operating margin (EBITA, non-IFRS) came to 31.5 percent.

Moreover, in the second half of 2018, we laid the foundation for further profitable growth with the Helix project. The goal of Helix is to achieve growth, and it builds on the core competencies of our Company, which will be celebrating its 50th anniversary in 2019. Helix is a multi-year project developed under the leadership of the new CEO Sanjay Brahmawar. The Helix transformation project is based on our strengths and on a greater focus on growth markets. Software AG's core strength in integration lies where two powerful forces meet: at the intersection of digital transformation and real-time data. The Company will bundle its expertise in the areas of app integration, clouds, IoT devices and data and will establish itself as a key agent and innovator for companies to support them in this transformation process. Our market potential will grow to €24 billion by 2023. We will better exploit this potential in 2019.

For more information on the Helix project and our expectations for 2019, please refer to the Forecast. p. 100

Comparison of actual performance with forecast issued last year

Please note that revenue forecasts are at constant currency. Earnings targets are not adjusted for stock option plans, acquisition or restructuring-related expenses or short-term effects that arise during the course of the year, all of which are unforeseeable.

Software AG communicated the following forecast for fiscal 2018 with the release of its 2017 consolidated results on January 25, 2018:

- Based on the 2017 financial results and current business performance, Software AG predicted growth in the Digital Business Platform business line, not including Cloud and IoT, of +3 to +7 percent at constant currency for the year 2018.
- Based on the strong demand for Software AG technologies in the areas of IoT and Industry 4.0, the Company forecast growth in its Cloud and IoT revenue of +70 to +100 percent at constant currency.
- For the A&N business segment, Software AG anticipated a decline of between 2 and 6 percent at constant currency and in comparison to the previous year.
- In addition, the operating margin (EBITA, non-IFRS) was anticipated to be between 30.0 and 32.0 percent; and earnings per share (EPS, non-IFRS) were expected to increase by 5 to 15 percent for fiscal 2018.

Following the end of the first quarter of 2018, Software AG raised its guidance for the full 2018 fiscal year on April 13, 2018 and published the increased annual forecast for Cloud and IoT sales in an ad hoc statement that same day. Based on the current business performance and the anticipated business results for 2018, the Management Board communicated the following guidance:

- For the DBP business line, not including Cloud and IoT, Software AG continued to predict an increase of 3 to 7 percent (unchanged) at constant currency.
- Software AG raised the forecast for 2018 revenue growth in its Cloud and IoT business to +100 to +135 percent, from the previous +70 to +100 percent.
- For the A&N business segment, Software AG predicted a decline of between 2 and 6 percent in comparison to the previous year (unchanged) at constant currency.
- In addition, Software AG predicted an operating margin (EBITA, non-IFRS) of between 30.0 and 32.0 percent and an increase in earnings per share (EPS, non-IFRS) of between 5 and 15 percent (unchanged).

The Management Board confirmed this guidance with the release of its second-quarter financial results on July 18, 2018 and again with the release of its third-quarter financial results on October 19, 2018.

Software AG posted the following results for the 2018 fiscal year:

- The DBP business line, not including Cloud and IoT, posted €434.4 million (2017: €441.5 million) in revenue in 2018, representing 1 percent growth year-on-year and at constant currency. This figure was below the projected growth range of +3 to +7 percent, which is is due to revenue decreases in individual subsidiaries.
- The Cloud and IoT business posted €30.3 million (2017: €14.9 million) in revenue in 2018, which is 106 percent growth year-on-year and at constant currency. This figure thus exceeded the range of +70 to +100 percent predicted at the start of the year and achieved the lower end of the raised projected growth range of +100 bis +135 percent released on April 13, 2018. One reason for this was that the IoT business performed better than expected at the beginning of the year due to market dynamics.
- The A&N business line generated €218.3 million (2017: €223.7 million) in fiscal 2018, which reflects a 2 percent increase year-on-year at constant currency. This figure considerably exceeded the forecast at the start of the year of –6 to –2 percent. This is due in part to greater demand for products for optimized use of special processors.
- The Consulting business line achieved €182.6 million (2017: €198.8 million) in revenue in 2018. This reflects a year-on-year decrease of 6 percent at constant currency, which is due primarily to the continued focus on revenue components that drive Software AG's product sales.
- Operating profit margin (EBITA, non-IFRS) came to 31.5 percent (2017: 31.8 percent), hitting the upper end of the annual forecast of 30.0 to 32.0 percent. Earnings per share (EPS, non-IFRS) totaled €2.64 (2017: €2.38). This reflected an increase of 11 percent, which also hit the upper end of the projected growth range of +5 to +15 percent.
- Software AG's absolute operating income (EBITA, non-IFRS) was €272.9 million (2017: €279.5 million) in 2018. This figure is a slight 2 percent lower than the previous year. The target issued last year for this indicator was for single-digit growth. That rate of growth could not be achieved due to the decrease in revenue.

Financial Performance

Revenue

Group revenue totaled €865.7 million (2017: €879.0 million) for 2018 as a whole, which, at constant currency, reflects growth of 2 percent.

The percentage of total revenue attributable to the future-oriented Digital Business Platform (DBP) business line continued to rise: DBP revenue (including Cloud and IoT) was up 2 percent, or 5 percent at constant currency, to €464.7 million (2017: €456.5 million). The Adabas & Natural (A&N) business line generated €218.3 million (2017: €223.7 million) in revenue, reflecting 2 percent growth year-on-year at constant currency.

Annual recurring revenue (ARR) in the DBP (including Cloud and IoT) business line rose by 12 percent. ARR is a good indicator of future cash flows generated by past activities. ARR in the amount of €305.4 million (2017: €272.7 million) consists of all future recurring revenue from transactions performed through December 31, 2018, together with future SaaS/usage-based revenues from transactions agreed through the end of the fourth quarter.

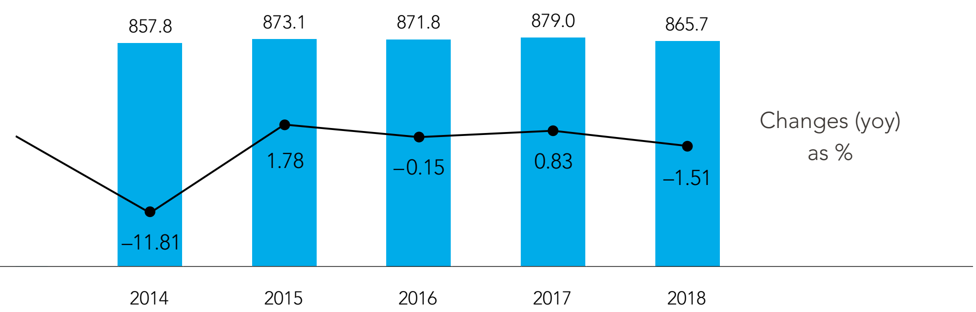
Currency impact on revenue

Currency translation had a less significant impact on Software AG's revenue in fiscal 2018 than in 2017. The negative impact on Group revenue totaled €26.7 million (–3 percent) in the year under review. The main drivers were the weak U.S. dollar in the first half of the year (with the U.S. dollar accounting for the second-largest share among foreign currencies in the Group), the Brazilian real, and the South African rand.

The largest percentage of Software AG's global revenue was again generated in euros (EUR), at 34 percent (2017: 34 percent). That is followed by the U.S. dollar (USD) at 31 percent (2017: 31 percent). The next largest shares of revenue in foreign currencies were 6 percent (2017: 6 percent) in pound sterling (GBP) and, like last year, 4 percent respectively in Brazilian real (BRL) and Israeli shekel (ILS). The percentage in Australian dollars (AUD) was also 4 percent (2017: 3 percent). Other currencies accounted for the remaining 17 percent (2017: 18 percent) of revenue. The broad distribution of currency shares reflects Software AG's highly global focus.

Five-Year Revenue Performance

in € millions



Quarterly Revenue

	Q1		Q2		Q3		Q4	
in € millions	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**
Group revenue	186.6	205.9	205.7	207.4	208.8	197.3	264.6	268.4
as % of total annual revenue	22	23	24	24	24	22	31	31

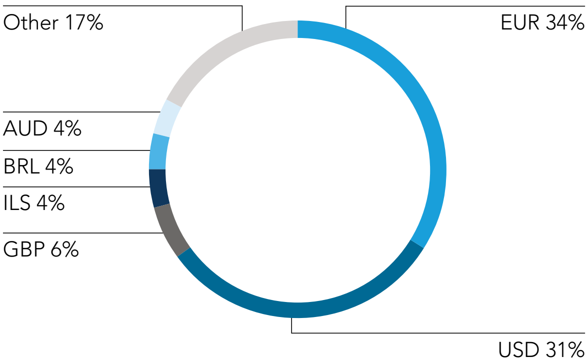
Exchange rates had varying effects on the different types of revenue. Maintenance revenue experienced the strongest impact at €17.0 million (–4 percent), which was notably higher than the year before. The currency-related impact on license revenue amounted to €5.2 million (–2 percent). SaaS revenue experienced a negative effect of €0.4 million (–2 percent). The negative effect on services was €4.2 million (–2 percent).

Currency Impact on Revenue

in € millions	2018	as %
Licenses	–5.2	–2
Maintenance	–17.0	–4
SaaS	–0.4	–2
Services and other	–4.2	–2
Total	**–26.8**	**–3**

2018 Currency Split

34% revenue in euros
66% revenue in foreign currency

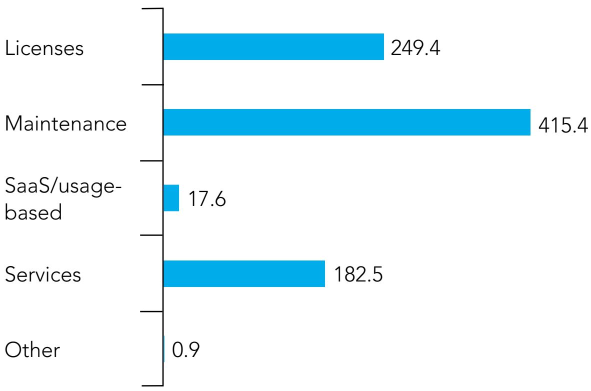


Types of revenue

Software AG's Group revenue includes product revenue—consisting of license, maintenance and SaaS sales—and service and other revenue. Product revenue rose to €682.3 million (2017: €679.4 million) in fiscal 2018, which is 4 percent growth at constant currency. As a percentage of total revenue, product revenue rose in 2018 to 78.8 percent (2017: 77.3 percent). License revenue from Software AG's DBP and A&N products was down slightly year-on-year, at €249.4 million (2017: €250.1 million). At constant currency, this reflects growth of 2 percent. Maintenance revenue in the two product lines came to €415.4 million (2017: €420.2 million) in the period under review. This represents a 3 percent increase at constant currency. The high-margin maintenance share of total revenue thus remained at the previous year's level of 48.0 percent. This is a result of Software AG's dedicated focus on repeat high-margin and profitable income. SaaS revenue rose 97 percent at constant currency in the year under review, to €17.6 million (2017: €9.1 million). Consulting revenue, which refers solely to projects associated with Software AG's own products, declined in the year under review to €182.5 million (2017: €198.8 million) (not including other income). This represents a decline of 6 percent at constant currency. This result is a consequence of Software AG's strategic decision to focus more intensively on high-quality consulting and profitability.

Sales by Revenue Type 2018

in € millions	2018	2017
Licenses	249.4	250.1
Maintenance	415.4	420.2
SaaS/usage-based	17.6	9.1
Services	182.5	198.8
Other	0.9	0.8
Total	**865.7**	**879.0**



Product revenue by region

Software AG's global product revenue is divided into three regions:

The **Americas** (North and South America) generated €306.2 million (2017: €315.0 million) in 2018, which translates to 45 percent (2017: 46 percent) of product revenue. As expected, broken down by country, the USA accounted for the largest share of revenue, followed by Brazil and Canada. In 2018, business suffered in North America due to the reorganization of the sales team and to the weakness in the U.S. public sector as a consequence of the government shutdown.

EMEA (Europe, Middle East and Africa) achieved a revenue volume of €310.6 million (2017: €312.8 million) and thus accounted for a share in global product revenue of 45 percent (2017: 46 percent). EMEA's most important single markets are **Germany**—the largest contributor of revenue—the United Kingdom, and France, followed by the Iberian Peninsula, Nordic and Benelux. Germany alone accounted for €89.6 million (2017: €90.9 million), or 13 percent (2017: 13 percent) of product revenue.

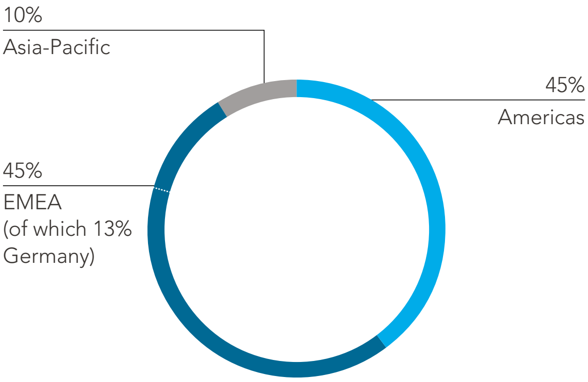
Asia-Pacific (**APJ**; Australia, Japan, Asia and China) increased product revenue to €65.8 million (2017: €51.2 million) in 2018 and thus accounted for an increased share in Group product revenue of 10 percent (2017: 8 percent). Australia was this region's top performer.

For more information on sales markets, please refer to Market Positioning in Fundamental Aspects of the Group. p. 36

Product revenue by industry

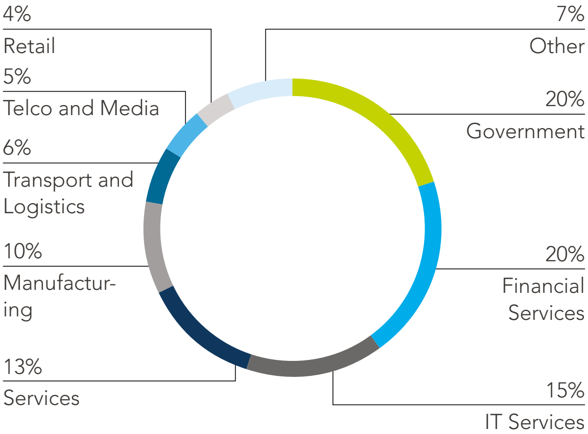
Thanks to a continuously expanding, extremely loyal customer base including many big names from all industries, Software AG is well established in the public, financial and IT (including outsourcing) sectors. These sectors together accounted for over half, or 55 percent, of Group revenue in fiscal 2018. Based on revenue volume, the following sectors followed: services (13 percent), manufacturing (10 percent), transport and logistics (6 percent), telecommunications and media (5 percent) and other sectors (11 percent).

Product Revenue by Region[1]



[1] Based on product revenue in 2018 by management approach (contracts can be distributed across multiple countries/regions).

Product Revenue by Industry[2]



[2] Based on product revenue in 2018

Order intake

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As described in Fundamental Aspects of the Group, order backlog in the Consulting business line is an especially important company-specific early warning indicator. Software AG's order backlog as of December 31, 2018 continued to show stability and thus supports the expected growth stability for the following period. Accordingly, at the end of 2018 the forward order book (order backlog/revenue * 365 days) was more than five months (2017: 4 to 5 months).

Order intake for products with perpetual licenses plays a minimal role, because new orders usually lead to immediate revenue. Order intake in maintenance renewal, maintenance agreements and product subscriptions (Software as a Service) are not a separate performance indicator for the Group. They are managed in line with the Consulting business via resulting order backlog performance. The order backlog for these product revenue components in 2018 showed a single-digit growth rate year-on-year. The forward order book is not calculated for the entire product business. It is not a reliable measure due to the heterogeneity of the various components (perpetual licenses, maintenance renewal, maintenance agreements and subscriptions).

Performance of key items on the income statement and cost structure

Software AG's **cost of sales** again developed disproportionately to revenue in fiscal 2018, coming to €195.0 million (2017: €213.3 million). **Gross profit** thus rose 1 percent to €670.7 million (2017: €665.6 million). The gross profit margin as a percentage of Group revenue therefore exceeded last year's level of 75.7 percent, reaching 77.5 percent. The key factors involved in Software AG's continued high profitability were the growing share of the product business and, in addition, active management of the contribution margin of consulting orders.

To further secure Software AG's technology leadership in the dynamic digital market, **expenses for R&D** were raised 3 percent to €124.4 million (2017: €120.6 million). In addition to expanding its R&D capacities through acquisitions (Trendminer, Built.IO), Software AG additionally invested in near and offshore areas. R&D expenses as a percentage of product revenue (licenses, maintenance and SaaS) increased from 17.8 percent the year before to 18.2 percent.

Sales, marketing and distribution expenses rose slightly year-on-year, to €244.7 million (2017: €243.5 million). These expenses as a percentage of total revenue were thus 28.3 percent (2017: 27.7 percent). Sales efficiency remains a key operating performance indicator for the management of Software AG.

General and administrative expenses went down once again due to further efficiency increases in administrative processes. In comparison to the previous year, they declined 3 percent to €74.0 million (2017: €75.9 million). General and administrative expenses as a percentage of total revenue decreased to 8.5 percent (2017: 8.6 percent).

2018 Income Statement

in € millions	2018	2017	+/– as %	+/– as % acc[1]
Licenses	249.4	250.1	0	2
Maintenance	415.4	420.2	–1	3
SaaS	17.6	9.1	93	97
Services	182.5	198.8	–8	–6
Other	0.9	0.8	13	8
Total revenue	**865.7**	**879.0**	**–2**	**2**
Cost of sales	–195.0	–213.4	–9	
Gross profit	**670.8**	**665.6**	**1**	
R&D expenses	–124.4	–120.6	3	
Sales, marketing and distribution expenses	–244.7	–243.5	1	
General and administrative expenses	–74.0	–75.9	–3	
Other taxes	–7.0	–7.2	–3	
Operating earnings	**220.6**	**218.4**	**1**	
Other income/expense, net	3.9	–2.8	—	
Financial income/expense, net	4.3	1.5	—	
Earnings before income taxes	**228.9**	**217.1**	**5**	
Income taxes	–63.7	–76.5	–17	
Net income	**165.2**	**140.6**	**17**	
thereof attributable to shareholders of Software AG	**164.9**	**140.3**	**17**	
thereof attributable to non-controlling interests	**0.3**	**0.3**	**0**	
Earnings per share in € (basic)	2.23	1.88	19	
Earnings per share in € (diluted)	2.23	1.88	19	
Weighted average number of shares outstanding (basic)	73,978,520	74,645,119	–1	
Weighted average number of shares outstanding (diluted)	73,980,884	74,649,890	–1	

[1] acc = At constant currency

Earnings performance

Software AG's **operating income (IFRS)** increased in fiscal 2018 to €220.6 million (2017: €218.4 million). The operating margin exceeded last year's high level, reaching 25.5 percent (2017: 24.8 percent). The main factors behind the robust operating earnings were the high-margin product revenue, accounting for 78.8 percent (2017: 77.3 percent) of total revenue, and the ongoing strength of the very profitable A&N business–supplemented by high sales efficiency and enhanced efficiency in all central processes thanks to active cost management.

Despite increased investments in R&D and in sales, marketing and distribution as well as decreased revenue, **EBIT** (net income plus income taxes plus other taxes plus net financial income/expense) went up in fiscal 2018 to €231.6 million (2017: €222.8 million). This rise was the net result of the following effects: revenue fell by €13.3 million to €865.7 million (2017 €879.0 million); the cost of sales dropped 9 percent or by €18.4 million to €195.0 million (2017: €213.4 million); R&D expenses increased by €3.8 million to €124.4 million (2017: €120.6 million); and other income/expense, primarily from currency gains, increased by €6.7 million to €3.9 million (2017: –€2.8 million). First-time application of IFRS 15 had a positive effect amounting to €6.9 million on Software AG's earnings. EBIT climbed once again in the fourth quarter of 2018, to €82.8 million (2017: €82.7 million), breaking an all-time quarterly record for Software AG. The EBIT margin also went up 50 basis points to an all-time high of 31.3 percent (2017: 30.8 percent) in the fourth quarter.

Other net income came to €3.9 million (2017: –€2.8 million), mainly due to currency translation gains that were €4.1 million higher than in the previous year. **Net financial income** again improved in fiscal 2018, rising to €4.3 million (2017: €1.5 million). This significant year-on-year improvement is primarily due to the overall lower interest on liabilities to banks. Other positive factors in fiscal 2018 were the reduced annual average credit volume and improved financing terms on loans, which pushed interest expenses down €1.7 million.

Accordingly, **earnings before income taxes** went up 5 percent to €228.9 million (2017: €217.1 million). After the exceptionally substantial increase in the previous year, income taxes went down 17 percent to €63.7 million (2017: €76.5 million), thus returning to their 2016 level. As forecast in the previous year, the new tax legislation in the USA starting in 2018 had a positive effect on Software AG's business results and more than offset the negative effect in 2017. As a result, the Group's effective income tax rate declined to 27.8 percent (2017: 35.2 percent).

At €165.2 million (2017: €140.6 million), **net income** exceeded the previous year's level in fiscal 2018. Accordingly, there was a 19 percent increase in **earnings per share** (basic) to €2.23 (2017: €1.88), with the average number of shares (basic) at 73,978,520 (2017: 74,645,119).

2018 Earnings

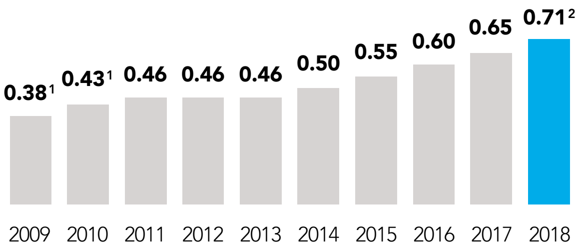
in € millions	2018	2017	+/– as %
Total revenue	**865.7**	**879.0**	**–2**
Cost of sales	–195.0	–213.4	–9
Gross profit	**670.8**	**665.6**	**1**
Margin as %	77.5	75.7	—
R&D expenses	–124.4	–120.6	3
Sales, marketing and distribution expenses	–244.7	–243.5	1
General and administrative expenses	–74.0	–75.9	–3
Other income/expense (net)	3.9	–2.8	—
EBIT	**231.6**	**222.8**	**4**
Margin as %	26.8	25.3	—

Appropriation of profits

Software AG adheres to a sustainable dividend policy, which is geared toward long-term development and value orientation of the Company. This strategy will be pursued further in the interest of solid shareholder relations. The Management Board and Supervisory Board will therefore propose a **dividend** in the amount of €0.71 per share at the Annual Shareholders' Meeting on May 28, 2019 for fiscal year 2018. Last year, the dividend was raised by about 10 percent to €0.65 per share. Subject to the approval of the Annual Shareholders' Meeting and assuming 74.0 million (2017: 74.0 million) dividend-bearing shares outstanding, this would be a total payout sum of €52.5 million (2017: €48.1 million). Based on the closing share price in 2018 (Xetra closing price on Dec. 28, 2018: €31.59 (2017: €46.86), this proposal is equal to a dividend yield of 2.24 percent (2017: 1.39 percent).

Dividend Development Since 2009

in € per share



[1] Adjusted after 3-for-1 stock split, rounded
[2] Dividend proposal, subject to shareholder approval in May 2019

Software AG's Management Board resolved in 2015 to increase the **dividend ratio** range to 25 to 33 percent of the averaged net income (attributable to shareholders of Software AG) and free cash flow. Based on average free cash flow (€184.1 million / 2017: €161.9 million) and net income (€164.9 million / 2017: €140.3 million) of €174.5 million in fiscal 2018 (2017: €151.1 million), the dividend ratio would equal 30.1 percent (2017: 31.8 percent). This consistent dividend policy stands for the Company's unequivocal commitment to stability and value and will be continued in upcoming years.

Additional earnings performance indicators

In order to improve the comparability of Software AG with competitors (primarily in the U.S.) which do not use IFRS accounting standards, Software AG also reports non-IFRS performance indicators. (For more information, please refer to Internal Corporate Control System at the beginning of this Management Report). These performance indicators are as follows: p. 47

Operating Earnings per Share (non-IFRS)

in € millions	2018	2017
Earnings before income taxes	**228.9**	**217.1**
Other taxes	7.0	7.2
Financing income	–10.5	–10.1
Financing expenses	6.2	8.6
Net financial income/expense	**–4.3**	**–1.5**
EBIT (before all taxes)	**231.6**	**222.8**
+ Acquisition-related amortization of intangible assets	21.1	29.6
+ Acquisition-related decreases in product revenue due to purchase price allocations	0.0	0.4
+/– Other acquisition-related effects on earnings	2.3	1.3
+/– Income/expense resulting from share price-based remuneration	11.0	20.7
+ Restructuring/severance/litigation	6.9	4.7
EBITA (non-IFRS)[1]	**272.9**	**279.5**
as % of revenue (non-IFRS)	**31.5**	**31.8**
Net financial income/expense	4.3	1.5
Other taxes	–7.0	–7.2
Earnings before income taxes	270.2	273.8
Income taxes (FY 2018: 27.8%; FY 2017: 35.2%)[1]	–75.2	–96.5
Net income (non-IFRS)	195.0	177.3
Earnings per share (non-IFRS)[2]	**€2.64**	**€2.38**
Average number of shares outstanding (no.)	74.0 mn	74.6 mn

[1] Income tax rates shown are equal to the actual rates for fiscal 2018 and 2017.
[2] Earnings per share (non-IFRS) are calculated by dividing net income (non-IFRS) by the average number of shares outstanding.

Operating profit margin (EBITA, non-IFRS) is Software AG's key performance indicator for monitoring profitability. EBITA (non-IFRS) declined slightly by 2 percent to €272.9 million (2017: €279.5 million) in fiscal 2018. At €231.6 million (2017: €222.8 million), EBIT before all taxes was 4 percent higher, a notable change compared to the previous year. Amortization on intangible assets, down 28.7 percent to €21.1 million (2017: €29.6 million), also posted a significant change. This decline was primarily due to the time frames of the amortization periods for the intangible assets acquired through acquisitions in previous years.

Another key factor was the substantially reduced expenses for stock option plans, at €11.0 million (2017: €20.7 million). This effect was primarily due to the decline in Software AG's share price from €46.86 as of December 29, 2017 to €31.59 as of December 28, 2018. On the other hand, restructuring, severance and legal disputes rose to €6.9 million (2017: €4.7 million), due mainly to severance packages for two members of the Management Board.

Software AG's operating profit margin (EBITA, non-IFRS) based on Group revenue declined slightly to 31.5 percent (2017: 31.8 percent). The operating margin was thus in the top quarter of the range of 30 to 32 percent that had been forecast at the beginning of 2018. This ongoing high profit margin has solidified Software AG's financial foundation for further strategic development of its business.

Net income (non-IFRS) increased to €195.0 million (2017: €177.3 million). Accordingly, earnings per share (non-IFRS) based on the average number of shares outstanding (basic) in the amount of 74.0 million (2017: 74.6 million) were €2.64 (2017: €2.38). The number of shares was decreased with a share buyback program. This represents an increase of 11 percent, achieved due to the improved financial result and, above all, the lower income tax expenses resulting in particular from the corporate tax reform in the USA that took effect as of January 1, 2018. Income tax expenses declined €12.8 million (16.7 percent) to €63.7 million (2017: €76.5 million) in 2018.

SaaS/usage-based revenue

Recognizing the increasing importance of new licensing models in the software industry, Software AG added the revenue type "SaaS/usage-based" to the DBP segment in fiscal 2018. With Software as a Service (SaaS), customers acquire usage rights to the software, including operation of the software (hosting), for a limited period of time. The customers do not own the software; rather, they can only use it online. Revenue from SaaS/usage-based sales came to a total of €17.6 million (2017: €9.1 million) in fiscal 2018.

Annual recurring revenue (ARR)

In light of the increasing share of licensing models with recurring revenue (in contrast to one-time generation of license revenue in the case of a permanent license), it is no longer sufficient to monitor sales performance solely on the basis of sales. Therefore, in fiscal 2018, Software AG introduced the indicator "annual recurring revenue (ARR)" as an additional monitoring component in the DBP segment. This indicator presents total annualized order intake under the following agreement types:

- Limited-period licenses/subscription licenses
- Maintenance under limited-period and perpetual licenses
- Software as a Service (SaaS)
- Usage-based licenses

In the case of usage-based licenses, the monthly revenue generated in the last month of a period is multiplied by 12 to obtain the annualized figure.

Annual recurring revenue (ARR) in the DBP (including Cloud and IoT) business line totaled €305.4 million (2017: €272.7 million) in fiscal 2018. In the Cloud and IoT business, ARR came to €30.1 million (2017: €13.7 million) in 2018.

Total contract value

Total contract value (TCV) shows the agreed cash flows under all contracts entered into in a given period, up to the end of the contract. This figure is an indicator for sales performance in the period in question and reflects the expected cash flows, up to the end of the contract, from permanent licenses, subscriptions and SaaS in the product business.

Multi-Period Earnings Summary

in € millions	2018	2017	2016	2015	2014
Total revenue	**865.7**	**879.0**	**871.8**	**873.1**	**857.8**
thereof product revenue	682.4	679.4	675.2	678.8	641.4
EBIT (before all taxes)	**231.6**	**222.8**	**213.9**	**209.4**	**176.0**
as % of total revenue	26.8	25.3	24.5	24.0	20.5
Net income	**165.2**	**140.6**	**140.4**	**139.6**	**110.6**
as % of total revenue	19.1	16.0	16.1	16.0	12.9

Segment reporting

Software AG's business operations are divided into three segments: Digital Business Platform (DBP), Adabas & Natural (A&N) and Consulting. The high-growth Cloud and IoT business is part of the DBP business line.

The DBP segment consists of a future-oriented product platform for customers' digital transformation. It accounted for more than half of total revenue. DBP's share of revenue rose to 53.7 percent (2017: 51.9 percent)—confirmation of the high business and market relevance of this future-oriented business line. In particular, revenue from the Cloud/IoT business, which is part of the DBP segment, posted substantial growth, from €14.9 million in the previous year to €30.3 million in fiscal 2018. This represents growth of 103.3 percent, exceeding the maximum growth anticipated at the beginning of the year of 100 percent. Revenue in this business thus confirmed the expectations for this future-oriented growth market.

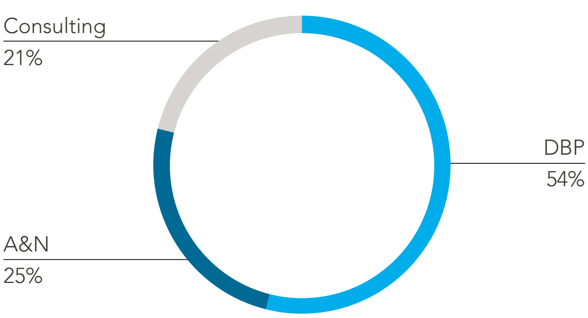
The percentage of revenue from the traditional A&N segment declined only slightly, contrary to expectations, generating 25.2 percent (2017: 25.4 percent) of total revenue in the year under review.

The percentage of Consulting revenue declined slightly, to 21.1 percent (2017: 22.6 percent), due to its focus on quality projects.

Multi-Period Earnings Summary

2018	in € millions	as %
Total revenue	**865.7**	**100**
DBP	**464.7**	**54**
thereof DBP Cloud & IoT	30.3	4
A&N	**218.3**	**25**
Consulting	**182.6**	**21**

Revenue Split



Digital Business Platform (DBP)

All Software AG products for enterprise digital transformation, including the fast-growing Cloud & IoT business, were part of the DBP business segment in fiscal 2018. This segment generated €464.7 million (2017: €456.5 million) in total revenue, reflecting 5 percent growth at constant currency.

The **DBP segment not including Cloud & IoT business** generated revenue of €434.4 million (2017: €441.4 million). This reflected a decline year-on-year, as license revenues, at €166.2 million (2017: €176.7 million), did not meet expectations. The reason for this were revenue decreases in individual subsidiaries. Maintenance revenues were up 1 percent, or 5 percent at constant currency, and came to €268.2 million (2017: €264.7 million).

At the same time, Software AG substantially increased revenue from its **Cloud & IoT business** and strongly increased order intake. In fiscal 2018, revenue in this business rose to €30.3 million (2017: €14.9 million), reflecting growth of 103 percent (106 percent at constant currency). ARR in the Cloud & IoT business came to €30.1 million (2017: €13.7 million) as of December 31, 2018, reflecting an increase of 120 percent.

Despite higher cost of sales and higher R&D and sales and marketing investments, DBP segment earnings came to €147.0 million (2017: €150.9 million). Accordingly, the DBP segment margin was 31.6 percent (2017: 33.1 percent) in fiscal 2018.

DBP Cloud & IoT

	2018	2017	+/– % acc[1]
Licenses	8.7	3.5	149
Maintenance	4.1	2.4	72
SaaS / usage-based	17.6	9.1	97
Total revenue	30.3	14.9	106
Annual recurring revenue (ARR)	30.1	13.7	120

[1] acc = At constant currency

2018 Segment Report for the Digital Business Platform

in € millions	2018	2017	+/– as %	+/– as % acc[1]
DBP (not including Cloud & IoT)	**434.4**	**441.4**	**–2**	**1**
thereof licenses	166.2	176.7	–6	–4
thereof maintenance	268.2	264.7	1	5
DBP Cloud & IoT	**30.3**	**14.9**	**103**	**106**
Total revenue	**464.7**	**456.5**	**2**	**5**
Cost of sales	–35.9	–34.4	4	7
Gross profit	**428.8**	**422.1**	**2**	**5**
Sales, marketing and distribution expenses	–181.2	–174.3	4	7
R&D expenses	–100.6	–96.9	4	6
Segment earnings	**147.0**	**150.9**	**–3**	**1**
Margin as %	**31.6**	**33.1**	**—**	**—**

[1] acc = At constant currency

Adabas & Natural (A&N)

The mainframe database segment generated €218.3 million (2017: €223.7 million) in revenue in fiscal 2018. This 2 percent decrease, however, reflected a 2 percent increase at constant currency, and the segment thus clearly exceeded the anticipated –2 to –6 percent at constant currency. The whole market for traditional database software for mainframes is in decline due to its maturity and saturation. So for some years, Software AG's expectations have been a moderate decrease in this business. The fact that the decline in this traditional business slowed reflects the loyalty of the A&N customer base, which continues to rely on Software AG's dependable technology to run their business-critical applications. A key factor in the increased confidence was Software AG's announcement in late 2016 that it would continue development and support for the A&N portfolio beyond the year 2050. The Adabas & Natural 2050+ innovation program has had a positive impact since its introduction and will trigger new impetus for this segment in the medium term.

A&N licensing revenue rose in 2018 to €74.4 million (2017: €69.9 million), reflecting growth of 6 percent. A&N maintenance revenue for 2018 was down 6 percent, to €143.2 million (2017: €153.1 million).

A&N segment earnings went down accordingly to €155.4 million (2017: €156.5 million). The cost of sales dropped disproportionately; sales and marketing expenses declined slightly. R&D investments remained stable at the same level as in the previous year. A&N's segment margin exceeded the record-breaking level of the previous two years, reaching 71.2 percent (2017: 69.9 percent).

2018 Segment Report for Adabas & Natural

in € millions	2018	2017	+/– as %	+/– as % acc[1]
Licenses	74.4	69.9	6	8
Maintenance	143.2	153.1	–6	–1
Product revenue	**217.6**	**223.0**	**–2**	**2**
Other	0.7	0.7	0	0
Total revenue	**218.3**	**223.7**	**–2**	**2**
Cost of sales	–6.3	–10.1	–38	–35
Gross profit	**212.1**	**213.6**	**–1**	**3**
Sales, marketing and distribution expenses	–32.8	–33.3	–2	1
R&D expenses	–23.8	–23.8	0	–1
Segment earnings	**155.4**	**156.5**	**–1**	**5**
Margin as %	**71.2**	**70.0**	**—**	**—**

[1] acc = At constant currency

Consulting

The Consulting segment, focusing primarily on high-value consulting projects related to Software AG's own DBP and A&N products, posted revenue of €182.6 million (2017: €198.8 million) in 2018. The decline in revenue was mainly attributable to a reduced volume of business in Spain and the United Kingdom. Cost of sales and sales and marketing expenses declined roughly in proportion to the decline in revenue. Segment earnings came to €20.3 million (2017: €23.8 million), reflecting a decline of 15 percent. Accordingly, the segment margin was at 11.1 percent (2017: 12.0 percent), which is still very strong for the consulting market.

Software AG's strategic consulting services remained highly relevant for its customers in fiscal 2018. Software AG's objectives for its Consulting business are sustainable profitability and high service quality rather than rapid growth. The Consulting line was thus able to support the sustainable success of the other two product-driven business lines.

2018 Segment Report for Consulting

in € millions	2018	2017	+/– as %	+/– as % acc[1]
Total revenue	**182.6**	**198.8**	**–8**	**–6**
Cost of sales	–144.9	–155.8	–7	–5
Gross profit	**37.8**	**43.0**	**–12**	**–10**
Sales, marketing and distribution expenses	–17.4	–19.2	–9	–6
Segment earnings	**20.3**	**23.8**	**–15**	**–12**
Margin as %	**11.1**	**12.0**	**—**	**—**

[1] acc = At constant currency

The Group's Financial Position

General principles and objectives of Software AG's financial management

The primary objective of Software AG's financial management is to support the Group's profitable growth and ongoing portfolio optimization through an appropriate financing structure—regardless of short-term fluctuations in capital market conditions. Software AG ensures the solvency of all subsidiaries in the Group through central **liquidity management**. The Company has sufficient liquid assets available for this from net cash provided by operations and existing credit agreements. A high equity ratio and free cash flow provide the financial flexibility for accelerated organic growth and targeted acquisitions.

The corporate Finance department implements financial policy and risk management based on guidelines determined by the Management Board. Software AG's liquidity position is centrally controlled through active **working capital management**. Financial investments are essentially oriented toward the short term, which means that Group funds are invested at near money-market rates. Software AG consistently minimizes its default risk through broadly diversified investments and using stringent criteria in selecting transaction partners.

Furthermore, Software AG's corporate Finance department also monitors the currency risks for all Group companies, controls internal allocation of currency positions and minimizes remaining balances using derivative financial instruments. In doing so, only existing balance sheet items or expected cash flows are hedged.

Financing analysis

Software AG's net liquidity as of December 31, 2018 was €149.0 million (2017: €55.2 million). The increase compared to the previous year resulted primarily from the balance of positive operating cash flow in the amount of €195.1 million, the usually negative net cash from investment activities of €58.4 million, and the negative net cash from financing activities of €40.6 million. Of that balance, €48.3 million was accounted for by dividend payments and €7.7 million by inflows from short-term financing. Free cash flow rose by 14 percent in comparison to the previous year, to €184.1 million (2017: €161.9 million). This rise was primarily due to the increase in net cash flow from operating activities by €5.7 million compared to the previous year, and to an investment in office premises at corporate headquarters in Darmstadt in the amount of €17.3 million.

Borrowing (net) totaled €7.7 million (2017: €25.4 million) in light of the attractive market climate. Payments included €46.7 million (2017: €49.4 million) for acquisitions (net) and €48.3 million (2017: €44.6 million) for dividends. In light of favorable capital market conditions, current financial liabilities in the amount of €98.5 million were converted into non-current financial liabilities.

Shareholders' equity was €1,239.1 million (2017: €1,118.3 million) at the end of fiscal 2018, which reflects an 11 percent increase year-on-year. Retained earnings increased to €1,201.7 million (2017: €1,176.7 million), reflecting the balance of net income of €164.9 million less dividend payments of €48.3 million and the share buyback in the amount of €90.4 million and the effects of the application of IFRS 9 (–€0.2 million) and IFRS 15 (–€3.7 million). Other

Multi-Period Financial Position Summary

in € millions	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
Cash and cash equivalents	462.4	365.8	374.6	300.6	318.4
Current financial liabilities	111.9	210.3	101.5	113.0	110.8
Non-current financial liabilities	201.4	100.3	200.0	213.2	340.5
Net liquid assets/net debt	149.0	55.2	73.1	–25.7	–132.9
Equity	1,239.1	1,118.3	1,196.8	1,089.7	1,013.4
Equity ratio as %	62	59	61	60	55
Total assets	**2,007.9**	**1,907.5**	**1,957.2**	**1,814.8**	**1,848.9**

reserves came to –€59.1 million (2017: –€66.9 million). This negative figure for other reserves is due primarily to currency exchange differences of foreign operations in the amount of –€27.8 million and the adjustment in the measurement of pension provisions, at –€31.8 million. The value of treasury shares was €0.8 million (2017: €91.2 million). This decline resulted from the repurchase of treasury shares in an amount of €90.4 million. Capital reserves approximated last year's level at €22.6 million (2017: €22.7 million).

Software AG's equity-to-assets ratio was at 61.7 percent, compared to 58.6 percent in 2017, and thus remained strong despite the dividend payout. A redemption of 2,400,000 shares from previously repurchased shares reduced Software AG's share capital from 76,400,000 shares as of December 31, 2017 to 74,000,000 shares as of December 31, 2018.

Software AG used its high level of cash and cash equivalents in fiscal year 2018 to make two technology acquisitions, which will further strengthen its innovation portfolio in the highly relevant IoT market and thus the Group's future organic growth.

Financing instruments

Software AG's financing is based largely on continued strong free cash flow. In addition, bank loans, promissory note loans, factoring and finance leasing models are used for any additional financing needs. A primary financing risk arises from the possibility that the Company would not be able to satisfy existing financial liabilities, which include loan agreements, lease agreements and trade accounts payable. Active working capital management and Group-wide liquidity control limit this risk. Financial obligations can be balanced by available cash and bilateral lines of credit. The loans used are predominantly at variable interest rates and have remaining terms to maturity of no more than five years. Variable interest payments are based on the prevailing interest rate on the reporting date. Liabilities in foreign currency are calculated at the exchange rate as of December 31, 2018.

Strategic financing measures

Software AG's strong free cash flow is the backbone of its financing strategy. In combination with a high equity ratio, it offers financial flexibility for organic and inorganic growth. In addition, the Company uses bank loans, promissory note loans, factoring and leasing models to cover any additional financing needs. Software AG controls its liquidity position centrally through active working capital management. Financial investments are generally oriented toward the short term to ensure near-money market interest rates on the Group's funds. The Company broadly diversifies its investments and uses stringent criteria in selecting transaction partners. The loans used are predominantly at variable interest rates and have terms to maturity of no more than six years. Combined with a comfortable liquidity position, this results in a financing structure that is independent of short-term capital market conditions, thereby ensuring the solvency of all subsidiaries.

Investment analysis

Capital expenditure for property, plant and equipment and intangible assets generally play a minor role at software companies such as Software AG. After a large investment in fiscal 2017 in the amount of €17.3 million to acquire a building in Darmstadt, no significant investments were made in fiscal 2018.

Liquidity analysis

Cash flow continued its robust performance in fiscal 2018. **Net cash provided by operating activities** was up 3 percent at €195.1 million (2017: €189.4 million). Contributing to this was, on the one hand, a decline in other financial assets by €46.0 million (2017: increase of €21.4 million), primarily attributable to a decrease in the value of hedging transactions for stock option programs due to a drop in the Software AG share price. On the other hand, other provisions fell by €37.1 million (2017: increase of €2.3 million), also attributable primarily to a decline in obligations under share price-based remuneration programs for employees and Board members as a result of the drop in the share price. Moreover, the increased accruals for future maintenance revenue had a positive impact on operating cash flow, which reached a level of €18.8 million (2017: decrease of €12.4 million). This was offset by a negative effect amounting to €9.2 million (2017: positive effect amounting to €1.7 million) due to a decrease in pension provisions.

Software AG engaged in consistent receivables and cost management to keep cash flow high.

Cash outflows from investing activities decreased 20 percent to €58.4 million, compared to €73.3 million in 2017. This decline is due primarily to the investment in the previous year in office premises at corporate headquarters in Darmstadt in the amount of €17.3 million. This was offset by a reduction in net payments for acquisitions compared to the previous year, in an amount of €2.7 million.

Cash outflows from financing activities decreased 62 percent from €107.0 million in 2017 to €40.6 million in 2018. €100.0 million (2017: €70.9 million) in non-current financial liabilities were paid back and €100.0 million (2017: €0.1 million) in new non-current financial liabilities were recognized. Proceeds from new current financial liabilities totaled €7.7 million (2017: €96.3 million). Software AG's total dividend payout increased to €48.3 million (2017: €44.6 million) in 2018, because the dividend per share was raised from €0.60 in 2017 to €0.65 in fiscal 2018.

Free cash flow in fiscal 2018 was €184.1 million (2017: €161.9 million), which is 14 percent higher than the already high level of the previous year. This is 21.3 percent of total Group revenue, compared to 18.4 percent in 2017. The cash-conversion ratio (free cash flow to net income: €184.1/€165.2 million) was 111.4 percent (2017: 115.1 percent). Free cash flow per share rose by 15 percent compared to the previous year, from €2.17 to €2.49. Software AG defines free cash flow as cash flow from operating activities less cash flow from investing activities, not including proceeds from the sale of current financial assets, cash outflows for investments in current financial assets, proceeds from the sale of disposal groups or net cash outflows for acquisitions.

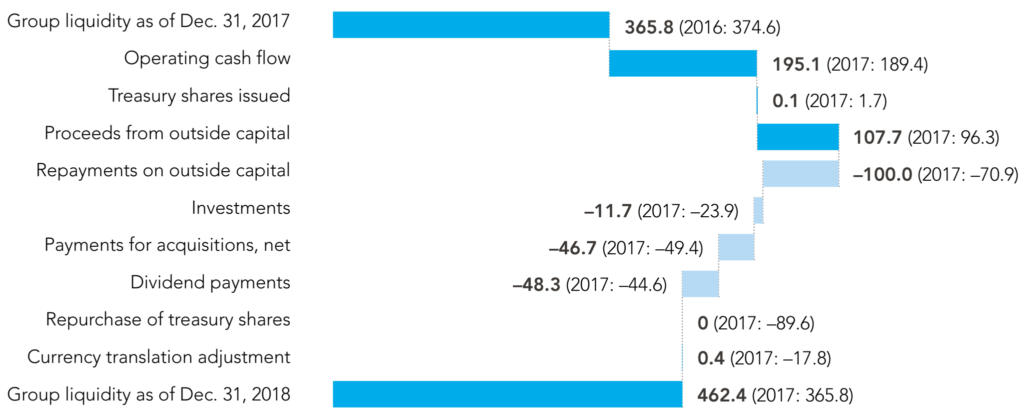
All in all, Software AG's statement of cash flows reflects its value-oriented focus on profitable growth. Specifically, this means that the Company employs its cash flow for future-oriented investments, dividends and share buyback programs.

Statement of Cash Flows for 2018

in € millions	2018	2017
Net cash provided by operating activities	195.1	189.4
Net cash used in investing activities	–58.4	–73.3
Net cash provided by/used in financing activities	–40.6	–107.0
Net change in cash and cash equivalents	96.5	–8.8
Cash and cash equivalents at end of period	462.4	365.8
Free cash flow	**184.1**	**161.9**

2018 Group Liquidity

in € millions

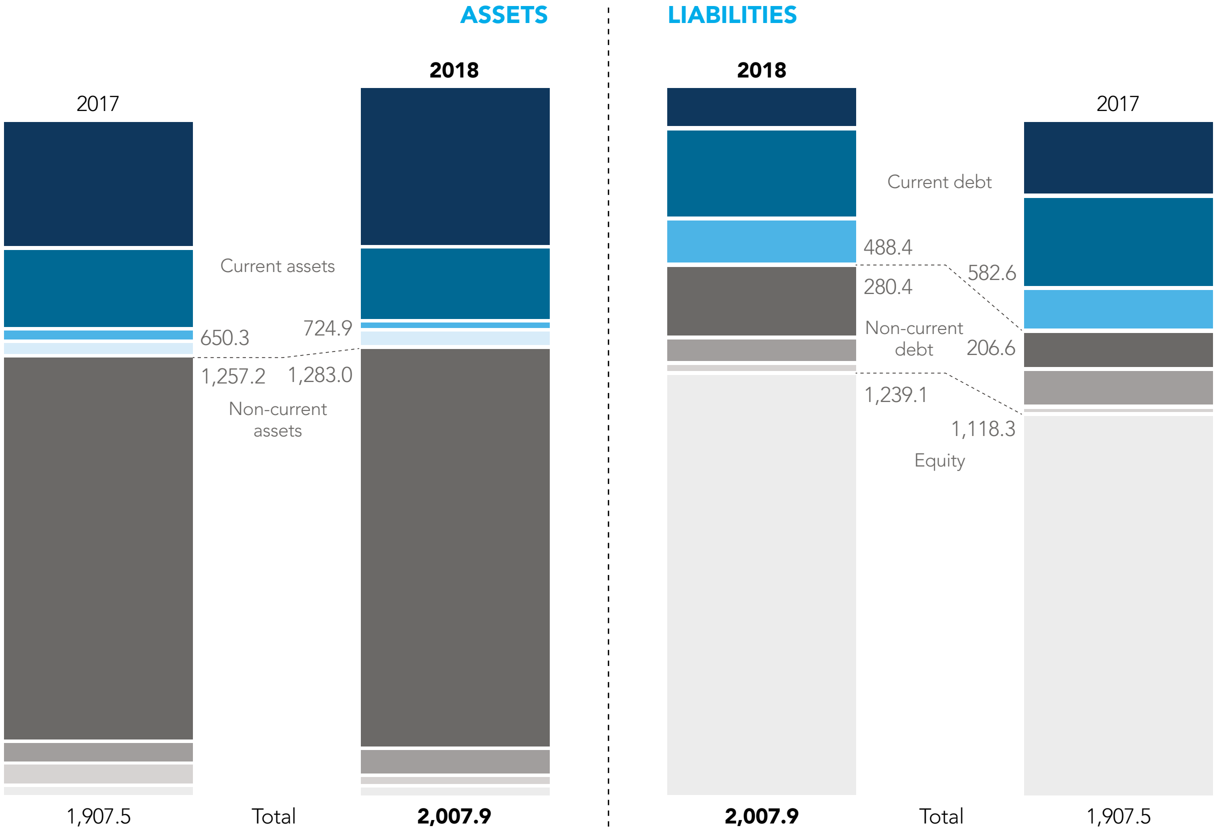


Asset structure analysis

Software AG continued to have a strong balance sheet. Assets as of December 31, 2018 had increased to €2,007.9 million, compared to €1,907.5 million the year before.

Balance Sheet Structure

in € millions



Assets

462.4	(365.8)	Cash and cash equivalents
207.5	(226.3)	Trade and other receivables
15.3	(26.2)	Other financial assets
39.7	(32.0)	Other non-financial assets
1,172.4	(1,125.9)	Fixed assets (Goodwill 964.4/921.4)
68.7	(53.3)	Trade receivables and other receivables
19.6	(54.7)	Other financial assets
22.3	(23.3)	Other non-financial assets

Liabilities

111.9	(210.4)	Financial liabilities
253.2	(259.2)	Other current liabilities
123.3	(113.0)	Deferred income
201.4	(100.2)	Financial liabilities
62.8	(98.6)	Other non-current liabilities
16.2	(7.8)	Deferred income
1,239.1	(1,118.3)	Equity

On the **assets** side, current assets rose to €724.9 million (2017: €650.3 million); cash and cash equivalents had increased since the beginning of the year. The increase compared to the previous year resulted primarily from the balance of the positive operating cash flow in the amount of €195.1 million, the usually negative net cash from investment activities of €58.4 million, and the negative net cash from financing activities of €40.6 million. Other financial assets declined by €10.9 million to €15.3 million (2017: €26.2 million). This decline resulted primarily from the reduced market values of hedging instruments for share price-based remuneration models. Added to this were lower trade receivables and other receivables in the amount of €207.5 million (2017: €226.3 million). Other non-financial assets increased by €2.7 million. This increase is basically due to the first-time capitalization of sales commissions after the application of IFRS 15 in fiscal 2018. Current income tax assets increased by €5.1 million to €19.7 million (2017: €14.6 million). This is a result of the higher level of tax prepayments compared to the previous year, which did not lead to tax expenditures in the full amount.

Non-current assets also rose, by €25.8 million to €1,283.0 million (2017: €1,257.2 million). This increase was largely due to an increase in intangible assets in comparison to the previous year, by €5.3 million to €137.0 million (2017: €131.7 million) and to an increase in goodwill by €43.0 million to €964.4 million (2017: €921.4 million) and to the rise in other non-financial assets to €2.9 million (2017: €0.2 million). The increase in intangible assets results from the balance of additions in the amount of €18.1 million from the two acquisitions, TrendMiner and Built.io, carried out in fiscal 2018, current amortization on these balance sheet items in the amount of –€21.2 million, and currency effects in the amount of €2.2 million. Goodwill increased by €30.3 million through the above-mentioned acquisitions and by €12.7 million due to currency effects.

In addition, non-current trade receivables and other receivables increased by €15.4 million to €68.7 million. A key reason for this rise was the increased use of subscription agreements as of the end of 2018, which entailed a distribution of cash flows over a longer period. Like current other financial assets, non-current other financial assets also fell, by €35.1 million to €19.6 million (2017: €54.7 million). This decline is mainly attributable to the reduced market value of hedging instruments for share price-based remuneration models, due to the drop in the Software AG share price.

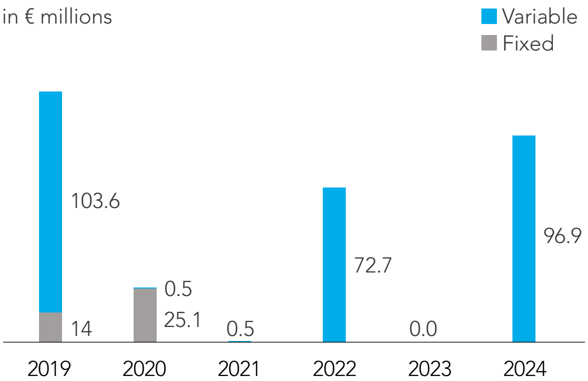
On the **liabilities** side, current debt declined by 16 percent as of December 31, 2018, to €488.4 million (2017: €582.6 million). Financial liabilities, in particular, declined by 47 percent to €111.9 million (2017: €210.4 million), due mainly to a conversion from current to non-current financial liabilities. Other provisions also declined, by 30 percent to €30.6 million (2017: €43.7 million). This decline resulted primarily from share price-related changes in share price-based obligations to employees and Board members and to amounts paid out under the Performance Phantom Share (PPS) program. Other non-financial liabilities also declined, by 3 percent to €145.8 million (2017: €150.4 million), due primarily to lower tax liabilities. Trade and other payables increased to €38.8 million (2017: €37.6 million).

Non-current debt increased by 36 percent to €280.4 million (2017: €206.6 million), primarily due to the aforementioned replacement of current with non-current financial liabilities. The latter increased accordingly from €100.2 million in the previous year to €201.4 million as of December 31, 2018. Other provisions in the amount of €10.3 million (2017: €34.3) million declined primarily by the amounts of share price-related changes in share price-based obligations to employees and Board members and by the amounts paid out under the PPS program. Provisions for pensions and similar obligations in the amount of €34.6 million (2017: €43.9 million) declined in comparison to the previous year. This decline was mainly due to the market-related increase in the discount rate in the United Kingdom from 2.5 percent to 3.0 percent.

Software AG's recurring income from maintenance revenue leads to current and non-current deferred income, which accounts for a significant percentage of liabilities. As of December 31, 2018, it amounted to €139.5 million (2017: €120.8 million) in all. The bulk of the increase of €18.7 million compared to the previous year resulted largely from the increased maintenance business, which accounted for €11.6 million. Smaller shares were attributable to the first-time application of IFRS 15, accounting for €3.1 million, the acquisitions during fiscal 2018, accounting for €2.8 million, and currency effects, accounting for €1.3 million.

At the end of fiscal 2018, Software AG's net cash position was €149.0 million (2017: €55.2 million). Shareholders' equity was €1,239.1 million (2017: €1,118.3 million), and was thus up 11 percent year-on-year. This increase in shareholders' equity was largely a result of the balance of high net income in the amount of €165.2 million and dividends paid out in the amount of €48.3 million. Software AG's equity-to-assets ratio was 61.7 percent, compared to 58.6 percent as of December 31, 2017.

Maturity Profile of Financial Liabilities



Off-balance sheet assets

In addition to the assets reported in the Consolidated Balance Sheet, Software AG has off-balance sheet assets. Off-balance sheet assets include the Software AG brand and internally developed software products, which are important intangible assets. Employees, their skills and their dedication are also critical to Software AG's success. Additional off-balance sheet assets include rented office premises, leased company cars and hardware.

Multi-Period Assets Summary

in € millions	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2014
Assets					
Current assets	724.9	650.3	642.0	584.2	635.4
Non-current assets	1,283.0	1,257.2	1,315.2	1,230.6	1,213.6
	2,007.9	**1,907.5**	**1,957.2**	**1,814.8**	**1,848.9**
Equity and liabilities					
Current liabilities	488.4	582.6	467.6	439.5	415.1
Non-current liabilities	280.4	206.6	292.8	285.5	420.4
Equity	1,239.1	1,118.3	1,196.8	1,089.7	1,013.4
	2,007.9	**1,907.5**	**1,957.2**	**1,814.8**	**1,848.9**

Software AG's Financial Position

Separate statement for parent company

The financial statements of Software AG (parent company) were prepared pursuant to the provisions of the German commercial code.

Software AG's financial performance

The key items of the **income statement** are as follows:

in € millions	2018	2017	+/– as %
Licenses	47.0	49.8	–5.6
Maintenance	102.8	108.0	–4.8
SaaS	4.4	0.0	—
Services	99.4	110.4	–10.0
Total revenue	**253.6**	**268.2**	**–5.4**
Operating income and expenses	–250.8	–266.3	–5.8
Income from investments and profit transfer	61.2	88.9	–31.2
Operating earnings before interest and taxes	**64.0**	**90.8**	**–29.5**
Net financial income/ expense	–1.0	–2.6	–61.5
Earnings before taxes	63.0	88.2	–28.6
Taxes	–13.3	–11.8	–12.7
Net income/loss for the year	**49.7**	**76.4**	**–34.9**

Revenue from Software as a Service (SaaS) was reported separately for the first time in fiscal 2018. SaaS revenue from last year was immaterial and therefore not reported separately.

- **Licenses** resulted from license-related royalties from subsidiaries and from Software AG's own license sales in Germany.
- **Maintenance** includes maintenance-related royalties from subsidiaries and maintenance revenue from third-party products.
- **SaaS** revenue resulted from SaaS-related royalties from subsidiaries and from Software AG's own SaaS sales in Germany.
- **Services** include management fees crossed-charged to the subsidiaries as well as services rendered by central support and cross-charged research and development costs.
- **Operating income and expenses** include changes in inventories of work in progress, other operating income and expenses, expenses for purchased goods and services, personnel expenses and depreciation, amortization and impairment on intangible and tangible fixed assets. The year-on-year decrease resulted primarily from lower cross-charges to the subsidiaries in the amount of €11.5 million.
- **Income from investments and profit transfer** includes dividends from subsidiaries, income and expenses arising from profit transfer agreements and impairment of financial assets and marketable securities. The decrease resulted primarily from the €29.7 million decrease in dividend payouts from subsidiaries.
- **Net financial income/expense** is the result of offsetting other interest and similar income against interest and similar expenses. The year-on-year improvement was due mainly to the overall lower interest on liabilities to banks.

Software AG's financial position

Software AG's **total assets** increased by a total of €23.5 million, from €902.0 million on December 31, 2017 to €925.5 million on December 31, 2018.

The following depicts the primary changes compared with the prior year:

in € millions	2018	2017	+/–
Intangible assets	12.4	15.5	–3.1
Property, plant and equipment	38.8	39.4	–0.6
Financial assets	772.7	730.1	42.6
Inventories	0.1	0.1	0.0
Receivables and other assets	88.2	103.6	–15.4
Cash and cash equivalents and short-term securities	6.7	6.6	0.1
Prepaid expenses	6.6	6.7	–0.1
Assets	**925.5**	**902.0**	**23.5**
Equity	268.5	266.8	1.7
Provisions	97.7	112.7	–15.0
Liabilities to banks	308.5	309.9	–1.4
Remaining liabilities	250.6	212.2	38.4
Deferred income	0.2	0.4	–0.2
Equity and liabilities	**925.5**	**902.0**	**23.5**

- **Intangible assets** decreased by €3.1 million due to amortization and additions from the current year.
- **Financial assets** went up by €42.6 million mainly because of the acquisition of TrendMiner N.V.
- **Receivables and other assets** went down by €15.4 million as of December 31, 2018. This is due primarily to the year-on-year decrease in dividend payouts from subsidiaries in the amount of €7.2 million and the reduced positive fair values of derivatives in the amount of €8.6 million.
- **Cash and cash equivalents** went up by €0.1 million. Software AG predominantly generates liquidity based on royalties, dividend payments, Group financing and management fees from the subsidiaries. For this reason, the cash flows of Software AG depend to a great extent on decisions regarding the dividend payouts of subsidiaries and financing arrangements between the parent company and the subsidiaries. A cash flow statement for Software AG alone would therefore have little meaning, for which reason it does not prepare such a statement.
- Software AG's **equity** increased by €1.7 million year-on-year. This increase resulted mainly from the balance of €49.7 million in net income and €48.1 million in dividends paid out to Software AG shareholders in 2018.
- **Provisions** went down from last year by €15.0 million. This decrease is due primarily to the exercise of and loss in value of Software AG shares, which led to a reduction in provisions for performance phantom shares.
- **Liabilities to banks** went down by €1.4 million.
- **Remaining liabilities** went up by €38.4 million to €250.6 million (2017: €212.2 million). This change resulted primarily from the €28.8 million increase in liabilities to affiliated companies, particularly because of the significant rise in cash-pooling activities. Furthermore, other liabilities from acquisitions rose by €5.0 million.

Outlook

Software AG's future financial performance depends upon the financial standing of the Software AG Group and decisions regarding the payout of Group-internal dividends. Therefore, please refer to the Outlook in the Group Management Report. p. 103

COMBINED NON-FINANCIAL STATEMENT

Fundamental Aspects

Reporting system

Software AG's Combined Non-Financial Statement relates to the fiscal year from January 1 to December 31, 2018. The report has been published in this format as part of the Combined Management Report since fiscal 2017.

The Combined Non-Financial Statement contains the information required by section 289c of the German Commercial Code (HGB) to enable readers to understand the Company's business growth, financial results, its situation and the effects of its activities on the aspects stated in section 289c (2) of the HGB. When preparing this report and thus when analyzing the requirement to report, Software AG made use of the option provided by section 289d of the HGB to prepare the Combined Non-Financial Statement based on the Global Reporting Initiative (GRI), an international standards framework.

The contents of the Combined Non-Financial Statement relate to Software AG and the Group. The Software AG Group's non-finanical indicators are based on data that generally corresponds to the scope of consolidated financial reporting. Any deviations are explained accordingly. The measures presented for the individual aspects are ongoing, unless stated otherwise.

External audit of the Combined Non-Financial Statement

Software AG's Combined Non-Financial Statement is audited externally by the auditing firm BDO AG. Auditing was conducted with the goal of attaining a limited level of assurance, based on the (revised) ISAE 3000 Standard.

Explanation of the business model

Software AG supports enterprise digital transformation. As a global technology provider, Software AG has a special connection to customer and employee issues. Responsible conduct and integrity are a key social concern in a highly competitive market environment, where the use of Software AG's innovative technologies can also help its customers conserve resources. For more information on Software AG's business operations and business model, please refer to Fundamental Aspects of the Group in the Combined Management Report. The materiality analysis is presented in the Key Topics section.

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Corporate social responsibility and sustainability

Responsible conduct and sustainability are guiding principles for Software AG. Software AG defines sustainability not only as the creation of long-term values for its stakeholders, but its customer relationships, its technology, its partnerships, its investments in the Company and its employees' expertise as well. These have been its core values for many years. Software AG will continue developing these for the benefit of its shareholders and the Company as a whole.

Software AG ensures its accountability by assigning non-financial matters to the roles and responsibilities of its Management Board members accordingly. The topics of environment, social matters and corporate governance—which includes combatting corruption and bribery—are assigned to the CEO and therefore have the highest level of priority.

Software AG is certain that moral principles and economic success not only go together, they belong together. Out of respect for future generations, it is important to Software AG to conserve resources in order to achieve sustainable economic, environmental and social progress.

To Software AG, responsible conduct means:

- Playing a role in customers' long-term success
- Continually improving standards
- Being a long-term and therefore reliable partner
- Allowing staff to develop along with the Company
- Adding value to society
- Pursuing the highest social standards in daily activities
- Promoting education and innovation globally and locally at Software AG locations

Values such as trust, respect, open-mindedness and transparency shape Software AG's global operations. Software AG is a multinational corporation with operations in more than 70 countries. This means many different cultures and legal systems converge. The Company therefore instituted a global Code of Conduct in 2011. It describes the values shared by all employees worldwide that form the basis for Software AG's conduct as a company—with customers, partners and employees alike.

Stakeholders

Software AG has internal and external stakeholders. The internal stakeholder groups comprise the employees, the Management Board, the Supervisory Board, the Compliance Board and the Works Council. The external stakeholder groups include the customers, investors, partner network, suppliers, future employees, universities and research institutions, local communities and key multipliers such as analysts and the media.

Appreciation of stakeholders

Software AG attaches great importance to fostering an ongoing dialog with its stakeholder groups. This is also reflected by the Company's structure, which incorporates numerous departments dedicated to maintaining a dialog with the most important stakeholder groups. These include Sales, Customer Support, Human Resources and Internal Communications, Marketing, University Relations, Investor Relations, Corporate Communications and Public Affairs.

The main stakeholder groups also have a direct voice in the Company, for example through the international user groups, employee representatives, the Supervisory Board, the Annual Shareholders' Meeting or the Scientific Advisory Board.

The following table shows some examples of the groups and the intervals between their meetings and surveys:

Stakeholder Group	Committee	Interval/Meetings
Investors, employees, main shareholder (Software AG Foundation)	Elected representatives on the Supervisory Board	Regular meetings
Investors	Annual Shareholders' Meeting	One general meeting annually
Employees	Works Council (Germany)	Regular general and employee meetings
Employees	Employee survey	Surveys on specific topics
Customers	Global customer survey	One survey annually
Customers	International IT leadership meeting	Annual strategy meeting
Customers	International user groups	One trans-regional conference annually, regular regional meetings
Research & Development	Scientific Advisory Board	Regular meetings

Key topics

Materiality analysis

Software AG began conducting a materiality analysis involving its internal and external stakeholders in order to identify the non-financial issues that were of relevance to the Company in fiscal year 2017. To carry out the materiality analysis, Software AG worked with an external consulting company from Darmstadt, Germany, which specializes in implementing sustainable concepts. A joint workshop was held to identify the most important internal and external stakeholders as well as potentially relevant issues on which the stakeholders were to be questioned. Based on these issues, a questionnaire was developed for the internal and external stakeholders, taking into account the GRI standards.

This survey was repeated in fiscal 2018.

The questionnaire was set up as an anonymous online survey, and stakeholders were sent an e-mail inviting them to participate in the survey during a three-week period of time between September 4 to 30, 2018. The questionnaire registered more than 1,000 hits, an increase of 11 percent over 2017. At the end of the survey, anonymous responses had been submitted by a total of 382 participants (2017: 372). Participants were surveyed regarding the following eight topics:

- Employee concerns
- Social matters
- Environmental matters
- Respect of human rights
- Anti-corruption & anti-bribery matters
- Products
- Supply chain
- Customer concerns

The participants were asked about 42 potentially relevant topics for Software AG; 32 (2017: 32) were classified as relevant, and 15 (2017: 13) of them as highly relevant.

All topics that were classified as highly relevant by stakeholders are assumed to be of business and impact relevance as defined by section 289 c (3) HGB.

List of key topics

As part of the 2018 materiality analysis, Software AG identified the following topics as highly relevant:

Highly relevant topics	GRI standard	Minimum content (according to HGB) and other aspects deemed to be material	Page
Customer satisfaction	n/a	Customer concerns	94
High quality of Software AG products	n/a	Customer concerns	95
Availability of product support for customers	n/a	Customer concerns	96
Protection of customer data	GRI 418	Customer concerns	97
Transparent and trusting corporate culture	n/a	Employee concerns (section 289c (2), no. 2)	91
Equal treatment of all Software AG employees	GRI 405	Employee concerns (section 289c (2), no. 2)	87
Employee training programs and further education	GRI 404	Employee concerns (section 289c (2), no. 2)	91
Taking employee concerns into consideration	n/a	Employee concerns (section 289c (2), no. 2)	88
Flexible working hours/part-time model	n/a	Employee concerns (section 289c (2), no. 2)	89
Equal opportunity for all Software AG employees	GRI 405	Employee concerns (section 289c (2), no. 2)	87
Software AG products should contribute to improving economic performance for Software AG customers	n/a	Customer concerns	94
Policies and procedures to combat corruption	GRI 205	Anti-corruption matters (section 289c (2), no. 5)	92
Adherence to competition laws and antitrust laws and regulations	GRI 206	Anti-corruption matters (section 289c (2), no. 5)	92
Low staff turnover	GRI 401	Employee concerns (section 289c (2), no. 2)	89
Regular performance assessments and feedback for career development and professional growth	GRI 404	Employee concerns (section 289c (2), no. 2)	91
Additional topics [1]			
Dialog at the regional level and local community development	GRI 413	Social matters (section 289c (2), no. 3)	97
Prevention of human rights violations and child labor	GRI 412/408	Respect of human rights (section 289c (2), no. 4)	86
Energy consumption	GRI 302	Environmental matters (section 289c (2), no. 1)	99

[1] In order to fully report on HGB requirements, Software AG will go into respect of human rights as well as environmental and social matters in greater detail.

Code of Conduct and Conventions and Recommendations of International Organizations

The majority of Software AG's concepts and due diligence processes regarding the aspects listed above are described in detail in the Company's various Codes of Conduct. For that reason, they are only summarized below:

Global Code of Business Conduct and Ethics

The **Global Code of Business Conduct and Ethics (Code of Conduct)** contains policies for sound and responsible corporate governance. It sets out what Software AG considers to be ethically correct conduct in its day-to-day business. The relationships of Software AG employees to customers, partners and competitors follow these guidelines. All employees must read and understand the contents of the Code of Conduct. To this end, all employees attend mandatory, Web-based training programs and receive certification upon completion of the programs. The Code of Conduct is currently available in eight languages. In addition, the Company has other specific guidelines for conduct with partners and suppliers.

The Code of Conduct covers the following topics, among others:

- Software AG's values and professional conduct
- Staff health and safety
- Equal treatment and anti-discrimination
- Data protection and trade secrets
- Fair competition and antitrust law
- Compliance and anti-corruption
- Protection of Company property
- Conduct in the event of conflicts of interest and for clarification of ethical issues

Compliance with the Code of Conduct

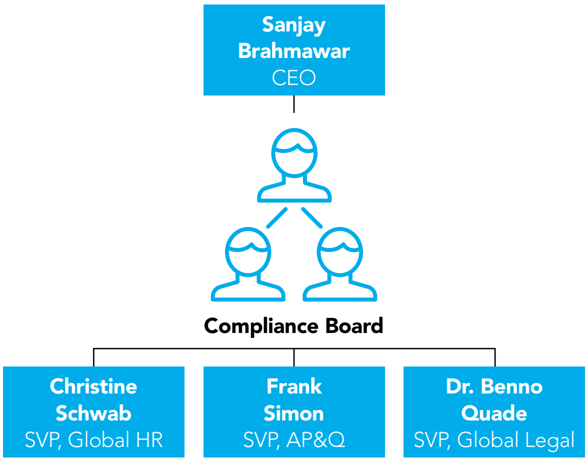
Software AG has introduced various mechanisms to help its employees comply with the Code of Conduct. For example,

- All employees must complete a regular online training program, which integrates hands-on examples, to familiarize them with the different aspects of Software AG's Code of Conduct.
- The online training is offered through Software AG's learning management system, which checks that employees complete the training. The duration of the training program varies, depending on the employee's individual speed, and is therefore not documented.
- At the end of the Web-based training program, they complete a multiple-choice test; after passing the test, they are issued a certificate. As of December 31, 2018, 92.4 percent (2017: 96.2 percent) of Software AG employees worldwide had successfully completed the training program and received a certificate.
- The Compliance Board can be contacted (also anonymously) regarding all questions and approvals. Software AG has set up an email-based reporting system at complianceboard@SoftwareAG.com for reporting incidents.

Software AG has established a Compliance Board, which is responsible for introducing, implementing and monitoring the Compliance Program. This Board reviews and assesses compliance issues and concerns and ensures that employees behave in compliance with the law, that internal rules and processes are followed, and that conduct complies with Software AG's Code of Conduct.

The Compliance Board reports directly to the CEO and consists of the following members:

Compliance Board



The essential duties and responsibilities of the Compliance Board include:

- Further developing the Code of Conduct, regularly reviewing and updating it to ensure its sustainable application worldwide
- Monitoring the implementation and application of the Code of Conduct
- Conducting training programs on compliance issues and on the Code of Conduct
- Advising employees on compliance issues and on the Code of Conduct
- Investigating compliance violations and making recommendations for appropriate measures in response to non-compliance
- In the event of non-compliance, the Compliance Board examines whether the compliance rules (including the Code of Conduct), procedures, training and organizational framework conditions need to be adjusted.

Illegal intentions or intentional misconduct on the part of employees cannot be completely ruled out. Violations of the Code of Conduct can be sanctioned by disciplinary measures (in addition to possible legal penalties).

Scope

The Code of Conduct applies to Software AG worldwide, including but not limited to, external staff and agents acting on behalf of Software AG.

Partner Code of Conduct

Software AG's business relationships with its partners are regulated by its Code of Conduct for Software AG Partners and self-assessment. It requires partners to provide information and commit in writing to comply with Software AG's Code of Conduct. To this end, they sign the Code of Conduct for Software AG partners and carry out a self-assessment. The Compliance Board plays a regulatory and auditing role.

Supplier Code of Conduct

There are also conduct guidelines for suppliers: Software AG's binding Supplier Code of Conduct is available in eight languages and must be confirmed in writing by all suppliers of the Software AG Group. An enforcement guideline regulates the process for existing and new suppliers as well as archiving signed Codes of Conduct. In addition, it gives the Compliance Board the right to perform regular audits to ensure that suppliers are adhering to the Code of Conduct. For suppliers that have their own code of conduct, the Compliance with Supplier Code of Conduct Checklist serves as a basis for comparison and to check their compliance with Software AG's requirements.

Conventions and recommendations of international organizations

In addition to the laws and regulations in the countries where Software AG operates, there are several conventions and recommendations by international organizations. They are primarily addressed to the member states and not directly to individual companies. However, they are a very important guideline for the conduct of a multinational company and its employees. Software AG therefore attaches great importance to compliance with these guidelines worldwide. The most important agreements of this kind are listed below:

- Universal Declaration of Human Rights (UNO), 1948
- European Convention for the Protection of Human Rights and Fundamental Freedoms, 1950
- Tripartite Declaration of Principles of the ILO (International Labor Organization) on Multinational Enterprises and Social Policy, 1977
- ILO Declaration on Fundamental Principles and Rights at Work, 1998 (especially regarding the following topics: elimination of child labor, abolition of forced labor, prohibition of discrimination, freedom of association and right to collective bargaining)
- OECD Convention on Combating Bribery of Foreign Officials in International Business Transactions, 1997
- OECD Guidelines for Multinational Enterprises, 2000

General Aspects

Software AG has established concepts related to the respect of human rights and combating corruption and bribery as well as to employee, customer, environmental and social matters. The key topics relating to these aspects are discussed below.

Respect of human rights (section 289c (2), no. 4 HGB)

Prevention of human rights violations and child labor

Concepts and due diligence processes

Respect and protection of human rights constitute the foundation of Software AG's international operations. To ensure compliance with human rights and the prevention of child labor, Software AG has established a binding Code of Conduct for employees, suppliers and partners respectively. The Code of Conduct is a comprehensive management approach that sets out what Software AG considers to be ethically correct conduct in business. It also addresses issues such as equal rights, (sexual) harassment, child labor and compliance with basic codes of conduct and human rights. In addition, it refers to major international agreements and recommendations of international organizations.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 408 and 412)

Globally active companies face the fundamental risk that the protection of children and young people may not be consistently guaranteed within their business relationships and supplier chains. For this reason, Software AG has taken targeted measures with its Code of Conduct to exclude the risk of child labor. Software AG mitigates the risks arising from working with partners and suppliers by requiring them to commit to excluding child labor and respecting human rights in the respective Codes of Conduct (Partner Code of Conduct, Supplier Code of Conduct). Furthermore, with regard to its own business activities, several years of training are an absolute prerequisite for people working in the IT industry and in turn, for the vast majority of Software AG employees. The Company therefore sees no risk of child labor within its own business operations or in connection with the use of Software AG's products and services. For this reason, Software AG has not implemented any additional internal procedures or control indicators to exclude child labor other than those set forth in the Code of Conduct.

Likewise, Software AG believes that its worldwide operations do not pose a significant risk of its activities having a serious negative impact on human rights. Software AG is not aware of any cases where products or product components have been linked to human rights violations. Software AG assumes that its business partners comply with the relevant laws and the Code of Conduct. Software AG's Code of Conduct ensures that its business partners adhere to ethical principles of conduct that go beyond the legislation of the respective countries. As a result of these measures, Software AG believes that the risk of its business partners violating human rights and infringing on the rights of children and young people is very low.

Employee concerns (section 289c (2), no. 2 HGB)

Equal treatment of all Software AG employees

Concepts and due diligence processes

The Management Board of Software AG believes that diversity fosters an innovative corporate culture and that all individuals have a right to equal opportunities. The Supervisory Board of Software AG is aware of the opportunities offered by diversity within the Company and, against this background, developed a diversity concept in fiscal year 2017. This concept introduces diversity targets for selecting members of the Management Board and the Supervisory Board. In addition, Software AG's Code of Conduct requires that employees interact in a non-discriminatory manner by setting out Software AG's fundamental guidelines and procedures governing equal treatment.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 405)

As a global corporation, Software AG benefits from the high diversity of its employees. A further increase in the diversity of the workforce and an innovative corporate culture offer great opportunities for the sustainable development of the Company's business model. For Software AG, the low percentage of women studying STEM disciplines represents a high risk for an unequal distribution of male and female employees in technical fields in the future. For this reason, the Company has been making considerable efforts, especially in Germany, to increase the appeal of IT professions for women. Information events and short internships for students are already being offered at the high school level. Moreover, Software AG hosts special information events and participates in diverse projects exclusively for female students and women to boost their interest in STEM professions.

In 2018, Software AG launched the Women@Software AG Initiative—by women, for women. This global platform enables women to share their personal experiences in the professional world and help each other overcome potential challenges. In addition, Software AG India developed a program specifically for women who have temporarily left the workforce. The Software AGain Initiative empowers women in computer science and software engineering to find their way back into the professional world. Both of these initiatives will be a focal point in 2019 as well.

The diversity concept for populating the Management Board and Supervisory Board was taken into consideration in 2018 as part of the selection process in the search for a new CEO of Software AG.

Furthermore, Software AG sees no significant risks associated with its business relationships, products or services that would likely have serious negative effects on equal treatment. Fundamental key indicators of measuring and steering diversity are listed in the following table:

Management Board and Supervisory Board by Gender and Age Group

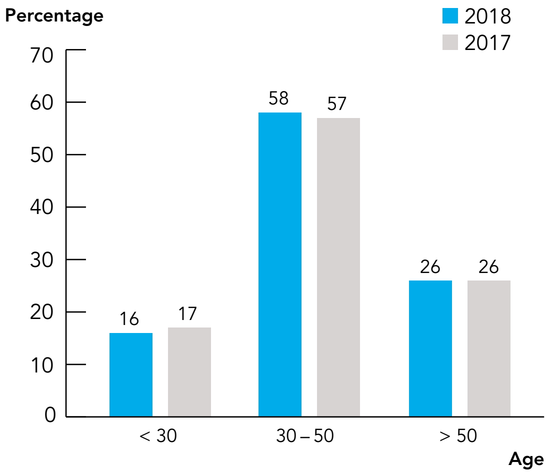
	Dec. 31, 2018	
Supervisory Board	**as %**	**by age group**
thereof male	83.3	>50 years
thereof female	16.7	30–50 years
Management Board	**as %**	**by age group**
thereof male	80	>50 years
thereof male	20	<50 years
thereof female	0	—

Employees[1] by Gender and Age Group

as %	Dec. 31, 2018	Dec. 31, 2017
Female by age group	**29.9**	**28.1**
<30	4.9	4.9
30–50	17.3	15.8
>50	7.7	7.4
Male by age group	**69.9**	**71.8**
<30	10.7	12.0
30–50	40.5	41.2
>50	18.7	18.6
Diverse by age group	**0.2**	**0.1**
30–50	0.1	0.1
>50	0.1	0.0
Total	**100**	**100**

[1] Adjusted for dormant employment contracts. There were no significant changes or seasonal fluctuations in the number of employees during the year.

Age Group Trend



Total Number of Employees[1] by Gender

Full-time employees	Dec. 31, 2018	Dec. 31, 2017	+/– as %
Male	3,359	3,300	2
Female	1,347	1,291	4
Diverse	11	5	120
Total full-time employees	**4,717**	**4,596**	**3**

Total Number of Employees[1] by Region

Full-time employees	Dec. 31, 2018	Dec. 31, 2017	+/– as %
thereof in EMEA	1,631	1,627	0
thereof in APJ	1,123	1,025	10
thereof at HQ	844	840	0
thereof in North America	602	596	1
thereof in DACH	403	402	0
thereof in LATAM	114	106	8
Total full-time employees	**4,717**	**4,596**	**3**

Total Number of Employees[1] by Employment Type and Gender

	Dec. 31, 2018	Dec. 31, 2017	+/– as %
Full-time	**4,402**	**4,280**	**3**
thereof male	3,263	3,207	2
thereof female	1,128	1,069	6
thereof diverse	11	4	275
Part-time	**315**	**316**	**0**
thereof male	96	93	3
thereof female	219	222	–1
thereof diverse	0	1	–100
Total salaried employees	**4,717**	**4,596**	**3**

All information is based on key personnel data from Software AG's global database. The data was retrieved as of December 31, 2018, and all information is presented as FTE (full-time equivalents). Staff members who are not salaried employees of Software AG do not account for a significant proportion of the organization's activities.

Taking employee concerns into consideration

Concepts and due diligence processes

Software AG believes it is important to take the concerns of employees into consideration in their direct work environment, in business processes and also in the leadership culture. To this end, the Company began conducting regular employee surveys in 2018 to give staff the opportunity to voice their concerns and state their position on various questions regarding employee loyalty and retention. These employee surveys are conducted by the departments either on a national basis with a defined, recurring list of questions on issues relating to employee satisfaction or limited to individual topics from day-to-day work.

Furthermore, the CEO conducted employee meetings worldwide after stepping into the role and thematically addressed the employee feedback received there. As the "voice of the employees," this feedback was used as the starting point for the Helix strategy project that Software AG launched in the second half of 2018.

[1] Each in full-time equivalents, adjusted for dormant employment contracts, not including FACT AG employees. There were no significant changes or seasonal fluctuations in the number of employees during the year.

Substantial risks and key performance indicators

Software AG benefits in a wide array of ways from taking employee concerns into consideration. For example, their feedback can be used to improve processes, correct mismanagement or rectify shortcomings in employee benefits. Taking employee concerns into account leads to greater employee satisfaction and loyalty overall.

In 2018, Software AG conducted 14 employee surveys, five of which were in global divisions and covered the topic of employee satisfaction, while nine were related to specific topics.

The survey results on employee satisfaction will serve as a baseline for future surveys to determine any improvements in employee satisfaction and loyalty.

Flexible working hours/part-time model

Concepts and due diligence processes

The need for flexible working hours and models varies from one Software AG location to the next. Software AG gives employees in Germany the opportunity to adjust their work hours to best suit their individual needs within the Company's requirements, offering flexible work hours and diverse part-time models. Moreover, employees can arrange to work from home entirely or partially, or spontaneously as needed. The home office option is especially popular with employees in the USA as well. In India, Software AG offers the SoftwareAGain program to enable young mothers to step back into their careers after maternity leave. This program includes content-based training programs as well as a gradual increase in work hours. Employees all over the world have the flexibility to determine their own work hours within operational needs and local labor laws covering work hours as well as the requirements of international collaboration and personal concerns.

Substantial risks and key performance indicators

When it comes to competing for the best talent, Software AG benefits from its diverse offering in the area of work hours and employment models. This benefit contributes significantly to the Company's continued high work/life balance ratings on the employer rating platforms Glassdoor (4.1) and Kununu (3.77). Software AG works to continually adapt its programs to meet its employees needs and improve the positive ratings it receives on employer evaluation platforms.

Low staff turnover

As the industry faces a shortage of skilled IT workers, Software AG is implementing targeted measures to promote employees and rising talent to win new employees for the Company and retain expert staff. At the same time, the supportive measures also contribute to lowering staff turnover.

Concepts and due diligence processes

Precise observation and analysis of the turnover rate in different locations and departments is a key measure of employee satisfaction, success in recruiting the best talent as well as Software AG's reputation and overall appeal in the individual departments and locations. High turnover rates require a prompt identification of the underlying problem and appropriate countermeasures. Furthermore, Software AG offers a range of development and training programs for youth, college students and young employees to begin fostering young talent as early as possible.

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Substantial risks and key performance indicators (performance indicators pursuant to GRI 401)

High turnover leads to a loss of employee expertise and therefore poses a threat to the continuity of the Company's market presence. The necessary new hires mean increased initial training activities, and the work and productivity normally delivered by the resources needed for training activities is lost. Turnover figures are currently only available on a local basis for Software AG. For that reason, the Group is introducing a global HR information system to have access to reliable, global and meaningful turnover numbers across departments.

Promoting Young Talent and Staff Members

Target Audience	Initiatives (examples)
Youth	**Calliope Mini-Courses in Germany** • Programming classes for elementary, middle and high school students in the classroom and on YouTube. **Girl's Day in Germany and Slovakia** • Girls try working in a technical job for a day. **Student Internships** • Students have the opportunity to try working in technical or administrative professions at Software AG. **Participation in Vocational Training Fairs for Students** • Hobit 2018, SV Darmstadt 98 Vocational Training Fair, "Seize the Future" Internship Fair in Saarbrücken. **Industry Kids Day at Software GmbH Austria** • Companies give young people ages 5–14 a look at the industry with independently led "junior labs." **Talent at Home in Spain and India** • Software AG employees' children are invited to spend a day observing people at work at Software AG. **Hesse Technical School** • High school graduates with (technical) university entrance qualifications get the chance to learn first-hand about STEM fields through a combination of trial classes and company internships. **International assignments as part of job training** • Software AG enables trainees and students to participate in projects abroad.
College students	**Master's Degree in Digital Transformation Management** • Software AG helped in the creation of a master's program in Digital Transformation Management, which was first offered in 2017 at the Goethe Business School in Frankfurt, Germany. Software AG offers employees the option to complete this degree while working. **University Relations Program** • Through the University Relations program, Software AG maintains close contact with colleges and universities worldwide and provides them with select software products for teaching and research free of charge. **Software Campus** • As a founding partner of Software Campus, Software AG is making an active contribution to opening up excellent career prospects in Germany to tomorrow's IT managers.
Rising talent	**Future Talents Program** • The Future Talents Program was developed to identify new talent, promote their development and motivate them to become the next generation of creative thinkers, key employees and leaders at Software AG. **Leadership Essential Program for New Leaders** • This program prepares potential managers to overcome the challenges that leadership roles bring.
Leadership	**Corporate Executive Program** • The Corporate Executive Program develops leaders and experts to step up as multipliers to tell Software AG's digitalization story to the external market. **Leadership Essential Program for Experienced Leaders** • Employees who already hold a leadership role and want to improve their personnel management skills.

Transparent and trusting corporate culture

Concepts and due diligence processes

Software AG's corporate culture encompasses the values, norms and attitudes that shape the decisions, actions and conduct of its members. Software AG employees live these values and norms every day. To ensure responsible corporate governance on a long-term basis, the shared guidelines for conduct have been set out in the Code of Conduct. In addition, Software AG embedded the Leadership Principles it adapted in 2017 into all management training programs.

The Leadership Principles are a guideline for continuously improving one's own performance, for developing new ideas or finding the best solution to a customer's problem. Software AG uses these principles to drive forward the process of building and consolidating a transparent and trusting corporate culture. The focus is on cooperation, communication and the recognition and empowerment of each individual employee. The Company's leadership is closely involved in the development of these concepts and measures.

Substantial risks and key performance indicators

Software AG could not identify any significant risks to a transparent corporate culture associated with its own business activities, relationships with suppliers and partners, or its own products and services.

Measures promoting a transparent and trusting corporate culture will continue to be implemented and expanded.

Regular performance assessments and feedback for career development and professional growth

Concepts and due diligence processes

Regular performance and career development reviews are mandatory at Software AG. These reviews are supported by appropriate software and take place in the first and second quarter of a year for the previous year. Furthermore, Software AG regularly honors the best employees or teams in the specific categories of sales, professional services and development based on predefined performance criteria.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 404)

Regular performance reviews and career development meetings are a key tool for employee motivation and loyalty to ensure that the Company not only hires the best talents in the market, but retains them as well. This is the only way to ensure that employees continue to learn and develop professionally based on market requirements. The internal competition for the best employee or team awards in a quarter or year leads to an internal performance competition that employees find very motivating due to the recognition they earn. Meaningful measurement criteria will be available after the introduction of the HR Information system.

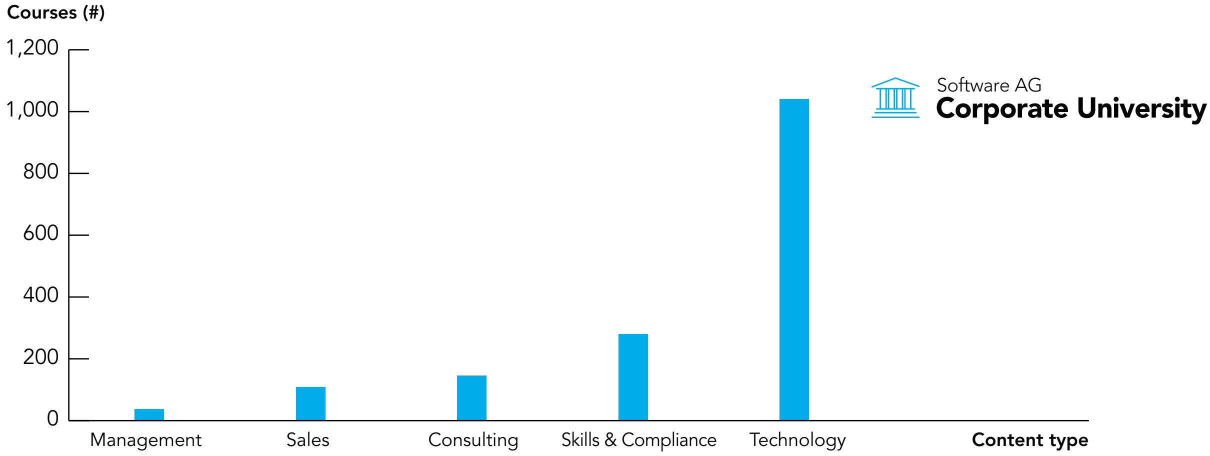
Training programs and further education measures

Concepts and due diligence processes

Software AG's Corporate University offers numerous training courses for all employees which can be accessed via the iLearn learning management system. The program includes online and face-to-face courses by the Company's own trainers and external trainers. The Corporate University uses modern training formats ranging from lightweight brief video tutorials to MOOCs (massive open online courses) to TV formats (live and recorded), for which a professional TV studio was set up in 2018. Employees can schedule training for themselves at any time. Training courses that are subject to a fee require the approval of an employee's manager; additional courses are provided by the Human Resources department and the Corporate University.

The entire training program is made available to all employees online in iLearn. In 2018, Software AG offered a total of more than 1,600 courses, of which 1,300 were e-learning courses. The vast majority of the courses were on technology topics. The portfolio of internally developed courses on soft skills was expanded significantly; it now comprises more than 150 courses. Software AG deliberately focuses on developing in-house training solutions, as past experience has shown that these courses resonate better with employees.

Course by Content Type



The Corporate University's course offerings are closely aligned with the requirements of the market, Software AG's users and products, the organization and its management and employees. The involvement of top management is especially crucial with offerings covering employee development and the Company's culture. The Management Board and top management levels are involved in the topics regarding the leadership culture.

iLearn's global training encompasses standardized training programs, such as basic training for new employees, the Global Consulting Services or the Sales-Enablement Program. The Company has mapped out development paths to prepare employees for product certification or to provide training and further education for Software AG product consultants. Employees and their managers agree on an individual learning plan, which is documented in iLearn. In addition, there is a range of courses focusing on executive development, including courses for future talents and senior executives as well as business management courses for top management. A total of 37 leadership and management courses were successfully completed in 2018.

Information on substantial risks and key performance indicators (performance indicators pursuant to GRI 404)

In a highly competitive market environment, neglecting ongoing training for their own employees poses a risk for companies. For that reason, Software AG is committed to the continuous training and further education of its employees, seeing it as an opportunity for achieving a significant competitive advantage. This is because Software AG's employees contribute decisively to the Company's business success with their professional and personal skills.

The satisfaction of course participants is continuously monitored, which involves evaluating the training offered and adapting it to meet demand. The system provides reports with information on the registration, number and satisfaction participants. According to the feedback, an average of 85 to 90 percent of participants were satisfied with the courses. The utilization rate of the program was also very good: In 2018, Software AG's employees registered for more than 30,500 courses, which corresponds to around six courses per employee.

Combating corruption and anti-competitive behavior (section 289c (2), no. 5 HGB)

A company's reputation is one of its most important assets and the basis of all relationships between employees, customers, partners, shareholders and a company's competitors. Alongside its efforts to survive in a highly competitive market, Software AG makes it a priority to act and do business responsibly and with integrity.

Concepts and due diligence processes

Software AG has therefore introduced a Code of Conduct that requires fair (competitive) conduct; all employees have to comply with the applicable antitrust and competition laws. Appropriate training and the clear rules of the Code of Conduct promote integrity and fair business practices at Software AG in the many countries where it operates. Employees with questions about competition and antitrust can consult the Software AG legal department responsible for the region or the Compliance Board. Software AG makes every effort to maintain integrity and fairness and to establish appropriate control measures.

The Code of Conduct includes the following prohibited actions (without restriction):

- Agreements with competitors that harm customers, such as price-fixing, collusive arrangements regarding tenders and agreements that exclude competition for customers or contracts

- Agreements according to which the freedom of a customer or supplier to sell a product is unreasonably restricted, including agreements setting a resale price for a product or service, setting unreasonable terms and conditions for the sale of products, technologies or services and agreements according to which other Software AG products and services are purchased

- Attempts to monopolize, for example by exploiting a dominant market position in order to exclude others from competition

- Acquisition of information on the competition using illegal or unethical methods

The Compliance Board reviews and assesses compliance issues and concerns and ensures that employees behave in compliance with the law, that internal rules and processes are followed, and that conduct complies with Software AG's Code of Conduct. The Compliance Board reports to the CEO. In the event of potential compliance violations, the Compliance Board continues to commission internal audits. These are approved by the CEO and carried out by Internal Audit. The results of the audit and the resulting corrective measures are reported to and reviewed by the Compliance Board and the CEO.

Software AG's Senior Vice President for Audit, Processes and Quality regularly reports the results of internal audits to the Supervisory Board's Audit Committee. This also applies to the results of the audits commissioned by the Compliance Board. The reports also cover other topics such as the continuous improvement of Software AG's compliance instruments and the effectiveness of internal controls.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 205 and 206)

Risks from corruption and anti-competitive behavior arise in international business activities due to differences in understanding regarding ethical and moral business practices from one country to the next. Software AG's goal is for all employees to adhere to its Code of Conduct. Software AG's employees are regularly informed about the regulations and measures for combating corruption and anti-competitive behavior. To this end, the CEO sent the Code of Conduct to all employees by email when it was originally introduced. Since then, the Code of Conduct has been part of the welcome package that all employees receive worldwide when they join the Company. 605 new Software AG's employees have completed training on the Code of Conduct and received the p. 84 required certification in fiscal 2018. All Software AG's business partners are required to sign either Software AG's Partner Code of Conduct or Supplier Code of Conduct. The Compliance Board assesses and rules upon exceptions to this rule.

Software AG has added issues related to fraud detection and prevention to its annual internal audit plan for countries with a specific fraud detection index. The Company does not have a risk management department that explicitly deals with the detection of fraud at its locations.

On July 31, 2018, the Spanish Antitrust Authority (Comisión Nacional de los Mercados y la Competencia, CNMC) imposed fines on a total of 11 companies, including Software AG Spain, in antitrust proceedings from the year 2015. The CNMC felt it proved that Software AG Spain was involved in price fixing, "covert tenders," and other anti-competitive activities. The fine imposed on Software AG Spain amounts to €6,016 thousand and was recognized accordingly under process-related risk provisions. Software AG Spain has filed an appeal against this administrative ruling. Following the recommendation of Software AG's Compliance Board, the CEO has decided on and implemented a variety of measures to prevent comparable incidents in the future. These include hiring a local in-house attorney in Spain, close legal monitoring (internal and external) of public tenders, and training for managers and employees (both face-to-face and video training sessions). Overall, Software AG continues to estimate the risk from corruption and anti-competitive behavior to be low due to the measures it has taken.

Customer concerns

Customer satisfaction

Good working partnerships are based on trust, commitment and shared exchange. For Software AG, the success of its customers is and remains a goal to which the Company is firmly committed. For this reason, it regularly surveys its customers and also expects and encourages company employees to suggest customer-centric solutions. In addition, it applies design-thinking methods so that it can quickly provide its customers with solutions that offer high benefits.

Concepts and due diligence

A key objective of Software AG is to promote innovation and competitive differentiation among its customers and to support their successful digital transformation. The three objectives of Software AG's Customer Satisfaction Program are closely linked to this.

Communication: Software AG attaches great importance to open communication with its customers. To improve its processes, products and services, it collects and reviews customer feedback on a regular basis.

Collaboration: Software AG collaborates closely within its own organization, within its partner network and with its customers to ensure that its customers get the maximum benefit from Software AG technology.

Co-innovation: Software AG uses state-of-the-art design-thinking methods in R&D to deliver constructive and relevant customer solutions as quickly as possible.

Substantial risks and key performance indicators

Software AG could not identify any significant risks to customer satisfaction associated with its own business activities, relationships with suppliers and partners, or its own products and services.

Each year, Software AG conducts a survey in order to understand its customers' experiences with Software AG. Depending on the type of collaboration with Software AG, customers are also regularly asked about their experiences with Software AG by the Global Support department Global Consulting Services or Global Education Services. The aim of these surveys is to ensure that all customers are completely satisfied with the collaboration at all stages of the interaction.

Response Rate for the 2018 Customer Satisfaction Survey

as %	2018	2017	2016	2015
Total	2.1[1]	8.9	5.5	1.7

[1] A true comparison of the response rate in 2018 with previous years is not possible. Prior to 2018, only surveys that were actually delivered served as a basis for calculating response rates. In 2018, however, all surveys sent had to be used, because the new survey tool does not filter out undelivered surveys as in the past. This results in a significantly lower response rate for 2018.

Summary of worldwide results of the 2018 customer satisfaction survey

Software AG's worldwide customer survey was sent to more than twice as many recipients in 2018. The distribution list was expanded significantly in North America, especially. The survey was also updated for the EMEA region. It is therefore impossible to accurately compare the response rate with previous years.

Regardless of the lack of comparability of the response rates, customer satisfaction, as measured by the Net Promoter Score, continued to improve in APJ and LATAM in 2018. Customers' assessments of Global Consulting Services and Global Support also showed improvement in these regions. The survey included questions on customers' experiences with Software AG and with individual products. They were also asked to make suggestions for improvement. These are all important starting points for Software AG when it comes to taking the right measures to further improve customer satisfaction.

For the reasons discussed above, Software AG is assessing whether it can find a more suitable benchmark than response rate.

The contribution of Software AG products to improving economic performance for Software AG customers

Concepts and due diligence

Within the Software AG sales cycle (CEP), each sale generates a value proposition for each customer, sometimes quantified in the form of a business case as well. It lays the foundation for setting a fair price and is part of the discounting or Global Deal Desk (GDD) approval process, but is not part of the contract. Instead, it serves merely as an illustration of the value advantage. Sometimes this business case will be substantiated with previous successes (customer success stories) that were approved by other Software AG customers as part of a use case. Software AG may also draw on independent analysts at times to inquire about customer numbers to maintain a neutral, advertising-free perspective. One example is the Forrester study, "The Total Economic Impact™ Of The Software AG Digital Business Platform" from April 2018.

Substantial risks and key performance indicators

The Company does not internally evaluate sales employees or consultants on achieving these goals and there are neither explicit indicators nor a process for ascertainment, except that every customer ideally should be won as a reference customer. Since business cases are not part of the contract, there are no risks from not achieving this objective.

Assurance of Software AG's high-quality products

Concepts and due diligence

Software AG's actions are driven by the desire to create added value for its customers and thus to contribute to their success. Software AG wants to enable its customers to differentiate themselves from their competitors in the digital world. In order to achieve this goal together, each Software AG employee is committed to the following values:

- The customer is at the heart of all dealings, from collaboration and co-innovation in the development of new products through to the way Software AG sells its services and solutions
- Compliance with laws and regulations regarding quality, safety and performance requirements in all countries where Software AG sells its products and services
- Support and continuous improvement of Software AG's business continuity management program

Software AG will pursue these commitments in a transparent and consistent manner with the help of clearly documented processes, performance indicators (such as quality objectives, routine quality management reviews) and a corporate culture focused on quality. Software AG implements measures that aim for continuous certification in the areas of quality management, business continuity and information security. With the measures described below, the Company is working to reduce the possible risks that can arise from insufficient product quality.

ISO 9001-certified quality management system

Software AG's ISO 9001-certified quality management system (QMS) provides a basis for high levels of customer satisfaction, high-quality support services and software as well as continuance improvement. The product development and Global Support systems and all supporting functions are part of Software AG's QMS. They lay down the processes, roles and rules that apply to every employee in his or her daily work routine. They also set out how important systems are secured.

The quality management system

- Verifies compliance with laws and regulations regarding quality, safety and performance
- Ensures Software AG's ability to provide support services to its customers
- Clearly defines transparent processes
- Is the basis for continuous innovation within an agile development environment
- Integrates feedback to ensure that Software AG can deliver high-quality software to help its customers gain a competitive advantage

ISO 22301-certified business continuity management system

Software AG's ISO 22301-certified business continuity management system focuses on ensuring the Company's support services. It is highly digitalized. It incorporates proven governance processes and makes provisions for incident response teams and duplications of critical infrastructure and applications. This ensures that the central systems needed by Software AG's customers are available. The system enables Software AG to quickly provide its customers with the services they need, also in crisis situations. The system is constantly adapted to changing requirements and regularly monitored; its efficiency is continuously improved.

ISO 27001-certified cloud information security management system

The ISO 27001-certified cloud information security management system provides the basis for:

- Protecting information in the cloud from unauthorized access and use and protecting information from being passed on, changed, disclosed, viewed, stored or erased
- Proactively identifying security risks, preventing and detecting security breaches and violations and responding to them
- Compliance with legal, regulatory and contractual obligations
- Identifying potential for improvement, introducing appropriate improvements and reviewing their effectiveness

This certification is crucial to win and maintain the trust of potential and existing cloud customers and to meet the compliance requirements that they place on their suppliers.

For more information on all certifications, please visit the Quality and Continutiy section of the website at: https://www.softwareag.com/corporate/company/quality_and_continuity/default.html

Quality specifications for product development

Software AG's investments in quality management are closely linked to its commitment to customer-centric development. This means that the customer is closely involved in the cycle, starting from the idea through to the product. Clearly defined development and testing processes combined with feedback loops ensure that the Company has the agility and flexibility needed to deliver first-class software, enabling Software AG's customers to achieve their competitive advantage. Regular software releases, updates and continuous improvements provide a sound foundation for operational efficiency and excellence.

Availability of product support for customers

Concepts and due diligence

In the digital world, customers expect Software AG to provide global 24/7 support, ensuring the continuity of their core business systems. To meet these expectations, Software AG's Global Support strives to meet the highest quality of standards at all organizational levels. This is achieved through:

- Empowerment of employees
- Ongoing improvement of employees' skills
- Continuous measurement and monitoring of customer satisfaction
- Utilization of innovations to improve customer experience and efficiency

Global Support quality guidelines

Software AG's Global Support is certified according to ISO 9001. This certification speaks for the high quality of Software AG's processes and tools. The success of its customers is Software AG's top priority, from the very first day they start using the Company's products. With Enterprise Active Support, Software AG provides fast, agile and proactive customer support for all of its products.

Customers who choose Enterprise Active Support benefit from industry-leading performance and fast response times in any time zone. Enterprise Active Support services include:

- 24/7 support, including telephone support
- Technical support for critical cases
- Access to Empower, the 24/7 customer support portal and self-service extranet
- New product versions, patches and fixes
- Web-based consulting sessions
- Multiregional support
- For more information on these services, please refer to the fact sheet: (https://resources.softwareag.com/services/enterprise-active-support-fact-sheet)

Software AG's Global Support helps customers in the event of a problem with a wide range of problem-solving measures. These include guiding customers in error analysis and diagnostics. In the event of multiple potential resolutions, Global Support advises customers on selecting the optimal solution. When relevant, Software AG also provides proactive problem resolutions such as identifying potential code fixes.

Moreover, Global Support provides a self-service portal known as Empower. This robust online portal supports customers proactively and delivers timely information and problem resolutions. From Empower, customers can access an extensive knowledge center containing white papers, articles about existing issues, information about fixes and a wealth of other relevant information. Empower is also a direct link to Software AG's groups and discussion forums, where customers can connect with the wider Software AG community.

Software AG's Global Support works with a comprehensive, flexible escalation process. Customers can engage a Strategic Support Manager to arrive at optimal solutions.

Customer satisfaction always takes center stage at Software AG's global support organization. It continually reviews, revises and invests in processes, knowledge and tools to improve customer service. Global Support also has a continuous feedback channel. As soon as a problem is resolved, customers are surveyed about their experience with Global Support and Software AG. This customer input is utilized for continuous growth and improvement.

Protection of customer data

The protection of personal data is a fundamental right of all individuals. Article 8 of the Charter of Fundamental Rights of the European Union (EU) defines the protection of personal data as a fundamental right; the protection of personal data is also part of the EU data protection laws in accordance with the EU Data Protection Regulation (GDPR). Software AG respects the privacy of its customers' and their customers' personal data and must therefore take appropriate measures.

Concepts and due diligence

Software AG has appointed a Data Protection Officer and formed a data protection team to advise the business units on data protection. An integrated data protection management system (DMS) was implemented in accordance with the requirements of the GDPR. The system documents, monitors and, if necessary, adapts the data protection aspects. The processes for handling data protection incidents and violations are integral components of the DMS, including incidents and violations that affect customer data. Software AG is implementing this DMS with its own products ARIS, Aris Risk and Compliance Manager, Alfabet and AgileApps.

The effectiveness of the data protection processes is reviewed within the scope of the ISO 9001 audit. The results and findings are documented, and progress is measured in a central audit system. Management is regularly informed in relevant meetings.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 418)

In 2018, there were no incidents at Software AG in which customer data was violated or lost. No incidents were reported in accordance with the provisions of the applicable data protection laws. Overall, the Company classifies the situation with regard to protection of customer data as neutral in terms of risk and opportunities considering the measures mentioned above.

Social matters (section 289c (2), no. 3 HGB)

Dialog at the regional level and local community development

Concepts and due diligence

Software AG pursues the goal of networking with the communities where it operates and contributing to their well-being as a good corporate citizen. Software AG's concept is to address social concerns at the regional level. The management is involved accordingly in developing measures for local issues. Ever since Software AG was founded, social commitment has been a central part of its corporate culture. The Company is proud that so many colleagues around the world are involved in numerous volunteer projects and is happy to support and reward this commitment. The social commitment of Software AG's employees is reflected in many local projects at its locations throughout the world. Information on the individual projects is regularly updated at http://software.ag/csr/en/default.aspx.

The cornerstones for sustainability and responsible action were laid by the Company's founder, Dr. Peter Schnell, and his principles are still firmly anchored in Software AG's corporate culture today. He established the Software AG Foundation 27 years ago, which is an anchor investor with a shareholding of almost 34 percent.

Software AG's own activities, such as its worldwide campaign "Move Your Feet to Give a Hand," are designed to build a bridge between Company sports, team spirit, and charitable and athletic commitment. Software AG, the representatives of the Supervisory Board and the Software AG Foundation donate a fixed amount of money for each kilometer run by employees at official running competitions. In 2018, staff members covered a distance of 7,459 kilometers (2017: 6,376) and raised a donation of €32,500 (2017: €28,000). Since the campaign began 11 years ago, Software AG's employees have covered 95,410 kilometers in total, more than two times around the world. Employees can make suggestions on which non-profit organizations the money should go to.

Particularly at its corporate headquarters in Darmstadt, Software AG is firmly rooted in the region and is involved in numerous projects, working with and on behalf of a wide range of stakeholder groups.

Software AG has been a sponsor of the SV Darmstadt 98 soccer club (the Lilies) for many years. As part of the club's social campaign "Under the Sign of the Lily," Software AG supports charitable activities to help people with developmental or physical disabilities, such as organizing soccer training for disabled athletes in cooperation with Special Olympics Hessen.

Software AG is committed to strengthening the IT industry in Germany. As an active member of several industry networks, Software AG plays a strong role in shaping the political and economic landscape. Beginning with the modernization of the education system, continuing with the advancement of IT startups through to securing future-oriented jobs, Software AG is dedicated to developing the scientific and economic strengths of its industry in order to sustain the innovative capability of Germany as a competitive IT location.

The ongoing digitalization of education is an integral part of the German government's digital agenda and a central field of action—in classrooms, lecture halls, vocational schools and companies. Digitalization is a topic that broadly affects business and society at large, resulting in the need for basic broad-based digital education in schools, from elementary school onwards. Since 2007, Software AG has had its own University Relations Program, another example of the Company's social responsibility. Its goal is to develop digital competencies at universities and colleges worldwide. Computer training in elementary and high schools was newly added in 2017. In a unique pilot project at Main-Taunus School in Hofheim am Taunus, Germany, Software AG verified that the "Calliope mini" microcomputer which it presented at the 10th Digital Summit in Saarbrucken is also suited for elementary school instruction. Software AG has made the results from this pilot instruction program available to the public in the form of YouTube instructional videos that can be accessed free of charge. They have already been viewed more than 80,000 times. The Company's expanded offering of free software in hosted environments is also new. Software AG is thus taking into account the growing demand for software in the cloud.

Software AG is participating in various research and innovation projects as a business partner. This also applies to the "System Innovation for Sustainable Development" research project at Darmstadt University of Applied Sciences. Its aim is to establish a learning system for transparent and sustainable supply chain and evidence management. Software AG makes its expertise and technologies available for the focus on "sustainable consumption and production." Taking the example of leather chemistry, potential is being explored to find out how to achieve full traceability of products, detect or even prevent impurities or unwanted contaminations at an early stage, and provide innovative and environmentally responsible ideas for the leather industry.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 413)

Software AG has not identified any substantial risks in the area of social matters. Rather, it sees an opportunity here to give back to society—and especially the local communities of its operations worldwide—as part of its dedication to corporate social responsibility. Another example of the Company's social commitment is the local programs that support community development. Every full-time employee of Software AG in North America is entitled to dedicate eight hours a year to volunteering. There is a similar program in Germany which enables employees to take paid leave to do voluntary youth work.

Environmental matters (section 289c (2), no. 1 HGB)

Software AG's technological solutions are already helping many customers to make optimal and sustainable use of their resources. Software AG feels a strong sense of responsibility for the environment: The 1,243 employees in Germany are supplied with green electricity. In addition, the waste heat from the servers at corporate headquarters in Darmstadt is used to heat the building. The cafeteria offers the staff in Darmstadt a wide range of organic meals made with locally sourced products.

Energy consumption

Concepts and due diligence processes

Software AG is convinced that innovative technology developments always offer an opportunity to increase efficiency and conserve resources. This, in turn, has a positive effect on the environmental balance. As an IT company, Software AG wants to help reduce its carbon footprint by focusing on cutting its own energy consumption and using renewable energies for all of its operations in Germany.

Software AG takes a holistic approach to all aspects of energy management, demand and procurement for all its operations and is working toward reducing its energy footprint by saving energy and using more renewable energies. Electricity is the most important source of energy. The Company prefers electricity from renewable sources. In Germany, Software AG already obtains 100 percent of its electricity from renewable sources or produces it on-site itself.

To control power consumption for all its locations, Software AG continually implements energy-saving measures, such as retrofitting lighting systems, replacing motors and upgrading building technology. When planning the construction of new buildings, it pays close attention to making use of natural light, installing shading systems and state-of-the-art building technology. Software AG is also looking for ways to improve the energy intensity and performance of its data centers and to reduce energy consumption through innovation. All in all, the Company achieved a reduction in energy consumption at the locations under review from last year.

Substantial risks and key performance indicators (performance indicators pursuant to GRI 302)

Energy efficiency is of key importance to Software AG: It helps to reduce costs, achieve sustainability goals and reduce (environmental) risks. However, it is not only about saving money. Software AG's product portfolio forms the basis for the business operations of numerous companies worldwide. Software AG enables them to use resources intelligently and efficiently. In this way, customers leverage Software AG's solutions to improve their own energy footprint and reduce their CO_2 emissions.

On the whole, Software AG's business model incurs only a very low risk of negatively impacting the environment. The Company also sees the issue of environmental concerns as risk-neutral with regard to further consideration of its supply chain, products and services.

Energy consumption was reduced in 2018 from 125 to 121 kWh/m² (–3 percent) and per employee from 2,840 kWh/EMP to 2,553 kWh/EMP (–10 percent) due to the continuous upgrades in building technology, additional insulation and more energy-efficient systems including lighting systems (retrofitting with LEDs), modern window shades and air conditioning systems as well as more efficient IT components and servers.

Energy Consumption in 2018

Key indicators of energy consumption[1]

Year	Employee (EMP)	m²	kWh/year	kWh/m²	kWh/EMP
2017	3,042	69,225	8,639,678	125	2,840
2018	3,327	70,250	8,494,935	121	2,553

[1] Locations for which no separate account data is available are not included. The data collected represents about 80 percent of Software AG's total floor area. Data from the USA was not available at the data collection deadline.

FORECAST

Economic Conditions in Upcoming Fiscal Years

Future overall economic situation

The Institute for the World Economy (IfW), based in Kiel, Germany, predicts that global production growth will shrink to 3.4 percent in fiscal 2019. After a ten-year upswing, the U.S. economy has passed its peak. The IfW predicts gross domestic product growth of 2.5 percent in 2019 and 1.9 percent in 2020. The country's relatively solid economic performance in 2019 thus far is due primarily to continued strong private consumption resulting from high employment rates and increasing income levels, as well as to vigorous investment activity among corporations. Because monetary and financial policy will not trigger any further growth during the year, the expansion trend in the USA will, however, slow down in the forecast period.

The speed of expansion in the eurozone will also see a gradual deceleration. Though, financing conditions will remain favorable for companies thanks to the ECB's continuing expansive monetary policy. According to the IfW, this—in addition to foreign trade—is one reason the upward trend in the eurozone economy will last for some time to come. For 2019, the IfW thus expects the gross domestic product to grow by 1.7 percent, which is 0.2 percentage points lower than in 2018 (1.9 percent). Economic expansion will further slow in 2020 to a rate of 1.5 percent. Germany's economy is in the late stage of a five-year upswing. IfW analysts expect its gross domestic product to increase by 1.8 percent in both 2019 and 2020.

Production growth in emerging economies is anticipated to be 4.7 percent in 2019 and 4.6 percent in 2020. The weak trend in global trade will keep growth rates from going any higher. This will have an effect on total economic output in Latin America in 2019 and 2020 with equally sluggish growth rates of 1.6 and 2.3 percent.

The IfW assumes the global economy will see comparable growth rates in 2020 and 2019 of 3.4 percent. This level of expansion is not yet considered to be a actual recession, but capacity utilization in developed economies will barely see any more growth. The weak trend in global trade will continue, with growth rates of 2.3 percent in 2019 and 2.8 percent in 2020. Even this sluggish pace requires a gradual resolution of global trade conflicts.

Key Data on Germany's Economic Development

2017 to 2020[1]	2017	2018 Forecast	2019 Forecast	2020 Forecast
GDP, price-adjusted	2.2	1.5	1.8	1.8
GDP, deflator	1.5	1.8	2.2	2.2
Consumer prices	1.8	1.9	2.1	2.0
Labor productivity (hourly concept)	0.9	0.1	0.8	0.7
Employed domestically (1,000 people)	44,269	44,846	45,290	45,617
Unemployment rate as %	5.7	5.2	4.8	4.6

[1] Gross domestic product, Consumer prices, Labor productivity: year-on-year change as percentage;
Unemployment rate: determined by the German Federal Employment Agency
Source: Institute for the World Economy (IfW), Economic Reports, Global Economy in Winter 2018 No. 50 (2018|Q4), Dec. 11, 2018

GDP in Specific Countries and Regions

GDP[1]	2018 Forecast	2019 Forecast	2020 Forecast
USA	2.9	2.5	1.9
Japan	0.8	1.0	0.8
Eurozone	1.9	1.7	1.5
United Kingdom	1.3	1.0	1.1
Total	**2.4**	**2.1**	**1.8**
China	6.6	6.1	5.8
Latin America	0.6	1.6	2.3
India	7.7	7.5	7.0
East Asia	5.1	4.7	4.6
Russia	1.6	1.7	1.6
Global economy, total	**3.7**	**3.4**	**3.4**

[1] Change year-on-year as percentage
Source: Institute for the World Economy (IfW), Economic Reports, Global Economy in Winter 2018 No. 49 (2018|Q4), Dec. 11, 2018

Sector development

The IT market defied recession rumors in 2019. Market researchers at Gartner predict an increase in worldwide IT spending in 2019 of 3.2 percent to total $3.8 trillion and 2.8 percent in 2020 to $3.9 trillion. This means that demand for IT products and services would stay high in the next few years, despite the threat of a recession, Brexit and trade wars. This positive market development also applies to Software AG's segments of activity. The enterprise software market is expected to continue growing significantly at a rate of 8.5 percent to $431 billion and, similarly in 2020, at 8.2 percent to $466 billion. IT services will see an increase of 4.7 percent to $1.03 trillion in 2019, passing the one trillion notch for the first time. Further growth of 4.8 percent to $1.08 trillion in 2020 is expected.

Forecast of Global IT Spending

in $ billions	2019 Spending	2019 Growth (as %)	2020 Spending	2020 Growth (as %)
Enterprise software	431	8.5	466	8.2
IT services	1,030	4.7	1,079	4.8
Total IT	**3,767**	**3.2**	**3,875**	**2.8**

Source: Gartner Says Global IT Spending to Reach $3.8 Trillion in 2019
www.gartner.com/en/newsroom (January 28, 2019)

The Group's focus

Software AG delivered strong revenue results with industry-leading profitability in 2018. But because this revenue growth does not yet adequately reflect the high market potential of its products, the Group launched the Helix transformation program in the year marking its 50th anniversary. This multi-year program is based on Software AG's core strengths and heritage while driving change within the business to better meet changing market and customer demand and capitalize on growth opportunities. The goal is to guide Software AG to sustained profitable growth and to the top of the technology sector.

The following three levers form the core of Helix:

1. Focus on growth markets and products:

Software AG will restructure its product portfolio. Digital Business Platform (DBP) will be reconfigured into the three following areas, each with its own go-to-market identity:

- Integration & API
- IoT & Analytics and
- Business Transformation

Each of these three areas represents an attractive opportunity for growth. In addition, Software AG will prioritize markets that offer above-average growth opportunities. These include North America, Germany, the U.K. and France. The Company also plans to better maximize the potential of the APJ region.

2. Introduction of a matrix structure and SaaS:

With a view to improved effectiveness in the Sales team, Software AG plans to implement a new matrix operating model. The Group will ensure end-to-end accountability for sales budgets based on region—through regional presidents—and on products—through general managers. Go-to-market approaches will move from a generalist to a pecialist model. This will have a positive effect on customer retention and create cross and upselling opportunities. Furthermore, Software AG will shift its products from a classic licensing model to subscription-based sales. This is Software AG response to a market trend, which not only addresses clear customer preferences, but will also reduce quarterly earnings fluctuations and improve visibility of sales in the medium term.

3. Leadership team and partners:

Software AG's management team will drive the Group's new focus. Alongside CEO Sanjay Brahmawar and CFO Arnd Zinnhardt, CPO Dr. Stefan Sigg and CRO John Schweitzer will serve on the Management Board and lead the transformation. In addition, Bernd Groß in the function of CTO and Paz Macdonald in the function of CMO will play key roles in supporting the rollout of the Helix project. Software AG is also taking steps to retain and attract talent. The Company will strengthen its partner ecosystem, seeking to grow partner revenue significantly.

Expected Financial Performance

Anticipated revenue and earnings

Under the assumption that 2019 revenue is distributed as indicated by the capital market outlook and that no currently-unforeseeable special effects arise, the Software AG Management Board believes that the 2019 DBP, Adabas & Natural (A&N) and Consulting segment margins will remain at a similar level to those of 2018.

Assuming stable conditions (precluding currently-unforeseeable special effects) apply, the Software AG Management Board also expects IFRS net income to decrease at a low to middle single-digit rate. This development will be largely in line with the operating EBITA margin (non-IFRS). The operating non-IFRS margin target for 2019 is between 28 and 30 percent. IFRS net income is not a relevant indicator for Software AG's management, because it represents a balance of absolute revenue and cost amounts mixed with respective currency effects in different businesses, and is thus of little informational value.

Software AG will focus primarily on cloud computing, machine learning and artificial intelligence (AI) as well as IoT in 2019. These are four pivotal technologies that will guide organizations into the world of new data-driven business models.

Software AG's total guidance—including expected performance in DBP, DBP Cloud & IoT, A&N and Consulting revenue and operating EBITA margin—was approved by the Management Board and Supervisory Board. It is based on the national subsidiaries' individual budget plans. Factors used in their planning are anticipated economic developments in the specific regions, current order levels, existing pipelines, anticipated maintenance contract renewal rates and anticipated resource utilization of Consulting staff.

The Software AG Management Board expects growth in the DBP (not including Cloud & IoT) business in fiscal 2019 between 3 and 7 percent year-on-year. Growth in Cloud & IoT revenue is anticipated at 75 to 125 percent year-on-year. A&N is expected to see growth between –5 and 0 percent year-on-year. Provided the current corporate structure remains stable despite the Helix project and other organizational changes, Software AG expects a slight decrease in service revenue and positive low single-digit performance in total Group revenue compared to fiscal 2017. This guidance is based on prevailing exchange rates in 2018.

Software AG's EBITA margin (non-IFRS) target is between 28.0 and 30.0 percent. The table below shows the full forecast for the 2019 fiscal year:

Outlook for Fiscal Year 2019

	FY 2018 in € millions	**Outlook FY 2019 as of Jan. 30, 2019 as %**
DBP revenue	464.7	—
DBP not including Cloud & IoT	434.4	+3 to +7[1]
DBP Cloud & IoT	30.3	+75 to +125[1]
A&N revenue	218.3	–5 to 0[1]
Operating margin (EBITA, non-IFRS)[2]	31.5%	28.0 to 30.0

[1] At constant currency, not including hosting services
[2] Before adjusting for non-operating factors (see non-IFRS definition of earnings on p. 48)

Medium-term business performance

Software AG seeks to achieve profitable growth in the medium-term. A sizeable increase in the percentage of recurring revenue should result from the adoption of new license models. The Company will also continue prioritizing a strong level of operating free cash flow.

Outlook for the Software AG parent company (separate financial statements)

The financial performance of the Software AG parent company depends upon the financial standing of the Software AG Group and is determined by profit transfers and decisions regarding the payout of Group-internal dividends. For more information, please refer to the forecast on expected financial performance of the Software AG Group.

Anticipated performance of key items in the income statement

The cost of sales, largely consisting of personnel costs related to consulting services, are expected to rise moderately year-on-year. R&D expenses should also demonstrate single-digit growth year-on-year, particularly to fuel innovation in the field of Cloud and IoT. This includes expansion of R&D resources at low-cost locations. Spending allocated to the DBP and A&N segments will be aligned with revenue performance. Sales and marketing expenses are expected to increase by an upper-single-digit rate to fuel growth in the DBP and Cloud & IoT business line and steadfastly serve the A&N customer base. Operating administrative expenses will also see a rise in the upper single digits due to investments in administration and processes necessary to foment future growth.

Furthermore, the federal tax reform implemented in the USA at the beginning of 2018 will continue to have a positive impact on Software AG's earnings. Accounting for more than 30 percent of revenue, the USA is by far Software AG's largest single market. The Company has also made many acquisitions in the American market in the past. As a result, it has intellectual property rights on key products there. Because Software AG has recurring license income (royalties) which is subject to U.S. taxation, the Company profited considerably (also at Group level) from the U.S. federal income tax rate reduction from 35 percent to 21 percent.

Anticipated dividend development

Consistent dividend policy

Software AG adheres to a sustainable dividend policy, which is geared toward long-term, value-oriented development of the Group. This continuity is in the interest of reliable shareholder relationships and their appreciation for value. The dividend is paid from Software AG's earnings and cash flow. In addition to investments in profitable growth, Software AG's use of cash flow aims to enable shareholders to participate in the Company's profitability through attractive dividends. To reflect shareholder value, the Management Board raised its target dividend ratio range in 2015 to between 25 and 33 percent of the Group's average net income (attributable to shareholders of Software AG) and free cash flow.

Software AG continued its value-based dividend policy in fiscal 2018. After having raised the dividend to a record €0.65 per dividend-bearing share for fiscal 2017, the Management and Supervisory Boards will propose a dividend of €0.71 for fiscal 2018 at the 2019 Annual Shareholders' Meeting. Conditional upon approval by the shareholders, this would equal a total payout sum of €52.5 million (2017: €48.1 million), or, in relation to average net income (attributable to shareholders of Software AG) and free cash flow in 2018, a dividend ratio of 30.1 percent (2017: 31.8 percent). Based on the closing price of Software AG's share (Dec. 30, 2018: €31.59 (2017: €46.86)) for the year, this would correspond to a dividend yield of 2.2 percent (2017: 1.4 percent). This is a comparatively attractive yield in the current capital market climate. The dividend policy is a clear indication of the Company's value focus and will continue in the future.

Software AG's shareholders also benefited from share buyback plans and ensuing capital decreases. Software AG has reduced the number of outstanding shares through several buyback measures and redemption of treasury shares in recent years. The treasury shares repurchased by Software AG are not entitled to a dividend. The Management Board was authorized in 2017 by the Annual Shareholders' Meeting to repurchase up to 10 percent of the Company's share capital. It has not yet exercised this authorization. But it may be used at any time for future share buyback programs.

Expected Financial Position

Planned financing activities

Due to Software AG's high level of cash flow and comfortable liquidity, the Company does not foresee a need for external financing. External financing measures are taken almost exclusively for financing larger acquisitions. Because the timing of such acquisitions is not exactly foreseeable, neither an exact point in time nor the necessary financing can be named. Should a large acquisition arise, financing measures could be taken at any time.

Planned investments

There are currently no concrete plans for major investments. Software AG is however always prepared to take advantage of opportunities that present themselves for technology-driven acquisitions. Software AG has access to attractive financing options thanks to its high and stable cash flow. Given favorable circumstances, larger strategic acquisitions could therefore occur.

Anticipated liquidity

Based on Software AG's positive outlook for revenue and earnings, the Company expects an ongoing stable trend in free cash flow. As in past years, free cash flow is expected to be similar to net income in 2019. This means that operating cash inflows would again be higher than dividend payments and contractual credit repayments, resulting in a further increase in liquidity and thus even more financial options for possible acquisitions.

Management's general statement on the anticipated development and position of the Group

In the context of Software AG's realignment through the Helix project, we see 2019 as a year of transformation to better position our Group for the long-term. The goal is to guide Software AG to sustained profitable growth and to the top of the technology sector.

- Software AG seeks to win a greater market share in the Digital Business Platform (not including Cloud & IoT) business line though a clearer prioritization of markets and products.
- Software AG recognizes major opportunities for dynamic growth in the Cloud & IoT business line. We are convinced that our vendor-neutral products have the potential to become the industry standard for integration and IoT, Industry 4.0 and smart manufacturing.
- The stability of the A&N business is confirmation of the high degree of loyalty in the customer base. Fueled by the A&N 2050+ innovation program, Software AG seeks to stabilize revenue in the A&N business line.

OPPORTUNITY AND RISK REPORT

Opportunity and Risk Management

Goals

Software AG's primary goal is to generate long-term, profitable growth and increase enterprise value. To that end, the Company combines established business activities with an involvement in promising new market segments and regions. In order to ensure the long-term, sustainable development of Software AG, it forgoes short-term opportunistic earnings increases and the potentially resulting short-lived positive effects on share price. With a strategy that is based on sustainable, long-term success, the Company strives for balance between opportunities and risks and takes on risks only if the business activities associated with them have a high probability of enhancing the value of Software AG. It is always a prerequisite that Software AG can evaluate risks and that they remain manageable and controllable. In addition, risks and opportunities from ongoing business are systematically monitored, for example, by keeping a constant eye on product and service quality and managing exchange rate developments.

Organization

A Group-wide opportunities and risk management system enables Software AG to identify potential risks early to then accurately assess and minimize them to the greatest extent possible. Risks are to be understood as deviations from planned values. Strictly speaking and as is customary in everyday spoken language, risks are defined as negative deviations and opportunities as positive deviations from planned values. By continuously monitoring risks, Software AG can constantly evaluate the overall status systematically and in a timely manner and better assess the effectiveness of appropriate countermeasures. In doing so, operational risks as well as financial, economic, legal and market risks are included. Opportunities are generally congruent to the operational and functional risk structure in all risk areas. Software AG uses various controlling tools for ongoing monitoring of the risk areas identified, which address the development of the entire Company as well as department-specific issues. The Management Board receives ongoing information as to current and future risks and opportunities as well as the aggregated risk and opportunity situation via established channels. Software AG updates and monitors the applicable specifications for preventing and reducing threats on an ongoing basis throughout the Group.

Responsibility

Opportunities and risks throughout the world are managed and controlled by the teams at corporate headquarters responsible for opportunity and risk management for both Software AG and its subsidiaries. Corporate headquarters compiles opportunity and risk reports, initiates further development of the opportunity and risk management system and elaborates risk-mitigating guidelines for the entire Group. It constantly reviews the functioning and reliability of the system as well as the reporting. Software AG's internal control system has operationalized business risks by way of internal policies on business policies and practices, as well as Group-wide specification of effective internal controls, compliance with which are continually monitored. The defined policies regulate internal procedures and areas of responsibility at the global and local levels. They are designed to provide information for management and to monitor the operating business risks of the Software AG Group. In order to enhance transparency, administration, communication and compliance assessment of the policies are carried out centrally on an ongoing basis. Group business processes are managed and monitored centrally using software applications based primarily on Software AG technology. Another component of risk and opportunity management is the transfer of operating risks to insurance carriers. The General Services department at corporate headquarters coordinates this function globally.

Structure of the opportunity and risk management system

Controlling

Controlling—which is under unified global leadership—monitors operating business risks, such as those from professional services, in real time and reports management-relevant figures continuously to the Management Board. In addition, both operational and strategic risks are analyzed by means of a structured reporting system. It shows developments in all relevant departments using KPIs and reports them continuously, monthly and quarterly (depending on KPI) to the Management Board. Furthermore, if exceptional circumstances relating to potential business opportunities or risks arise, ad hoc analyses are conducted and reported to the Management Board.

Finance

The Finance department is responsible for establishing all guidelines for financial reporting in accordance with International Financial Reporting Standards (IFRS). All accounting decisions relevant to the Company's financial statements as well as the revenue calculation process are monitored and/or executed by the global Corporate Finance department. This ensures compliance with IFRS accounting regulations throughout the Company.

Treasury

The Corporate Treasury team creates daily cash reports and weekly hedging transaction reports for the Management Board. It also presents the European Monetary Infrastructure Regulations (EMIR) reports on a monthly basis. All high-risk foreign-currency and hedging transactions may be conducted only by the Corporate Treasury team, which reports directly to the CFO. A global treasury policy prohibits the national subsidiaries from engaging in any high-risk transactions with derivatives. Internal Audit evaluates compliance with this policy on a regular basis. The global process of receivables management is monitored centrally by the Treasury department.

Internal Audit

Software AG's Internal Audit is an active component of the Company's risk management system. Through a systematic and targeted approach, it ensures the effectiveness of risk management along with the evaluation and continual improvement of the internal control systems (ICS) and the management and supervision processes. It is also geared to the creation of added value for Software AG by rating the efficacy and efficiency of business processes. Internal Audit reports directly to the CEO and operates worldwide.

Risk management in the financial reporting process

The risk of financial reporting errors was largely eliminated through implementation of the following processes:

- Detailed, global, IFRS-compliant accounting standards must be used. Compliance with these standards is monitored by Corporate Finance and verified by Internal Audit.

- The national subsidiaries' accounting departments are monitored by the local Finance, Controlling, and Administration (FC&A) managers, who are in turn supervised by regional FC&A managers. The subsidiaries report their figures to Corporate Accounting, which is part of the Corporate Finance team. There, the figures from the national subsidiaries are consolidated using the SAP/BCS software tool. At the same time, the Corporate Controlling consolidates the countries' profit and loss statements using Office Plus (management information system). Finally, the two consolidated Group profit and loss statements are compared with each other, any deviations are investigated, and any discrepancies that arise are corrected.

- Worldwide separation of the functions of generating and reviewing accounting figures is guaranteed by segregation into two areas: Corporate Finance and Corporate Controlling. Both of them, with different managers, report to the CFO separately.

- As part of monthly report generation, the Corporate Finance and Corporate Controlling departments analyze and review the figures from all reporting entities. Any differences that arise are corrected on a monthly basis.

- All internal Group supplier and service relationships are centrally coordinated and legally regulated through cooperation agreements. Central departments within Corporate Finance and Corporate Controlling handle internal service allocation. In addition, an intercompany transactions policy standardizes internal Group approval processes throughout the world. The revenue calculation process is rigorously monitored by means of globally managed approval processes as of the commencement of contract negotiations. The Global Deal Desk a preventative internal control system and is employed worldwide. All offers to conclude contracts with customers go through this approval process, in which the Legal department as well as Corporate Finance, Corporate Controlling and the Management Board are also involved.

- Internal Audit continually reviews all key customer contracts worldwide with a view to compliance with the approval process and correct representation in accounting.
- A global policy regulates access rules for the local and central accounting programs, which are monitored by the General Information Services (GIS) department.
- Only employees of Corporate Accounting have access to the data from the SAP/BCS consolidation program.
- All Group reports, including the Combined Management Report, are reviewed by a second person in Corporate Finance in accordance with the dual-control principle.
- External experts are commissioned on a regular basis to evaluate such complex matters as stock option plans, pension provisions, legal risks and purchase-price assignments within the framework of acquisitions.

Strategic risk and opportunity management

The strategic risk management system is composed of a central interdisciplinary core team of directors from Corporate Finance, Internal Audit and Legal who report to the CFO in this function. A manager from the relevant field of expertise serves as risk advisor and is responsible for monitoring, assessing and managing identified strategic risks. The risk advisors are recommended by the core team and chosen by the responsible member of the Management Board. Risks are evaluated according to a uniform valuation system. The system takes into account the potential impact to Group EBIT for the next three years to determine the risk category. This impact is calculated taking into account the risk-mitigating measures taken by management.

Expected impact on EBIT in the next 3 years (cumulative) in € mn	Risk category
20–50	low
50–200	medium
> 200	high

The impact on EBIT over the next three years is divided into three categories. Effects of up to €50 million on Group EBIT in the next three years are categorized as low risk. Effects on EBIT between €50 and €200 million are categorized as medium risk. And, risks affecting EBIT by more than €200 million in the next three years are categorized as high risk.

In a separate step, these impacts on EBIT in the next three years are categorized into three risk levels according to probability.

Probability as %	Risk level
0–33	unlikely
34–66	likely
> 67	highly likely

Probability between 0 and 33 percent is valued at an unlikely risk level, between 34 and 66 percent at likely and above 66 percent at highly likely. The risk categories and levels are aggregated and assigned an equivalence marker based on expected values. These are then assigned to one of three cumulative risk signal levels

Risk signal	Risk relevance
green	insignificant
yellow	medium
red	significant

All strategic risks and opportunities are evaluated based on this uniform risk matrix. Risks and opportunities not considered of strategic nature are not included in the risk matrix. All Software AG managers are responsible for reporting newly identified strategic risks and opportunities to the core team at corporate headquarters. The team then informs the Management Board for advice on possible strategies for handling them. The core team reports to the Management Board regularly about the ongoing development of the identified risks and opportunities. The Management Board regularly presents the risk management system to the Audit Committee of the Supervisory Board and discusses with it the level of the identified risks and opportunities as well as appropriate measures for managing risks and opportunities.

Ensuring the effectiveness of the risk management system and internal control system

Internal Audit regularly reviews the effectiveness of the risk management system and the internal control system. When necessary, suggestions for improvement are prepared and implemented, which is monitored centrally. Corporate Finance and Corporate Controlling regularly conduct an internal review of accounting-relevant control processes and modify them for new developments.

Key individual risks and opportunities

Software AG presents key risk and opportunity areas and individual risks and opportunities discerned from the totality of risks and opportunities identified through the risk and opportunity management system in the Opportunity and Risk Report.

Environment and sector risks/opportunities

Market risks

Among other things, market risks are related to the different economic developments in individual countries or regions. The technological evolution of the individual sectors of the IT industry can impact the business potential of the individual business lines positively or negatively. Software AG's balanced revenue mix reduces dependence on a single geographical or professional IT submarket. Software AG markets technologies that are not specific to certain industries, ruling out a dependence on individual industries or customers. Thanks to its technological innovations, ongoing R&D investments and purchase of new technologies as part of technology-driven acquisitions, the Company significantly expanded its product portfolio and will continue to do so in the future. In this manner, it facilitates the flexibility of customers' existing IT infrastructures and lower costs substantially. This, in turn, secures Software AG's broad customer base over the long term. The ROI is relatively fast for customers. Hence, new products are a logical way to cope with market-related cost pressures even in weak economic periods. The overwhelming majority of customers use Software AG software for business-critical applications for years and often decades when running satisfactorily. Therefore, its revenue flow is stable, especially from maintenance services.

Market opportunities

Software AG sees itself as a technology leader in the enablement of enterprise digitalization. This strong trend in the Internet of Things (IoT) segment is a big opportunity for Software AG's future development. Software AG anticipates strong, dynamic growth in upcoming years in the IoT market in particular. Software AG's new strategic focus which incorporates the results of a comprehensive strategy project, will enable the Company to intensify its focus on technological and regional growth markets. Furthermore, Software AG will continue its A&N 2050+ program. And, because of the significance of its "ecosystems" in successful software sales, it will also enhance its partner model. These measures generate better-than-average opportunities for Software AG to grow and claim market share in core markets. Take, for example, the integration software market. Following an in-depth analysis, Software AG found that this market represents total addressable revenue of some €11 billion.

European national debt crisis

The debt crisis in individual eurozone countries lingering since 2010 has had only a limited impact on Software AG's primary business. In fiscal 2018, the Software AG Group earned only 4.4 percent (2017: 4.0 percent) of its profitable product revenue in countries hit particularly hard by the debt crisis (Portugal, Italy, Greece and Spain). The majority of that was from Spain. Software AG is not conducting business operations in Greece.

Brexit

In light of the exit of the United Kingdom from the European Union, uncertainties have arisen with respect not only to the future of Britain's economy but of Europe's as well. After the British parliament rejected the results of negotiations with the European Union, the risk of a disorderly Brexit became substantially greater.

The specific effects of a disorderly Brexit on the Group are not yet clear. It is therefore impossible to make exact predications other than the existing uncertainty. The British market is one of Software AG's most important markets. The fact that Software AG operates in all key financial centers of the European Union should have a risk-mitigating effect. Any financial companies that leave the United Kingdom to resettle in another EU country such as Germany, France or Ireland can be served by Software AG subsidiaries in the relevant location.

USA
The USA is Software AG's most important market. Software AG operates its own sales organization in the USA. It also has significant portions of corporate departments like Marketing and R&D there with key local IP rights, which result in considerable royalties for the Company in the USA. A large percentage of Group profits is generated and taxed in the USA. The U.S. tax reform passed in late 2017 reduced Software AG's tax burden considerably in fiscal 2018 compared to the previous year. Software AG's Group tax rate went down from 37.3 percent last year to 30.0 percent in fiscal 2018. Tax expenses are also expected to stabilize at this low level in upcoming years, provided conditions remain constant. Because key parts of the Software AG group are based in the USA, it does not anticipate any major disadvantages from the current administration's "America First" strategy, despite being a German company. It also doesn't currently foresee any substantial risks to its global business resulting from the USA's global trade policy. The extent of the negative impact of the looming trade conflicts between the USA and China and the USA and the European Union on the Software AG Group's global development is not yet clear. Market opportunities should still outweigh risks because the U.S. economy is currently doing very well.

Corporate strategy risks and opportunities

Product innovation
The software sector is subject to very fast innovation cycles with respect to new products as well as to go-to-market models, particularly user-dependent (pay per use) IoT and cloud models. These are based on constantly changing customer, market and integration requirements. New innovation trends are very difficult to predict and are sometimes identified too late. Hitting the right balance between fast product innovation on one hand and high product quality on the other is therefore of utmost importance. Technological and legal risks are notably higher in the cloud business than in the previously prevalent on-premise business due to data protection and security. New startups, without a long history in on-premise business, can employ the cloud business model from the beginning, which gives them a headstart in developing and implementing this model.

The risk of not being able to identify new innovation trends or identifying them too late exists due to the uncertain nature of future development of the software market. This can lead to an insufficient focus on growth-relevant products. Large competitors have greater financial resources for innovation and ongoing development of their product portfolios. Software AG's business development is thus susceptible to being negatively affected by new competitor products. Furthermore, Software AG's focus on existing markets must not be impaired.

To minimize this innovation risk, significant investments have been and are being made in the development of the product portfolio. Ongoing assessment of future market development is conducted in cooperation with leading technology analysts such as Gartner and Forrester. Software AG's customer-centric innovation process is based on close collaboration between Sales, Product Marketing, Product Management and R&D and customers, enabling market-driven and thus market-relevant product innovation. Customers' product requirements are closely accounted for through co-collaboration with customers in the development of products. One of the greatest challenges of the industry in the context of innovation risk is to optimally allocate R&D resources. Specifically, the risk of not focusing sufficiently on future growth-relevant topics exists. This risk is minimized by the newly implemented general manager concept which includes product line revenue accountability. As part of the new concept, sales revenue from the individual product lines will also be monitored in oder to identify negative developments early and trigger and execute management activities.

Product quality is ensured through defined product standards, the quality manager and the Chief Quality Officer. This office oversees product quality, product user friendliness and customer support.

Through consistent, externally certified quality management of quality control and a cross-departmental response team for arising data protection and security failures, Software AG is accounting for the increased data protection risk associated with the cloud business. Software AG also augmented its work with contracted digital forensic specialists.

When new trends arise, Software AG complements its product offering with acquisitions, as illustrated most recently with TrendMiner and Built.io in fiscal 2018.

Expansion of the IoT business and the Digital Business Platform product line's technology leadership—confirmed multiple times by distinguished technology analysts like Gartner and Forrester—are generating major market opportunities for Software AG. In light of the ever-faster moving trend toward Industry 4.0 and the advancing digitalization of organizations in the private and public sectors, Software AG can help shape markets in its position of innovation leadership.

As in the previous year, the product risks described here were categorized as risk signal yellow at the end of 2018.

As part of the Helix strategy project, an in-depth analysis of Software AG's R&D activities led to the conclusion that an intensified product focus would support a more efficient and effective use of resources. Furthermore, a new performance matrix will ensure the right roadmap prioritization of customer and market requirements for product development. This offers a considerable opportunity for further expanding the competitive advantages of Software AG products and receiving excellent ratings by the relevant technology studies. A stronger R&D focus can also improve customer satisfaction and business success.

Market risks and opportunities: Digital Business Platform (DBP)

The digital business platform market has developed and matured in recent years. It consists of diverse submarkets of varying sizes and growth rates.

The Digital Business Platform (DBP) combines the ARIS, Alfabet, webMethods, Apama and Terracotta product families. Through these product families Software AG is represented in DBP submarkets including business process management software, integration software, business process analytics, governance risk and compliance analysis, enterprise architecture management and critical event processing as well as other smaller sub-markets. The acquired and enhanced product families from Cumulocity, Zementis, the TrendMiner analytics platform and Flow and Embed by Built.io are the backbone of the new IoT business.

Software AG continues striving toward global leadership of the digital business platform market and is planning a significant expansion in its Cloud & IoT business. This requires high innovation speed from both the technological and go-to-market points of view. This strategy requires large investments in sales, marketing and R&D.

The Company will continue investing in product innovations through its own R&D efforts and targeted technology acquisitions, which will play a key role for customers in maximizing the opportunities of digitization. But, as an innovation leader, Software AG competes with other large software companies, system integrators and platform providers also seeking to develop and dominate this market. For this reason, Software AG undertook the technology acquisitions of TrendMiner and Built.io in 2018. The IoT market is very likely to advance rapidly in the next two to three years. Software AG doubled its revenue in this market in fiscal 2018. There is thus a significant risk of not successfully developing this business segment with the necessary speed. But the increasing focus on IoT market development also poses the risk of losing focus on the traditional DBP business.

Software AG's challenge is to continuously improve individual products as well as the platform as a whole. The modular and software/hardware-neutral structure of DBP along with its ability to build on existing systems by any vendor represent a particular opportunity. DBP offers users a high level of investment protection as it enables them to develop and integrate their own innovative applications quickly and flexibly based on their existing IT landscapes.

There is an additional challenge associated with building replicable solutions based on DBP in order to benefit from economies of scale. The replicability of solution scenarios developed therefore influences the profitability of the business line.

The global advance of digitalization offers major opportunities. According to leading market analysts, the core components of DBP—integration software, process optimization solutions and analytics tools for big data and especially IoT—are exceptionally promising fields of growth. The DBP solutions are gaining strategic importance with customers as they are increasingly employed for the transformation of entires business models. This results in opportunities and risks. On one hand, deal sizes are growing and the number of DBP multi-product deals are rising. But on the other, the situation requires a focus on a limited number of strategic customers and placing such large-scale deals with them. This leads to longer go-to-market processes and the risk of more volatile license revenue in individual quarters.

The following measures have been taken and are being taken to proactively manage the market risks associated with DBP:

- Expansion of the ADAMOS strategic alliance and strategic partnerships with the other leading IoT companies
- Rollout of new go-to-market strategy with pay-per-use license fees and/or subscription/cloud business models
- Adaptation of sales remuneration models to reflect new go-to-market strategies
- Focus on larger country organizations with sufficient numbers of technology consultants
- Safeguard existing DBP business while developing new Cloud & IoT business
- Augment customer and capital market communication regarding impact of new business strategy
- Ongoing supervision of go-to-market results and early response to problematic developments
- Software AG has established DBP as a leading technology platform for implementing and executing evermore essential digital strategies for all organizations.
- The Adabas and Natural (A&N) 2050+ initiative not only stabilizes the A&N product segment, but improves cross-selling potential in the DBP business as well.

The DBP business line offers major opportunities for Software AG's future business development, especially due to its technology lead and fast development of the IoT market as well as the rapidly growing enterprise digitalization trend. (For more information, refer to the market opportunities described above.) As in the previous year, these risks were given the red risk signal at the end of 2018.

To further mitigate risks, the Management Board decided to restructure the complex Digital Business Platform into clearer, more concentrated product groups as part of the new strategy focus in 2019: Integration & API, IoT & analytics and Aris & Alfabet (A²), without foregoing the technical interoperability of the DBP components. This is intended to reduce sales complexity and shift the focus to the strength of the individual product offerings, which is continuously verified by technology analysts. The Management Board sees opportunities in raising the visibility of products with existing and target customers, sharpening Software AG's identity and significantly improving customer satisfaction and success. In the Management Board's estimation, this will all contribute to increasing the Company's share in the high-growth integration, IoT, analytics, process mining and enterprise asset management market segments.

Cloud & IoT

Software AG's new strategy sees the Cloud & IoT business as its future key growth driver. Executing a land-and-expand strategy in the Cloud & IoT markets requires continued development of corporate culture and sales remuneration models. Software AG's existing sales culture, based on licenses of unlimited duration and full license revenue recognition as of the date the contract is signed, must be transformed into a sustainable sales culture—with license revenue recognition distributed over time through subscriptions and cloud agreements. To achieve this, the Company will create a parallel sales organization in the largest regions/subsidiaries which is specialized in the IoT market. It will address horizontal and vertical market segments for IoT service providers and end customers. The goal is that this will lead to more stable and steady revenue growth. Software AG's brand recognition has room for improvement. For this reason, it is currently augmenting its marketing activities and resources significantly. Competition in the IoT market is intensifying at a constant rate due to the arrival of large cloud providers, telecommunications companies, traditional IT providers, system integrators and others. The growing competition calls for an unequivocal acceleration of IoT business development. This could also mean a rise in the price of potential IoT acquisitions, so Software AG must speed up the pace of further corporate acquisitions. That could lead to considerable organizational challenges and corresponding risks. Software AG's IoT/Cloud offering is structured around the products of recently acquired smaller software companies (Cumulocity, Zementis, TrendMiner, Built.io, etc.). Integration of these companies could slow the speed of IoT/Cloud business expansion and hinder growth. Due to limited resources, Software AG must hone its focus on IoT markets to the greatest extent possible, as they hold the highest potential for growth. Identifying the right growth market early is, however, not sufficiently possible, due, among other factors, to the early stage of the IoT markets. The Company is therefore building on partnerships in different directions to implement its IoT software platform as a leading base technology in as many key IoT partnerships as possible. Furthermore, R&D departments in Germany and India will be expanded. The risk associated with information security and data protection is significantly higher in the cloud business than in the existing business of selling licenses with unlimited duration. Previously, customers were responsible for data protection and security; now, as a cloud provider, Software AG will carry this risk. This transformation means an increased legal risk associated with cloud agreements. So, to minimize this risk, an information security management system (ISMS) in accordance with ISO 27001 was implemented and externally certified.

The buying behavior of enterprise customers in the software market is changing, and demand for subscription and SaaS products is on the rise. Software AG's Management Board therefore defined a "subscription-first" approach as part of the new strategy, whereby all Software AG products will be offered primarily as subscriptions in 2020. This will satisfy customer demand for pay-as-you-use and subscription options and, regardless of the deployment model, give them access to the advantages of this form of consumption. Software AG will continue delivering a hybrid product offering—on-premise and cloud/SaaS.

The risks associated with the Cloud & IoT business, which is currently under development, were rated at risk signal green. There was no rating for this risk last year since this business line was just established in 2018.

Market risks and opportunities: Adabas & Natural (A&N)

Software AG's traditional A&N product family is currently in an advanced stage of the product lifecycle. The age structure of A&N employees poses a challenge for Software AG and its customers. There is hardly any new customer business in this segment. The product portfolio is based on existing customers. Growing cost pressure on customers has the effect of more migration of mainframes to open systems. But resources are tight when it comes to supporting customers with this migration. Software AG's strategy is based in part on extending customers' existing license rights and/or selling add-on products. The potential offered by renewing licenses is lower compared to past years. Neverthless, A&N product customers continue to be extremely loyal to Software AG. This is because the A&N products are highly valued due to their:

- high availability
- high performance
- low operating costs
- high strategic relevance for customers' operations of applications running on A&N
- future guarantee

This presents the opportunity to attract customers with positive Software AG experience to long-term maintenance and modernization of their IT infrastructure while keeping A&N technology. Software AG is the best partner for that. Retaining and acquiring product expertise make this possible. Ongoing innovation and R&D activities lead to significantly better prospects for the A&N business line. Software AG began communicating its A&N 2050+ initiative in 2015. It is fundamentally willing to continue developing A&N and providing A&N customers installation support through the year 2050 and beyond. This initiative resonated extremely well with customers and increased the level of loyalty among the customer base.

Software AG is countering these risks with the following measures:

- The A&N 2050+ Initiative can significantly delay the anticipated long-term revenue decline.
- Customer support for migration of mainframes to open system platforms on A&N technology (re-hosting) to cut hardware costs for customers and prolong maintenance periods
- Ongoing development of subscription and re-hosting sales models
- Development of a new customer segment-specific sales approach that reflects A&N and DBP and new sales remuneration models
- A&N modernization to extend the product lifecycle, e.g. development and sale of zIIP functionality for online transactions and Adabas zIIP
- Ongoing development of hosting and private cloud availability for A&N products
- Expansion of A&N service capacities to support local partners and their re-hosting activities
- Build regional SWAT teams for local sales and pre-sales to roll out A&N 2050+ Initiative to key accounts
- Extended application support to serve customers with current A&N staff
- Generation change training programs for young A&N staff in R&D and Pre-Sales working at Software AG and at customers
- Expansion of more offshore R&D centers

These measures can significantly slow the downward trend of A&N sales while offering opportunities for generating additional sources of revenue. Software AG foresees a stabilization or a slight decline in A&N product revenue at constant currency in 2019. Product revenue growth is expected to be between approximately 0 percent and –5 percent. In 2018 this figure was 2 percent, which is considerably above the originally expected range between –2 and –6 percent. Software AG foresees a stabilization of A&N product revenue at constant currency in the years thereafter. Customer evaluations show that the overwhelming majority of all A&N installations are business-critical for customers. This means that many customers' economic livelihood depends on the performance and availability of the A&N products. Those customers have invested heavily in this technology, which they cannot and will not forgo. Therefore, there is the opportunity that this business line will continue generating high revenues in the future.

There are significant opportunities associated with product innovation and modernization/digitization packages in the A&N product line; this type of offering can make the need for large, cost-intensive projects to replace A&N technology superfluous. In this way, A&N remains a future-proof technology, which can make a positive impact on A&N customers' investment decisions.

These risks were given the yellow risk signal at the end of 2018 (2017: red). This is a significant improvement in the rating of this strategic risk as a result of the positive effects of the A&N 2050+ Initiative.

The new strategy not only recognizes the A&N 2050+ Initiative as an example of successful dedicated measures, it calls for its further development as well. There is a general consensus that A&N customers will be offered innovations to improve, optimize and modernize their legacy A&N installations on an ongoing basis. It is a top priority to further strengthen the A&N team and safeguard product expertise within Software AG. In the Management Board's estimation, that will contribute to the continued stabilization of A&N maintenance revenue and, with more customized digitalization solutions that are aligned with customers' A&N installations, to interest customers in additional Software AG products.

Acquisitions

Through selective acquisitions, Software AG is expanding its technological product range and continuing to build up its global presence. Acquisitions present the opportunity to participate in waves of innovation, to expand the product portfolio and increase relevance in the market and with prospective customers. The uncertainty of future market and technology trends means that there is a risk associated with determining the right target companies. Selection of an unsuitable target company leads to management resources and investment funds being tied up without sufficient return on investment. Due to the DBP market's advanced level of maturity, the number of possible target companies for strategic acquisitions is very low. The long-lasting period of low interest rates caused prices of potential target companies to rise and the profitability to drop. Potential target companies are therefore rare, too highly priced and often not the right size. Due to the advanced stage of the economic cycle, rising interest rates could lead to prices settling back down at a level feasible from a business perspective. Due to its early stage, th IoT market is still extremely fragmented nevertheless highly innovative. This results in significantly greater opportunities for acquisitions in this business. Software AG is therefore currently focusing on the acquisition of smaller IoT technology companies. Both acquisitions undertaken in fiscal 2018, TrendMiner and Built.io, strengthen the Cloud & IoT portfolio.

Furthermore, there is a risk that the companies acquired will not be integrated successfully. Insufficient integration could result in growth and profitability issues as well as failure to achieve combined business plan targets. It would become difficult to quickly exploit revenue and cost synergies. There is an additional potential risk associated with the loss of key specialists when not enough attractive positions are created quickly. Especially smaller-scale acquisitions pose the challenge that managers who have worked as generalists must transition to the role of specialist in a larger organization following an acquisition. The main challenges include the integration of the product portfolio, the processes, the organization, the human resources, and the different corporate cultures. The following risk-mitigating processes have been defined for the time prior to and after acquisitions:

Pre-acquisition phase

To mitigate the selection risk, Software AG's M&A department is continuously observing and evaluating the market for technology developments both in the Silicon Valley and Europe alike. To reduce risks associated with due diligence processes, Software AG conducts a critical business model analysis of all potential target companies. In some cases, Software AG has entered a partnership with the potential target company prior to acquisition. In-depth due diligence is carried out with respect to technological, strategic and operational integration. Prior to a takeover, an intensive review is conducted to ascertain whether the technologies of the company in question effectively expand Software AG's product portfolio, how market access and market penetration will change, and what synergy potentials can be realized. Every acquisition is preceded by a precise analysis of the financial condition of the target company by experienced due diligence teams. Moreover, the question of whether the target company's corporate culture can be harmonized with that of Software AG is explored. In order to ensure consistent integration planning, staff members who will be responsible for integration later are included in due-diligence processes at an early point in time.

The risks associated with the pre-acquisition phase were given risk signal green at the end of 2018.

Post-acquisition phase

Software AG identifies potential problem areas as quickly as possible using established control mechanisms. The implemented integration processes are coordinated centrally to ensure integration of all departments and to quickly create revenue and cost synergies. Specific KPIs are identified and monitored for each integration. A key component of these activities is the integration of Sales. It entails dovetailing the new sales models and product offerings with the Software AG Sales organization and harnessing revenue potential. This enables sales of newly acquired products to existing customers (upsell) and sales of existing products to new customers (cross sell). The acquired sales organization can act as an overlay function for the existing sales organization. Since the acquisition of Built.io operations in the fall of 2018, integration into the respective product units has been taking place with clearly assigned success responsibilities. This gives way to an opportunity to achieve better and more sustainable integration of the acquired products and business models into Software AG.

Opportunities and risks associated with integration in the post-acquisition phase were rather low because of two small-scale acquisitions in fiscal year 2016, one small-scale acquisition in fiscal 2017 and two small-scale acquisitions in fiscal 2018.

Because an intensification of acquisition activities is planned in the near term, the integration risk was assigned a yellow risk signal (2017: yellow).

Product distribution risks and opportunities

Sales efficiency and sales risks and opportunities

The complexity of Software AG's products together with the complexity of the requirements of its customers alike require a high level of experience and expertise on the part of the Sales force. This leads to relatively long sales cycles. Sales and marketing expenses in fiscal 2018 were more than 98 percent (2017: 97 percent) of license revenue. Higher average deal size and better scalability can improve sales efficiency. To achieve that, a sales focus on large key customers is essential. This increases the dependence of license revenue on a smaller number of large customers though. Software AG's complex product portfolio and long sales cycles causes annual license revenue to accumulate heavily in the fourth quarter. Insufficient average deal sizes closed by the direct Sales organization with full administrative support from Legal and Finance and insufficient use of standard agreements and processes leads to a reduction in sales efficiency and profitability. Some of the smaller country subsidiaries have too few technology consultants (pre-sales staff) and skills to provide customers with technical consulting on the entire platform. The scalability of the DBP product portfolio has room for is not yet optimal.

Software AG intends to continually increase sales efficiency and thereby further accelerate DBP product revenue growth with the following measures:

- Successive rollout of transition to recurring license models such as subscriptions and usage-based licenses in all product lines with better scalability and forecast accuracy
- Continuation of development of IoT/OEM partnerships like ADAMOS and others with improved product revenue forecasting
- Ongoing monitoring of business development using a defined set of KPIs, including a rolling forecast for each of the four quarters, to enable fast decisions on necessary actions when problematic developments arise
- Continuous focus on sales excellence and success management to raise sales productivity
- Increased focus on pipeline management
- Establish an IoT sales organization
- Further optimize the balanced mix of direct and indirect sales
- Refresh the sales strategy under the leadership of the new CRO, John Schweitzer
- Refresh the corporate strategy under the leadership of the new CEO, Sanjay Brahmawar

The risk rating signal remained unchanged from last year at red due to the continued relevance of sales-efficiency topics. This assessment was confirmed by the strategy transformation project. But the Helix project also revealed unique opportunities for Software AG resulting from a focused and consistent go-to-market strategy and optimized sales discipline. A product focus and the necessary sales staff enablement in the regions on one hand and a newly established performance matrix on the other offer considerable opportunities for sales optimization and thus sales success.

Partnership risks and opportunities

Software AG's growth strategy is anchored in the expansion of its partner ecosystem to broaden vertical and regional market reach. Developing DBP-based solutions and applications as well as implementing software via partners can accelerate growth. The potential risk of ineffective partner selection could lead to too little involvement of the partner ecosystem in sales and thus negatively affect the exploitation of new market segments and Software AG's market relevance and technology acceptance. The lack of trained Software AG consultants at system integrators could lead to a shortage of consulting services. Problems and delays during projects due to partners could result in warranty claims from customers, cause Software AG's image to suffer and negatively affect customer satisfaction. Insufficient product know-how among partners can weaken public perception and jeopardize sales success. If partners have inadequate access to Software AG products or they are inadequately integrated in the Software AG ecosystem, the software could become less relevant to them and sales success jeopardized. Too few partnerships with large technologies companies can lead to competitive disadvantages and too few sales opportunities. Insufficient partner governance could result in potential legal and image risks and jeopardize the success of Software AG's partner business.

In order to strengthen its partner business, Software AG implemented the following measures:

- Implementation of processes and systems to increase transparency of the partner ecosystem in all regions
- Placement of the IoT platform with a growing number of OEM partners to increase opportunity for future success

- Expansion of a global and attractive partner program with partner lifecycle management
- Development and expansion of an effective and scalable partner enablement and qualification program to improve service capacity and quality
- Access to training materials and Software AG products and technology consultants
- Expansion of internal resources in support of partner sales
- Ongoing monitoring of the sales market for new partner ecosystem opportunities
- Establish partner management resources in all regions to improve collaboration with system integrators and trailblazing partners
- Ongoing enhancement of specific partner channel compliance instruments, consistent use of standard partner power-up contracts and partner training on Software AG's business model

Part of the Company's strategic transformation is to maximize the considerable opportunities presented in the partner business by pursuing a consistent and comprehensive concept to build a global partner ecosystem. It can be assumed that establishing a new performance matrix and focusing on the highest-potential partnership models in the different product groups can generate medium-term revenue growth through the partner ecosystem.

The risks associated with partner business were given risk signal green at the end of 2018.

Personnel risks and opportunities

Employer appeal

Employees are the most important asset for Software AG. Therefore, one of the central challenges is having a sufficient number of highly qualified employees at all relevant sites at all times. The ability of an employer to hire and, above all, retain qualified and motivated employees is key to success. Software AG is in a transformation phase in the highly competitive Cloud & IoT market. This transformation requires finding the right talent outside the Company and existing highly qualified employees driving the change process from the inside. Uncertainty about Software AG's future success in these new markets could have a negative impact on its image as an employer both among highly qualified applicants and existing specialists. The demographic trend in some countries and markets could also result in a reduction in potential growth due to a shortage of qualified young talent. The advancing age structure in the A&N business line could lead to a loss in expertise.

Software AG takes the following measures to counter this risk:

- Ensure sufficient number of highly qualified young staff in all regions
- Improve employer image
- Ongoing evaluation of market-oriented remuneration and target salaries based on global benchmarks
- Needs-based training for all staff and managers worldwide
- Development programs for highly talented employees
- Staff development programs for all staff worldwide
- Employee surveys
- Targeted efforts to develop young talent for the generation transfer as part of the Adabas&Natural 2050+ agenda
- Optimized distribution of employees at high and low-cost locations

Software AG assumes that these measures provide a sound basis for ensuring Software AG's long-term success.

The war for talent will get fiercer in the IT sector; Software AG's strategic transformation and the employee value proposition created as part of Helix will help boost Software AG's image as a growing software company. Stronger talent management and greater visibility of innovative staff initiatives geared toward a growth mindset will also fuel Software AG's reputation as an appealing employer. This creates a win-win-win-win opportunity for the talent, the Company, its teams and its customers.

Due to the measures taken to address the intense competition among employers for talent, personnel-related topics were given a green risk signal at the end of 2018 as in the previous year.

Legal risks

Intellectual property (IP) right protection

This strategic risk mainly consists of of the two subcategories described below:

Protection of software partners' intellectual property rights

Because Software AG licenses third-party products, it must defend those rights granted to customers such as licenses to certain resources. Unauthorized undetected use by customers can result in liability risks relating to past license fees owed to software distributors. To mitigate this risk, audit rights have been included in all customer contracts which entitle Software AG to monitor customers' use of products in accordance with contractual stipulations. All third-party software sales agreements will be reviewed and for unfavorable terms and modified as needed by a central department. In addition, Software AG continued developing and optimizing its procurement process.

Patent litigation

Patent law, especially in the U.S. due to the large number of software patents granted combined with the peculiarities of U.S. procedural law, favors the bringing of patent lawsuits. This situation is often exploited by non-practicing entities (patent trolls). They are often financed by hedge funds to assert patent lawsuits against software companies. This also affects Software AG. Patent litigation in the U.S. entails the risk of higher procedural costs to defend against claims without provision for reimbursement in American procedural law. The risk associated with patent trolls has lessened somewhat in recent years due to a new legal ruling by U.S. courts. Furthermore, large U.S. software companies have joined forces to form a coalition to combat patent trolling. Software AG is currently assessing the option of joining this coalition to strengthen its own position. There is also a risk of being sued for patent infringements by competitor software companies. The Company has an Intellectual Property Rights team to counter patent law suits. In addition to tasks associated with patent law protection, the team handles Software AG's own patent applications and coordinates its defense against patent suits. The Company's portfolio of patents is the best protection against claims from other market participants, because it offers opportunities for cross-licensing agreements. Not least because of that, Software AG is constantly working to expand its patent portfolio, particularly in the U.S. Software AG owns a number of patents, which can be used to protect its business and defend it against patent suits. These patents could also contribute in the future to generating additional licensing revenues. All relevant technical and marketing documentation was systematically stored in a central location, which makes the necessary documents available quickly in the event of a legal suit. This documentation process is employed for newly acquired companies as well. All new products are evaluated internally for potential patent infringements before public publication. R&D and Product Marketing employees receive training on the subject of patent protection laws.

Implemented measures and processes reduce this risk considerably for Software AG. No new patent suits have been filed against Software AG since 2012. It is currently unforeseeable to what extent future patent suits will be fueled by the increasingly nationalistic tendencies worldwide.

Like last year, the risk associated with the protection of intellectual property rights was rated at a green risk signal as of December 31, 2018.

Information security and data protection

As a provider of maintenance, cloud and consulting services, Software AG works with sensitive customer data and thus acts as a processor. Software AG also manages sensitive information about its own business, employees and customers, prospective customers, partners and suppliers and is responsible for that data in this role. The Company is legally required to protect this data while the number of external hacker attacks is constantly rising. The spread of cloud computing also increases vulnerability to data hacking. Software AG's order processing agreements with customers guarantee compliance with data protection laws, particularly with the European Union's general data protection regulation (GDPR). Significant investments are necessary for ensuring the necessary level of data protection. Penalties of up to 4 percent of Software AG's total annual revenue can be issued in the event of infringements against these laws.

Software AG counteracts these risks by implementing a data protection management system which can define processes and guarantee information security and data protection. The Company's order processing agreements contain limitations of liability in the event of data loss. Complete IT security can never be guaranteed. The following security risk reduction measures are therefore undergoing constant improvement:

- Continuous monitoring of risk factors and expansion of data security through systematic data security strategy
- Implementation of early detection system for data breaches
- Disciplined execution of defined emergency measures in the event of an attack or system failure
- An ISO 27001-certified information security management system (ISMS) was instituted for cloud business customers
- Internal data security guidelines and standard processes, a data security committee and an IT security organization were established to monitor internal Software AG IT data security and develop data security measures as well as guidelines on an ongoing basis.

The risk posed by information security and data protection was given a green risk signal as of December 31, 2018. Due to the ever growing amount of risk associated with this subject, this risk was included in the catalog of corporate strategy risks for the first time in fiscal 2018. There was no rating for this risk last year for that reason.

Other legal risks

Regulatory, compliance and litigation risks

Regulatory and political changes, such as embargoes, can influence business operations in difference national markets. That could have a negative impact on the Group's future business and financial performance. Uncertainties regarding regional legal systems could hinder or prevent the assertion of Software AG's rights (e.g. commercial property rights).

A multinational software company like the Software AG Group is subject to global risks associated with legal disputes and government and official processes. Software AG cannot rule out that litigation and proceedings will have negative effects on the earnings of the Company; as a rule, the Group's financial position can even be negatively affected when law suits are won, given the high cost of defense attorneys and other defense services needed to thwart accusations, for example in the U.S. Despite detailed risk assessment and forward-looking risk provisions, there is a risk that the actual cost of litigation is higher than the assumed risk value.

For information on specific legal disputes, please refer to Note [36] in the Notes to the Consolidated Financial Statements and Other Provisions in the Separate Annual Financial Statements of Software AG (Parent Company).

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Financial operating risks

Exchange rate risks

Software AG is exposed to exchange rate risks through its global business activities. Its sales organizations operate in the currency of the countries in which the sales are transacted. This can result in currency risks and opportunities for Group revenue. For more information, please refer to the Currency Split graphic in the Management Report.

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Exchange rate fluctuation impact on Group revenue in 2018:

Currency fluctuation in 2018	Change in exchange rates 2018 vs. 2017 as %	Impact on revenue in 2018 in €mn
U.S. dollar 31.2% of revenue	–3.1%	–8.7
Pound sterling 5.7% of revenue	–1.0%	–0.5
Israeli shekel 4.2% of revenue	–4.3%	–1.6
Australian dollar 4.1% of revenue	–6.7%	–2.5
Brazilian real 3.9% of revenue	–16.3%	–6.5
Canadian dollar 2.7% of revenue	–4.2%	–1.0
South African rand 1.6% of revenue	–3.6%	–0.5
Other currencies 12.4% of revenue	–4.7%	–5.4
Currency effects on total revenue	**–3.0%**	**–26.7**

The sales-related expenses are in the same currency as the sales themselves. This natural hedging relationship is stronger in the U.S. due to the fact that parts of Software AG's research and development and global marketing are based there. Software AG further utilizes derivative financial instruments for hedging. This mitigates the effects of exchange rate fluctuations on Group results. Its hedging instruments are used to cover existing foreign currency receivables and payables and anticipated cash flows. Income generated in foreign currencies from individual Group companies is also hedged against changes in value due to exchange rate fluctuations. All exchange rate risks are monitored centrally.

Risks from financial instruments

Liquidity and cash-flow risks concerning derivative financial instruments are eliminated by the fact that Software AG secures only existing balance sheet items or highly likely cash flows. Based on the financial instruments open on the balance sheet date, an increase in the market interest rate level by 100 basis points would have increased Group net income in 2018 by €1.4 million (2017: €1.2 million). Provided conditions such as revenue structure and balance sheet relationships remained constant and no further hedging transactions took place, this approximate correlation could be applied to future fiscal years as well. Under these conditions, a 10 percent decrease in the euro's value against the U.S. dollar as of December 31, 2018 would have caused Group net income in 2018 to increase by €1.4 million (2017: €0.9 million). The remaining reserves in shareholders' equity would increase by €2.8 million (2017: €2.4 million). Constantly monitoring the creditworthiness of the affected banks helps Software AG minimize the risk of losing business partners with whom derivative financial instruments are concluded.

Other financial risks

Other financial risks include predominantly the risk of bad debt losses. No cluster risks exist due to Software AG's diversified markets and customer structure. Due to the long-range average, default risks are quite marginal as a result of the generally high level of creditworthiness on the part of its customers. To reduce the impacts of this risk, Software AG uses an automated approval process for customer contracts, known as the Global Deal Desk, based on its own technology. To protect cash holdings, Software AG constantly monitors partner banks' creditworthiness and adjusts investment decisions accordingly.

Opportunities and risks associated with the strategic realignment

While the opportunities associated with the strategic realignment were already discussed in the relevant sections, Software AG's Management Board is also aware that it represents a substantial multi-year change project for the Company. Such a change/transformation process can lead to considerable risks when guidance and management of the process is not clearly structured. The greatest risk is that the organization could become structurally overwhelmed by too many simultaneous initiatives and the existing governance structures hamper change and/or become ineffective due to imprecise/uncoordinated change. The Management Board is combating the risk inherent to any such considerable and enormous change project with the following measures:

- A change and transformation team (Helix Transformation Office) will be created. In addition to an experienced change manager, it will consist of three associates, an experienced program manager as well as employees recruited temporarily from all Software AG departments and regions. The Transformation Office will report directly to the CEO and will have oversight of all transformation-related activities across the Company.

- A detailed execution plan has been written which will serve to coordinate scheduling of initiatives and measures, to monitor progress of the transformation and provide complete transparency of the change/transformation program.

- Responsibility for the majority of transformation activities has been assigned to the relevant departments which will be in charge of executing their respective portion of the overall plan.

- The existing governance structures incorporate transformation/change components ensuring that all deviations from the execution plan are identified early and escalated to the right people if and to the extent necessary.

- External consulting and guidance of the change and transformation process will ensure that change/transformation management and plan execution meet Software AG's high level of quality standards.

- Frequent "pulse checks" and an open line of direct communication are geared toward providing transparency and enabling adjustments to change/transformation speed in real time when appropriate. Bidirectional communication within the Company is key to the success of Helix implementation.

The risk is rated at red in the first year of implementation. But the opportunities associated with the strategic realignment far outweigh this risk.

General Statement on the Group's Risk and Opportunity Situation

The Software AG Group's overall consolidated risk and opportunity situation improved from last year. 54.5 percent (2017: 44.4 percent) of Software AG's strategic risks were categorized as risk signal green, 27.3 percent (2017: 22.3 percent) as yellow, and 18.2 percent (2017: 33.3 percent) as red.

The Management Board assumes that the strategic risks are limited and manageable. No individual or consolidated risks can be identified that, due to the amount of their impact or their likelihood of occurring, could jeopardize the going concern of the Company now or in the future.

Risk Summary

	Impact on EBIT in the next 3 years	Probability	Risk signal	Trend
Corporate strategy risks and opportunities				
Product innovation	medium	likely	yellow	constant
Market risks and opportunities: DBP (including IoT)	medium	highly likely	red	constant
Cloud & IoT	low	likely	green	increasing
Market risks and opportunities: A&N product line	medium	likely	yellow	constant
Acquisitions, pre-acquisition phase (selection)	medium	unlikely	green	declining
Acquisitions, post-acquisition phase (integration)	medium	likely	yellow	constant
Strategic realignment (Helix)	medium	highly likely	red	constant
Product distribution risks and opportunities				
Sales efficiency and sales risks and opportunities	medium	highly likely	red	constant
Partnership risks and opportunities	low	likely	green	increasing
Personnel risks and opportunities				
Employer appeal	low	unlikely	green	constant
Legal risks				
Intellectual property (IP) right protection	low	likely	green	declining
Information security and data protection	low	likely	green	increasing

Software AG's Rating

The necessity for an external rating did not arise because of Software AG's solid financial structure and employed financing instruments. There is currently no official external rating of Software AG. Nevertheless, there are some facts that shed light on Software AG's external rating.

Based on the financial statements from December 31, 2017, as in previous years, Software AG was given central bank eligibility by the German Central Bank (Deutsche Bundesbank). This means that lending banks can use credit claims with Software AG as collateral for refinancing with the Deutsche Bundesbank.

Software AG's own banks classified its creditworthiness in the high end of the investment-grade range at the end of 2018.

REMUNERATION REPORT

The Remuneration Report is prepared in accordance with the recommendations of the German Corporate Governance Code from February 7, 2017 (hereinafter referred to as GCGC) and the provisions of the German financial reporting standard in its revised 2017 version no. 17 (DRS 17). It contains the information required and/or recommended by the German Commercial Code (HGB), the GCGC and and the International Financial Reporting Standards (IFRS). The Remuneration Report is part of the Consolidated Management Report and provides details on the compensation system for the Management and Supervisory Boards as well as the amounts and structure of their compensation. As required by the new GCGC, remuneration of Board members is presented as individual members' total amounts, broken down into non-performance-based components and one-year and multi-year performance-based components with long-term share-based incentive components. Furthermore, as recommended by the GCGC, the allocation of different compensation components is shown.

Allocation (1)

			Sanjay Brahmawar Chief Executive Officer since Aug. 1, 2018 Joined Aug. 1, 2018	
in €			**2017**	**2018**
Non-performance-based components	Fixed compensation (base salary)		0.00	416,666.65
	Additional benefits[1]		0.00	18,939.29
	Total		**0.00**	**435,605.94**
Performance-based components	One-year variable remuneration		0.00	629,694.45
	Multi-year variable remuneration			
	with long-term share-based incentive	Performance Phantom Shares—PPS[2]	0.00	0.00
		Management Incentive Plan V—(MIP V) (2015–2018)[3]	0.00	0.00
		Management Incentive Plan 2016—(MIP 2016) (2016–2019)[4]	0.00	0.00
Total allocation			**0.00**	**1,065,300.39**
Service cost			0.00	226,794.17
Total allocation (GCGC)			**0.00**	**1,292,094.56**

[1] Additional benefits include provision of a company car, voluntary social security and accident insurance premiums, rent reimbursements and severance payments. Additional benefits included rent reimbursements for Mr. Brahmawar of €17 thousand, severance payments for Mr. Duffaut of €1,600 thousand and severance payments for Dr. Jost of €2,022 thousand..

[2] The allocation for the Performance Phantom Share (PPS) plan refers to payment on Management Board members' PPS balance as of the Annual Shareholders' Meeting equal to the approved dividend per share for each PPS and partial exercise of existing PPS balances. Mr. Streibich invested 361,035 phantom shares at a value of €11,405 thousand in Software AG as of December 31, 2018. In addition, he received payment for 76,285 phantom shares valuing 3,173 thousand in fiscal 2018. Mr. Streibich continued reinvesting the full amount of cash-settled phantom shares in recent years, although the required minimum term had expired. The remaining disbursement of €235 thousand relates to the dividends described above. In the case of Mr. Duffaut, payments for his total PPS balance of 78,529 shares with a value of €3,155 thousand and dividends in the amount of €38 thousand in connection with his departure were included under allocation. Mr. Jost cashed in his complete PPS balance of 60,211 shares for a value of €2,348 thousand in connection with his departure. The remaining disbursement of €25 thousand relates to the dividends described above. Payments made to Dr. Sigg in the amount of €5 thousand were dividends on his balance as presented above. Mr. Zinnhardt invested 70,850 phantom shares at a value of €2,238 thousand in Software AG and cashed in 45,429 PPS at a value of €1,927 thousand as of December 31, 2018. The remaining disbursement of €46 thousand relates to the dividends described above.

Allocation

The following table shows the allocation of fixed remuneration, additional benefits and one-year variable remuneration for the year under review and the partially prolonged amounts of multi-year variable remuneration with long-term share-based incentive paid during fiscal 2018.

	Karl-Heinz Streibich Chief Executive Officer until July 31, 2018 Joined Oct. 1, 2003 – Left July 31, 2018		**Eric Duffaut Chief Customer Officer until Oct. 31, 2018 Joined Oct. 1, 2014 – Left Oct. 31, 2018**		**Dr. Wolfram Jost Chief Technology Officer until Jan. 8, 2019 Joined July 9, 2010 – Left Jan. 8, 2019 Employment contract ends June 30, 2019**	
	2017	**2018**	**2017**	**2018**	**2017**	**2018**
	697,642.92	406,958.37	600,000.00	500,000.00	560,000.04	714,913.33
	24,044.07	13,491.19	29,191.82	1,690,471.89	37,361.56	2,052,413.01
	721,686.99	**420,449.56**	**629,191.82**	**2,190,471.89**	**597,361.60**	**2,767,326.34**
	2,991,089.34	2,803,792.74	842,983.03	1,180,000.00	561,988.69	1,384,500.00
	4,736,866.44	3,407,365.90	35,101.80	3,192,533.72	743,515.50	2,372,775.18
	0.00	3,395,200.00	0.00	1,697,600.00	0.00	1,697,600.00
	0.00	0.00	0.00	0.00	0.00	1,212,350.10
	8,449,642.77	**10,026,808.20**	**1,507,276.65**	**8,260,605.61**	**1,902,865.79**	**9,434,551.62**
	0.00	0.00	0.00	0.00	220,119.85	218,732.88
	8,449,642.77	**10,026,808.20**	**1,507,276.65**	**8,260,605.61**	**2,122,985.64**	**9,653,284.50**

[3] Payments from MIP V resulted from the automatic exercise by all entitled members of the Management Board of this plan in accordance with the plan's guidelines.
[4] The allocations from MIP 2016 resulted from the premature exercise of these stock options by Mr. Jost in connection with his departure.

Allocation (2)

			John Schweitzer Chief Revenue Officer since Nov. 1, 2018 Joined Nov. 1, 2018	
in €			2017	2018
Non-performance-based components	Fixed compensation (base salary)		0.00	102,559.20
	Additional benefits [1]		0.00	7,078.92
	Total		**0.00**	**109,638.12**
Performance-based components	One-year variable remuneration		0.00	221,895.28
	Multi-year variable remuneration			
	with long-term share-based incentive	Performance phantom shares—PPS [2]	0.00	0.00
		Management Incentive Plan V—(MIP V) (2015 – 2018) [3]	0.00	0.00
		Management Incentive Plan 2016—(MIP 2016) (2016 – 2019) [4]	0.00	0.00
Total allocation			**0.00**	**331,533.40**
Service cost			0.00	0.00
Total allocation (GCGC)			**0.00**	**331,533.40**

[1] Additional benefits include provision of a company car, voluntary social security and accident insurance premiums, rent reimbursements and severance payments. Additional benefits included rent reimbursements for Mr. Brahmawar of €17 thousand, severance payments for Mr. Duffaut of €1,600 thousand and severance payments for Dr. Jost of €2,022 thousand.

[2] The allocation for the Performance Phantom Share (PPS) plan refers to payment on Management Board members' PPS balance as of the Annual Shareholders' Meeting equal to the approved dividend per share for each PPS and partial exercise of existing PPS balances. Mr. Streibich invested 361,035 phantom shares at a value of €11,405 thousand in Software AG as of December 31, 2018. In addition, he received payment for 76,285 phantom shares valuing 3,173 thousand in fiscal 2018. Mr. Streibich continued reinvesting the full amount of cash-settled phantom shares in recent years, although the required minimum term had expired. The remaining disbursement of €235 thousand relates to the dividends described above. In the case of Mr. Duffaut, payments for his total PPS balance of 78,529 shares with a value of €3,155 thousand and dividends in the amount of €38 thousand in connection with his departure were included under allocation. Mr. Jost cashed in his complete PPS balance of 60,211 shares for a value of €2,348 thousand in connection with his departure. The remaining disbursement of €25 thousand relates to the dividends described above. Payments made to Dr. Sigg in the amount of €5 thousand were dividends on his balance as presented above. Mr. Zinnhardt invested 70,850 phantom shares at a value of €2,238 thousand in Software AG and received payment for 45,429 PPS at a value of €1,927 thousand as of December 31, 2018. The remaining disbursement of €46 thousand relates to the dividends described above.

	Dr. Stefan Sigg Chief Research & Development Officer Joined April 1, 2017		Arnd Zinnhardt Chief Financial Officer Joined May 1, 2002	
	2017	**2018**	**2017**	**2018**
	375,000.03	500,000.04	441,715.32	441,715.32
	25,132.97	33,112.11	44,164.86	39,619.09
	400,133.00	**533,112.15**	**485,880.18**	**481,334.41**
	247,807.20	377,816.67	1,892,163.10	2,035,317.12
	0.00	5,245.50	7,359,377.46	1,973,150.68
	0.00	0.00	0.00	1,697,600.00
	0.00	0.00	0.00	0.00
	647,940.20	**916,174.32**	**9,737,420.74**	**6,187,402.21**
	362,427.00	492,900.72	163,614.05	172,704.36
	1,010,367.20	**1,409,075.04**	**9,901,034.79**	**6,360,106.57**

[3] Payments from MIP V resulted from the automatic exercise by all entitled members of the Management Board of this plan in accordance with the plan's guidelines.
[4] The allocations from MIP 2016 resulted from the premature exercise of these stock options by Mr. Jost in connection with his departure.

Benefits Granted (1)

			Sanjay Brahmawar Chief Executive Officer since Aug. 1, 2018 Joined Aug. 1, 2018			
in €			**2017**	**2018**	**2018 (min.)**	**2018 (max.)**
Non-performance-based components	Fixed compensation (base salary)		0.00	416,666.65	416,666.65	416,666.65
	Additional benefits [1]		0.00	18,939.29	18,939.29	18,939.29
	Total		**0.00**	**435,605.94**	**435,605.94**	**435,605.94**
Performance-based components	One-year variable remuneration [2]		0.00	629,694.45	0.00	694,444.45
	Multi-year variable remuneration					
	with long-term share-based incentive	Performance phantom shares—PPS [3]	0.00	527,353.39	0.00	1,254,836.96
		Management Incentive Plan 2017—(MIP 2017) [4]	0.00	0.00	0.00	0.00
		Management Incentive Plan 2018—(MIP 2018) [5]	0.00	294,782.03	0.00	1,312,500.00
Total (DRS 17)			**0.00**	**1,887,435.81**	**435,605.94**	**3,697,387.35**
Service cost			0.00	226,794.17	226,794.17	226,794.17
Total (GCGC)			**0.00**	**2,114,229.98**	**662,400.11**	**3,924,181.52**
Share price gains/losses and max. possible loss from vested share-based remuneration components [6]			0.00	0.00	0.00	–175,784.46
Total economic allocation			**0.00**	**2,114,229.98**	**662,400.11**	**3,748,397.05**

[1] Additional benefits include provision of a company car, voluntary social security and accident insurance premiums, rent reimbursements and severance payments. Additional benefits included rent reimbursements for Mr. Brahmawar of €17 thousand, severance payments for Mr. Duffaut of €1,600 thousand and severance payments for Dr. Jost of €2,022 thousand.

[2] The one-year variable remuneration depends, firstly, on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and, secondly, on the achievement of individual strategic, qualitative or quantitative objectives specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. One-third of over achievement (greater than 100 percent) of an objective is not paid in cash, but rather must be invested in phantom shares. The highest attainable one-year variable remuneration decreases accordingly.

[3] Members of the Management Board invest a portion of their variable compensation in phantom shares, which have a vesting period of one, two and three years for each third of the phantom shares respectively. The investment amount depends on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and of individual strategic, qualitative or quantitative objectives, specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. When performance is greater than 100 percent, the conversion amount increases by one-third of the over-performance amount of the one-year variable remuneration, which is not paid out but invested in phantom shares. Conversion to PPS is based on the average price of Software AG's share in February of the following year less 10 percent. When the vesting period is over, members of the Management Board can choose if they want to receive payment of the due amount or to reinvest it partially or entirely in phantom shares. The term of this reinvestment is limited to a maximum of six years and four months after the term of the Management Board member's contract has ended. Members of the Management Board can request to receive payment at any time during defined windows of time.

[4] MIP 2017 was launched in December 2016, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 28, 2020. The base price of these stock options is €33.18 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2016. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2019, in February 2020, in May 2020 and in August 2020. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €33.18 by 20 percent on ten consecutive trading days in the period from December 1, 2018 to November 30, 2019.

				Karl-Heinz Streibich Chief Executive Officer until July 31, 2018 Joined Oct. 1, 2003 – Left July 31, 2018
	2017	2018	2018 (min.)	2018 (max.)
	697,642.92	406,958.37	406,958.37	406,958.37
	24,044.07	13,491.19	13,491.19	13,491.19
	721,686.99	**420,449.56**	**420,449.56**	**420,449.56**
	2,991,089.34	2,803,792.74	0.00	3,173,685.82
	1,775,879.57	234,672.75	234,672.75	234,672.75
	0.00	0.00	0.00	0.00
	791,455.85	0.00	0.00	0.00
	6,280,111.75	**3,458,915.05**	**655,122.31**	**3,828,808.13**
	0.00	0.00	0.00	0.00
	6,280,111.75	**3,458,915.05**	**655,122.31**	**3,828,808.13**
	7,436,309.24	–4,654,233.60	1,100,113.64	–10,304,982.01
	13,716,420.99	**–1,195,318.55**	**1,755,235.95**	**–6,476,173.88**

[5] MIP 2018 was launched in December 2017, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 27, 2021. The base price of these stock options is €45.27 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2017. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2020, in February 2021, in May 2021 and in August 2021. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €45.27 by 20 percent on ten consecutive trading days in the period from December 1, 2019 to November 30, 2020. Maximum possible compensation for the CEO, Mr. Brahmawar, under this plan was set at €1,313 thousand, as presented above in the maximum compensation column. Commitments to the other members of the Management Board under this plan were described in the Remuneration Report in the 2017 Annual Report. The 100,988 MIP 2018 stock options awarded to Mr. Duffaut and Dr. Jost respectively in fiscal 2017 were discarded when they left the Company.

[6] The lower intrinsic values of the PPS balances resulting from Software AG's share price decrease in fiscal 2018 had a diminishing effect on remuneration, which was recognized in the 2018 column. Furthermore, the accumulated share price gains from the date of issue of MIP 2017 balances to the end of fiscal 2018 were recognized as increases to remuneration. These balances were disbursed at the value as of the end of fiscal 2018. Accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 were included as increases to remuneration in the 2018 (min.) column. The 2018 (max.) column shows the maximum possible losses from vested share-based remuneration components of the phantom share plan as well as accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 as increases to remuneration.

Benefits Granted (2)

			Eric Duffaut Chief Customer Officer until Oct. 31, 2018 Joined Oct. 1, 2014 – Left Oct. 31, 2018			
in €			2017	2018	2018 (min.)	2018 (max.)
Non-performance-based components	Fixed compensation (base salary)		600,000.00	500,000.00	500,000.00	500,000.00
	Additional benefits [1]		29,191.82	1,690,471.89	1,690,471.89	1,690,471.89
	Total		**629,191.82**	**2,190,471.89**	**2,190,471.89**	**2,190,471.89**
Performance-based components	One-year variable remuneration [2]		842,983.03	1,180,000.00	0.00	1,666,666.68
	Multi-year variable remuneration					
	with long-term share-based incentive	Performance phantom shares—PPS [3]	884,517.97	38,026.95	38,026.95	38,026.95
		Management Incentive Plan 2017—(MIP 2017) [4]	0.00	0.00	0.00	0.00
		Management Incentive Plan 2018—(MIP 2018) [5]	678,386.89	0.00	0.00	0.00
Total (DRS 17)			**3,035,079.71**	**3,408,498.84**	**2,228,498.84**	**3,895,165.52**
Service cost			0.00	0.00	0.00	0.00
Total (GCGC)			**3,035,079.71**	**3,408,498.84**	**2,228,498.84**	**3,895,165.52**
Share price gains/losses and max. possible loss from vested share-based remuneration components [6]			2,018,262.12	113,596.77	550,056.82	550,056.82
Total economic allocation			**5,053,341.83**	**3,522,095.61**	**2,778,555.66**	**4,445,222.34**

[1] Additional benefits include provision of a company car, voluntary social security and accident insurance premiums, rent reimbursements and severance payments. Additional benefits included rent reimbursements for Mr. Brahmawar of €17 thousand, severance payments for Mr. Duffaut of €1,600 thousand and severance payments for Dr. Jost of €2,022 thousand.

[2] The one-year variable remuneration depends, firstly, on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and, secondly, on the achievement of individual strategic, qualitative or quantitative objectives specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. One-third of over achievement (greater than 100 percent) of an objective is not paid in cash, but rather must be invested in phantom shares. The highest attainable one-year variable remuneration decreases accordingly.

[3] Members of the Management Board invest a portion of their variable compensation in phantom shares, which have a vesting period of one, two and three years for each third of the phantom shares respectively. The investment amount depends on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and of individual strategic, qualitative or quantitative objectives, specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. When performance is greater than 100 percent, the conversion amount increases by one-third of the over-performance amount of the one-year variable remuneration, which is not paid out but invested in phantom shares. Conversion to PPS is based on the average price of Software AG's share in February of the following year less 10 percent. When the vesting period is over, members of the Management Board can choose if they want to receive payment of the due amount or to reinvest it partially or entirely in phantom shares. The term of this reinvestment is limited to a maximum of six years and four months after the term of the Management Board member's contract has ended. Members of the Management Board can request to receive payment at any time during defined windows of time.

[4] MIP 2017 was launched in December 2016, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 28, 2020. The base price of these stock options is €33.18 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2016. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2019, in February 2020, in May 2020 and in August 2020. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €33.18 by 20 percent on ten consecutive trading days in the period from December 1, 2018 to November 30, 2019.

				Dr. Wolfram Jost Chief Technology Officer until Jan. 8, 2019 Joined July 9, 2010 – Left Jan. 8, 2019 Employment contract ends June 30, 2019
	2017	**2018**	**2018 (min.)**	**2018 (max.)**
	560,000.04	714,913.33	714,913.33	714,913.33
	37,361.56	2,052,413.01	2,052,413.01	2,052,413.01
	597,361.60	**2,767,326.34**	**2,767,326.34**	**2,767,326.34**
	561,988.69	1,384,500.00	0.00	1,560,000.00
	793,952.63	24,977.55	24,977.55	24,977.55
	0.00	0.00	0.00	0.00
	678,386.89	0.00	0.00	0.00
	2,631,689.81	**4,176,803.89**	**2,792,303.89**	**4,352,303.89**
	220,119.85	218,732.88	218,732.88	218,732.88
	2,851,809.66	**4,395,536.77**	**3,011,036.77**	**4,571,036.77**
	1,809,662.35	207,866.13	601,103.16	601,103.16
	4,661,472.01	**4,603,402.90**	**3,612,139.93**	**5,172,139.93**

5 MIP 2018 was launched in December 2017, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 27, 2021. The base price of these stock options is €45.27 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2017. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2020, in February 2021, in May 2021 and in August 2021. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €45.27 by 20 percent on ten consecutive trading days in the period from December 1, 2019 to November 30, 2020. Maximum possible compensation for the CEO, Mr. Brahmawar, under this plan was set at €1,313 thousand, as presented above in the maximum compensation column. Commitments to the other members of the Management Board under this plan were described in the Remuneration Report in the 2017 Annual Report. The 100,988 MIP 2018 stock options awarded to Mr. Duffaut and Dr. Jost respectively in fiscal 2017 were discarded when they left the Company.

6 The lower intrinsic values of the PPS balances resulting from Software AG's share price decrease in fiscal 2018 had a diminishing effect on remuneration, which was recognized in the 2018 column. Furthermore, the accumulated share price gains from the date of issue of MIP 2017 balances to the end of fiscal 2018 were recognized as increases to remuneration. These balances were disbursed at the value as of the end of fiscal 2018. Accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 were included as increases to remuneration in the 2018 (min.) column. The 2018 (max.) column shows the maximum possible losses from vested share-based remuneration components of the phantom share plan as well as accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 as increases to remuneration..

Benefits Granted (3)

			John Schweitzer Chief Revenue Officer since Nov. 1, 2018 Joined Nov. 1, 2018			
in €			**2017**	**2018**	**2018 (min.)**	**2018 (max.)**
Non-performance-based components	Fixed compensation (base salary)		0.00	102,559.20	102,559.20	102,559.20
	Additional benefits[1]		0.00	7,078.92	7,078.92	7,078.92
	Total		**0.00**	**109,638.12**	**109,638.12**	**109,638.12**
Performance-based components	One-year variable remuneration[2]		0.00	221,895.28	0.00	244,712.25
	Multi-year variable remuneration					
	with long-term share-based incentive	Performance phantom shares—PPS[3]	0.00	243,482.70	0.00	574,842.92
		Management Incentive Plan 2017—(MIP 2017)[4]	0.00	0.00	0.00	0.00
		Management Incentive Plan 2018—(MIP 2018)[5]	0.00	0.00	0.00	0.00
Total (DRS 17)			**0.00**	**575,016.10**	**109,638.12**	**929,193.29**
Service cost			0.00	0.00	0.00	0.00
Total (GCGC)			**0.00**	**575,016.10**	**109,638.12**	**929,193.29**
Share price gains/losses and max. possible loss from vested share-based remuneration components[6]			0.00	0.00	0.00	–81,160.90
Total economic allocation			**0.00**	**575,016.10**	**109,638.12**	**848,032.39**

[1] Additional benefits include provision of a company car, voluntary social security and accident insurance premiums, rent reimbursements and severance payments. Additional benefits included rent reimbursements for Mr. Brahmawar of €17 thousand, severance payments for Mr. Duffaut of €1,600 thousand and severance payments for Dr. Jost of €2,022 thousand.

[2] The one-year variable remuneration depends, firstly, on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and, secondly, on the achievement of individual strategic, qualitative or quantitative objectives specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. One-third of over achievement (greater than 100 percent) of an objective is not paid in cash, but rather must be invested in phantom shares. The highest attainable one-year variable remuneration decreases accordingly.

[3] Members of the Management Board invest a portion of their variable compensation in phantom shares, which have a vesting period of one, two and three years for each third of the phantom shares respectively. The investment amount depends on the achievement of the Company's revenue and earnings targets communicated to the capital market for the respective fiscal year and of individual strategic, qualitative or quantitative objectives, specifically defined according to the responsibilities of the member of the Management Board. The possible range of meeting a target is between 0 and 200 percent. When performance is greater than 100 percent, the conversion amount increases by one-third of the over-performance amount of the one-year variable remuneration, which is not paid out but invested in phantom shares. Conversion to PPS is based on the average price of Software AG's share in February of the following year less 10 percent. When the vesting period is over, members of the Management Board can choose if they want to receive payment of the due amount or to reinvest it partially or entirely in phantom shares. The term of this reinvestment is limited to a maximum of six years and four months after the term of the Management Board member's contract has ended. Members of the Management Board can request to receive payment at any time during defined windows of time.

[4] MIP 2017 was launched in December 2016, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 28, 2020. The base price of these stock options is €33.18 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2016. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2019, in February 2020, in May 2020 and in August 2020. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €33.18 by 20 percent on ten consecutive trading days in the period from December 1, 2018 to November 30, 2019.

				Dr. Stefan Sigg **Chief Research & Development Officer** **Joined April 1, 2017**				**Arnd Zinnhardt** **Chief Financial Officer** **Joined May 1, 2002**
	2017	**2018**	**2018 (min.)**	**2018 (max.)**	**2017**	**2018**	**2018 (min.)**	**2018 (max.)**
	375,000.03	500,000.04	500,000.04	500,000.04	441,715.32	441,715.32	441,715.32	441,715.32
	25,132.97	33,112.11	33,112.11	33,112.11	44,164.86	39,619.09	39,619.09	39,619.09
	400,133.00	**533,112.15**	**533,112.15**	**533,112.15**	**485,880.18**	**481,334.41**	**481,334.41**	**481,334.41**
	247,807.20	377,816.67	0.00	416,666.67	1,892,163.10	2,035,317.12	0.00	2,244,604.00
	342,349.33	567,060.31	5,245.50	1,315,376.39	1,390,629.99	1,568,235.46	46,052.50	3,639,322.64
	510,266.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	678,386.89	0.00	0.00	0.00	678,386.89	0.00	0.00	0.00
	2,178,942.89	**1,477,989.13**	**538,357.65**	**2,265,155.21**	**4,447,060.16**	**4,084,886.99**	**527,386.91**	**6,365,261.05**
	362,427.00	492,900.72	492,900.72	492,900.72	163,614.05	172,704.36	172,704.36	172,704.36
	2,541,369.89	**1,970,889.85**	**1,031,258.37**	**2,758,055.93**	**4,610,674.21**	**4,257,591.35**	**700,091.27**	**6,537,965.41**
	0.00	–87,398.10	0.00	–442,202.90	2,202,572.81	–593,298.92	550,056.82	–2,195,489.00
	2,541,369.89	**1,883,491.75**	**1,031,258.37**	**2,315,853.03**	**6,813,247.02**	**3,664,292.43**	**1,250,148.09**	**4,342,476.41**

5 MIP 2018 was launched in December 2017, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 27, 2021. The base price of these stock options is €45.27 and is the weighted average price of Software AG's share on the 20 trading days after November 15, 2017. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2020, in February 2021, in May 2021 and in August 2021. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €45.27 by 20 percent on ten consecutive trading days in the period from December 1, 2019 to November 30, 2020. Maximum possible compensation for the CEO, Mr. Brahmawar, under this plan was set at €1,313 thousand, as presented above in the maximum compensation column. Commitments to the other members of the Management Board under this plan were described in the Remuneration Report in the 2017 Annual Report. The 100,988 MIP 2018 stock options awarded to Mr. Duffaut and Dr. Jost respectively in fiscal 2017 were discarded when they left the Company.

6 The lower intrinsic values of the PPS balances resulting from Software AG's share price decrease in fiscal 2018 had a diminishing effect on remuneration, which was recognized in the 2018 column. Furthermore, the accumulated share price gains from the date of issue of MIP 2017 balances to the end of fiscal 2018 were recognized as increases to remuneration. These balances were disbursed at the value as of the end of fiscal 2018. Accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 were included as increases to remuneration in the 2018 (min.) column. The 2018 (max.) column shows the maximum possible losses from vested share-based remuneration components of the phantom share plan as well as accumulated share price gains from the issue of MIP 2016 balances until the end of fiscal 2018 as increases to remuneration.

Benefits Granted

Fixed compensation

The fixed compensation agreed to by the members of the Management Board is paid monthly, 12 times a year.

Additional benefits

The additional benefits consist of the commitment of an appropriate company car, voluntary social security benefits, accident insurance premiums, rent reimbursements and severance payments.

One-Year Variable Remuneration

Eighty percent of the one-year variable remuneration depends on achievement of the Group revenue and earnings targets that are communicated to the capital market. In addition, each member of the Management Board agrees to different quantitative and qualitative targets relevant to the respective area of responsibility, which are in the interest of the medium to long-term strategic development of the Company. The bonuses are calculated based on the extent to which targets are achieved. If the level of achievement is zero, no variable remuneration is paid. The the maximum achievable level is 200 percent. One-third of any percentage of performance exceeding 100 percent will not be paid in cash, but put aside as performance phantom shares (PPS) and paid out at a later point in time based on future share price performance. The highest attainable one-year variable compensation decreases accordingly.

Multi-Year Variable Remuneration

Performance-based components with long-term share-based incentive

Performance Phantom Share Plan (PPS)

A portion of the variable management remuneration is paid out as a medium-term component on the basis of a PPS plan. As in the previous year, the portion accruing for fiscal year 2018 will be converted into virtual (phantom) shares on the basis of the average share price of Software AG stock in February 2019, less 10 percent (reference share price). The resulting number of shares will become due in three identical tranches with terms of one, two, and three years. On the due dates in March 2020 to 2022, the number of PPS will be multiplied by the then-applicable share price for February. The remuneration cap recommended by the then-applicable GCGC was first instituted in 2014. Pursuant to this cap policy, neither old PPS balances nor newly issued PPS will be fully included in future share price increases, but only up to a maximum of twice the reference price at issue of the corresponding PPS tranche. This payment cap is determined annually for the balance of PPS awarded to the members of the Management Board based on the average award price.

Company officers will receive an amount per phantom share equal to the dividend paid to Software AG shareholders per share.

Company officers may elect to let the Company dispose of any PPS that have become due after the defined vesting period for up to six years and four months after the term of the respective Management Board contract has ended and thus continue to participate in the success of the Company.

The respective disbursement amount is determined on the date of disbursement using the disbursement price per share, multiplied by the number of phantom shares due to be converted. For tranches that aren't renewed, the disbursement share price is equal to the average closing price of Software AG's share in Xetra trading on the Frankfurt stock exchange on trading days during the month of February before phantom share disbursement. For tranches that are disbursed within the extension period, the disbursement share price is equal to the average closing price of Software AG's share in Xetra trading on the sixth to tenth trading days after the decision to exercise the phantom shares. The decision to exercise options can be made during the period from the date of publication of the financial results until the following fifth trading day. This plan led to expenses relating to the members of the Management Board in the amount of €3,131 thousand (2017: €5,486 thousand) in fiscal year 2018. The following table illustrates the PPS to be issued based on the average share price in February 2019 and the effects this remuneration plan had on Software AG's profit/loss in fiscal 2018:

	PPS granted in 2018 No.	Expense from PPS[1] granted in 2018 in €
Sanjay Brahmawar (CEO since Aug. 1, 2018)	16,260	527,353.39
Karl-Heinz Streibich (CEO until July 31, 2018)	0	263,037.73
Eric Duffaut (until Oct. 31, 2018)	0	–74,663.53
Dr. Wolfram Jost (until Jan. 8, 2019)	0	28,960.02
John Schweitzer (since Nov. 1, 2018)	7,507	243,482.70
Dr. Stefan Sigg	17,322	567,793.47
Arnd Zinnhardt	46,933	1,575,008.27

[1] This expense is due to allocation in 2018 at a price of €32.43 (2017: €42.42) per PPS at the time of award and interest expenses for hedging the price of PPS balances amounting to €44 thousand. Furthermore, the expense for Mr. Duffaut decreased by accruals for social security contributions from the previous year in the amount of €117 thousand because the share price was lower than the year before.

Stock option plans

1. Management Incentive Plan V (2015) (MIP V)

A share-performance-based Management Incentive Plan (MIP V) for members of the Management Board, upper management and key members of staff was approved in December 2014. The rights had a term of three years. The fair value on the date of award was €10.21 per stock appreciation right. Payment of exercise benefits was dependent upon a 30 percent share price increase. The target was met because Software AG's volume weighted average share price (VWAP) in Xetra trading exceeded the reference price at issue of €21.22 by 30 percent or more on ten consecutive trading days between November 15, 2016 and December 15, 2017. This represented an exercise threshold of €27.59. The reference price is equal to the average of the Software AG's VWAP from November 15 to December 15, 2014.

The exercise threshold was reached during the ten trading days from November 15, 2016 to November 28, 2017. When the exercise target was achieved, the gross exercise benefit was equal to Software AG's VWAP of €45.59 per stock option during the period from November 15 to December 15, 2017. The maximum possible exercise benefit per option was capped at 200 percent of the reference price, or €42.44. The price cap of €42.44 was thus employed for the exercise at the end of the year. Remuneration for this plan was disbursed in January 2018.

No further expenses were incurred under this plan in fiscal 2018. All expenses were recognized from 2014 to 2017.

2. Management Incentive Plan 2016 (MIP 2016)

Management Incentive Plan 2016, a plan based on Software AG's share price performance, was approved in December 2015. The rights had a term of three years. Exercise benefits were paid out conditional upon an exercise threshold. The exercise threshold was reached when Software AG's VWAP in Xetra trading exceeded the price of €30.00 on ten consecutive trading days during the period between December 1, 2017 and November 30, 2018. The exercise threshold was reached in the first ten trading days of December 2017. The stock option plan was exercised at the end of the term in December 2018. After the exercise target was achieved, the gross exercise benefit equaled Software AG's VWAP during the period from November 15 to December 15, 2018.

When the exercise target was achieved, the gross exercise benefit was equal to Software AG's VWAP of €35.49 per stock option during the period from November 15 to December 15, 2018. The maximum possible exercise benefit per option was capped at 200 percent of the reference price of €25.94, or €51.88. The price of €35.49 was thus employed for the exercise at the end of the year. Remuneration for this plan was disbursed in January 2019. The reference price is equal to the average of the Software AG's VWAP from November 15 to December 15, 2015.

The fair value on the date of award was €18.68 per stock appreciation right.

The following expenses were incurred under this plan in fiscal 2018:

Management Incentive Plan 2016

	Balance Dec. 31, 2018 MIP 2016 stock appreciation rights No.	Expenses from MIP 2016 stock appreciation rights in €
Sanjay Brahmawar (CEO since Aug. 1, 2018)	0	0
Karl-Heinz Streibich[1] (CEO until July 31, 2018)	65,444	116,715.56
Eric Duffaut[1] (until Oct. 31, 2018)	32,722	268,107.34
Wolfram Jost[2] (until Jan. 8, 2019)	0	261,981.64
John Schweitzer (since Nov. 1, 2018)	0	0
Dr. Stefan Sigg	0	0
Arnd Zinnhardt	32,722	210,935.30

[1] Expenses under this plan relating to Mr. Streibich and Mr. Duffaut were spread over time until their respective Management Board contracts expired.
[2] Dr. Wolfram Jost opted to receive payment for his MIP 2016 balance of 32,722 stock appreciation rights at a share price of €37.05 in 2018 when he left the Company.

3. Management Incentive Plan 2017 (MIP 2017)

The share-based Management Incentive Plan 2017 (MIP 2017) was instituted in December 2016 whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 28, 2020. The base price of these stock options is €33.18 and is the VWAP of Software AG's share on the 20 trading days after November 15, 2016. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2019, in February 2020, in May 2020 and in August 2020. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €33.18 by 20 percent on ten consecutive trading days in the period from December 1, 2018 to November 30, 2019. The maximum possible compensation under this program was defined at €3,767 thousand for Mr. Streibich (CEO), at 1,413 thousand for Dr. Sigg and at €1,884 thousand for the other members of the Management Board. The average fair value on Dr. Sigg's date of the award was €5.39 per option. The average fair value on the date of award for the other board members the year before was €4.79 per option.

No further MIP 2017 stock appreciation rights were awarded under this plan in fiscal 2018. In total, the expenses shown in the following table were incurred under the plan in 2018:

Management Incentive Plan 2017

	Balance Dec. 31, 2018 in 2017 No.	Income[1] from MIP 2017 stock appreciation rights in €
Sanjay Brahmawar (CEO since Aug. 1, 2018)	0	0
Karl-Heinz Streibich[2] (CEO until July 31, 2018)	252,548	840,773.56
Eric Duffaut[2] (until Oct. 31, 2018)	126,274	120,218.86
Dr. Wolfram Jost (until Jan. 8, 2019)	126,274	93,491.37
John Schweitzer (since Nov. 1, 2018)	0	0
Dr. Stefan Sigg	94,706	90,574.05
Arnd Zinnhardt	126,274	186,947.09

[1] Income resulted from the decrease in Software AG's share price in fiscal 2018.
[2] Expenses under this plan relating to Mr. Streibich, Mr. Duffaut and Mr. Jost were spread over time until their respective Management Board contracts expired.

4. Management Incentive Plan 2018 (MIP 2018)

The share-based management incentive Plan 2018 (MIP 2018) was instituted in December 2017, whereby members of the Management Board were awarded stock options in four tranches with a term of 3.3 years ending on August 27, 2021. The base price of these stock options is €45.27 and is the VWAP of Software AG's share on the 20 trading days after November 15, 2017. A quarter of these stock options will become exercisable at the respective average share price on the first 20 trading days in November 2020, in February 2021, in May 2021 and in August 2021. The performance target requires Software AG's share price (including dividends paid out in the meantime) to exceed the base price of €45.27 by 20 percent on ten consecutive trading days in the period from December 1, 2019 to November 30, 2020. The maximum possible compensation under this program was defined at €1,313 thousand for Mr. Sanjay Brahmawar (CEO), at €2,444 thousand for the former CEO, Mr. Streibich, and at €2,095 thousand for the other members of the Management Board.

The average fair value at the time of Mr. Brahmawar's award equaled €4.20 and for the other Board members €6.72 per stock option.

The following stock appreciation rights were awarded and expenses incurred under MIP 2018 in fiscal 2018:

Management Incentive Plan 2018

	Committed MIP 2018 stock appreciation rights in 2018 No.	Balance Dec. 31, 2018 MIP 2018 stock appreciation rights No.	Expenses from MIP 2018 stock appreciation rights in €
Sanjay Brahmawar[1] (CEO since Aug. 1, 2018)	70,228	70,228	16,791.04
Karl-Heinz Streibich[2] (CEO until July 31, 2018)	0	117,820	134,550.71
Eric Duffaut (until Oct. 31, 2018)	0	0	–4,062.71
Dr. Wolfram Jost (until Jan. 8, 2019)	0	0	–3,173.00
John Schweitzer (since Nov. 1, 2018)	0	0	0
Dr. Stefan Sigg	0	100,988	42,179.49
Arnd Zinnhardt	0	100,988	42,179.49

[1] Because Mr. Brahmawar joined Software AG on August 1, 2018, he received a percentage of the former CEO's shares, who, like the other members of the Management Board, had already received his MIP 2018 stock options in December 2017.
[2] Expenses under this plan relating to Mr. Streibich were spread over time until the expiration of his Management Board contract on July 31, 2018.

For further information on total remuneration of the Management Board, on the remuneration of former members of the Management Board and pension provisions for former members of the Management Board, please refer to the Notes to the consolidated financial statements and the Notes to financial statements for Software AG (parent company).

Other remuneration components

A member of the Management Board who leaves after a change of control within 12 months of such change and without good cause will receive a severance payment of one-and-a-half to three annual salaries based on the most recently agreed annual target remuneration. In case of resignation by a member of the Management Board, the above mentioned regulation is not applicable if the position of the Management Board member has only been altered marginally with the change of control.

When an employment contract is terminated prematurely but not by the member of the Management Board, the severance payment is limited to the target compensation for one or two years but no more than the remaining term of the contract. The employment contract, which has ended, for one member of the Management Board limits the severance payment to one annual target remuneration and not to the remaining term of the contract.

In the event of illness, the members of the Management Board will receive full pay based on the annual target remuneration for a period of six months. After six months, the variable remuneration component will be reduced by 1/12 for every month that follows. Salary payments will cease at the end of the term of the contract in any event. Any health insurance benefits received by the Board member must be credited against such payments.

In case of permanent disability, the employment contract of the Management Board member concerned will terminate at the end of the third month in which the permanent disability was determined. A permanent disability in this sense exists when the member of the Management Board is unable to work for 12 consecutive months. From the time of their departure until completion of their 62nd year of age, two German members of the Management Board receive a monthly disability pension of €14.5 thousand (2017: €14.2 thousand), one German member of the Management Board €13.2 thousand (2017: €13.0) and the CEO €19.5 thousand (2017: €28.5 thousand). The disability pension is increased annually by the percentage by which the consumer price index for Germany published by the Federal Statistical Office has increased in comparison to the previous year.

The Company maintains accident insurance policies for the Management Board members with an insured amount equaling €1,500 thousand in the event of death and €3,000 thousand in the event of disability. Furthermore, Software AG carries director and officer (D&O) insurance which covers members of the Management Board; the deductible is currently 10 percent of the damages but no more than 1.5-times the fixed annual salary of the Management Board member.

German members of the Management Board receive pensions for life after completing their 62nd year of age, regardless of their age when they joined the Company. For two members of the Management Board, the pension amounts to €14.5 thousand (2017: €14.3 thousand) per month and for one member to €13.2 thousand (2017: €13.0 thousand). The CEO's pension amounts to €19.5 thousand (2017: €28.5 thousand) per month. As part of the renewal of the former CEO's contract, his pension was adjusted beyond the age limit of 62 using a straight-line method. The pension is increased annually by the percentage by which the consumer price index for Germany published by the Federal Statistical Office has increased in comparison to the previous year. This pension commitment also includes a widow's annuity of 60 percent of the Management Board member's pension. In the event that a Management Board member leaves the Company prior to the age of 62 and before reaching the 15th year as a member of the Company's Management Board, such Management Board member will still be entitled to pension benefits, but they will be reduced on a pro-rated basis. In the event that a Management Board member leaves the Company prior to the age of 62, but after reaching the 15th year as a member of the Company's Management Board, such Management Board member will still be entitled to full pension benefits. As part of increased flexibility of pension benefit policies (in Germany) in fiscal 2015, members of the Management Board (at the time) were granted the option to receive pension benefits as a one-time lump sum instead of pension benefit payments. The amount of the one-time lump sum payment is calculated based on the surrender value of the Company's life insurance policies taken out and pledged to members of the Management Board as reinsurance cover for pension entitlements. Beneficiaries must declare their choice to exercise the option of a one-time lump sum payment no later than three months and one week before the regularly scheduled beginning of their pension.

Claims from the American Management Board member to pension or disability pension will be served by the applicable social security system for employees in the USA.

Claims from the former French Management Board member to pension or disability pension were served by the applicable social security system for Company employees in France.

The change in present value from pension commitments (IFRS) in 2018 and the present value of pension commitments as of December 31, 2018 are as follows:

in €	Change in present value (DBO) from pension commitments in 2018	Present value of pension commitments as of Dec. 31, 2018
Sanjay Brahmawar (CEO since Aug. 1, 2018)	274,503.00	274,503.00
Karl-Heinz Streibich (CEO until July 31, 2018)	780,307.00	10,517,664.00
Eric Duffaut (until Oct. 31, 2018)	0	0
Dr. Wolfram Jost (until Jan. 8, 2019)	762,459.00	2,725,840.00
John Schweitzer (since Nov. 1, 2018)	0	0
Dr. Stefan Sigg	459,372.00	869,023.00
Arnd Zinnhardt	849,472.00	3,584,380.00

In addition, a German Management Board member who has served on the board for more than three years can, at the discretion of the Company, be given the opportunity to waive portions of their future variable target remuneration to finance additional supplementary benefits. In such a case, the Company pays an annual amount corresponding to the amount waived, raised to the percentage of the average target performance ratio for the preceding three full fiscal years before the respective waiver, into a pension plan negotiated by the Company for the benefit of the Management Board member. This option has thus far not been granted to any Management Board member.

In addition, all members of the Management Board are entitled to be provided with a suitable company car or car allowance.

No additional commitments have been made regarding severance pay in the event an employment contract is not extended or a shareholder change occurs, nor regarding supplementary state benefit paid to unemployed people who enter self-employment or found a new business, continuation of salary payments in the event of early termination of employment, or interest on severance payments. There are also no entitlements to payments based on customary practice.

Remuneration of the Management Board in 2017

The specific components of the Management Board's compensation in 2017 are contained in the complete tables in accordance with the GCGC. These components will therefore not be repeated here. Accordingly, this portion of the Remuneration Report will deal solely with the development of compensation relating to stock options and pension commitments in 2017.

The following expenses were incurred under MIP V in fiscal 2017:

	Committed MIP V stock appreciation rights in 2017 No.	Expenses from MIP V stock appreciation rights in €
Karl-Heinz Streibich (CEO)	0	1,622,255.59
Eric Duffaut	0	1,012,328.45
Dr. Wolfram Jost	0	811,127.79
Dr. Stefan Sigg (since April 1, 2017)	0	0.00
Arnd Zinnhardt	0	811,127.79

The following expenses were incurred under MIP 2016 in fiscal 2017:

	Committed MIP 2016 stock appreciation rights in 2017 No.	Expenses from MIP 2016 stock appreciation rights in €
Karl-Heinz Streibich (CEO)	0	1,449,867.53
Eric Duffaut	0	790,159.38
Dr. Wolfram Jost	0	624,649.07
Dr. Stefan Sigg (since April 1, 2017)	0	0.00
Arnd Zinnhardt	0	624,649.07

The following MIP 2017 stock appreciation rights were awarded and expenses incurred under MIP 2017 in fiscal 2017:

MIP 2017

	Committed MIP 2017 stock appreciation rights in 2017 No.	Expenses from MIP 2017 stock appreciation rights in €
Karl-Heinz Streibich (CEO)	0	1,423,088.48
Eric Duffaut	0	498,335.78
Dr. Wolfram Jost	0	389,333.52
Dr. Stefan Sigg[1] (since April 1, 2017)	94,706	239,374.14
Arnd Zinnhardt	0	389,333.52

[1] Because Dr. Sigg joined the Company on April 1, 2017, he received 75 percent of the stock options previously issued to the other board members (not including the CEO) under MIP 2017 in December 2016.

The following MIP 2018 stock appreciation rights were awarded and expenses incurred under MIP 2018 in fiscal 2017:

MIP 2018

	Committed MIP 2018 stock appreciation rights in 2017 No.	Expenses from MIP 2018 stock appreciation rights in €
Karl-Heinz Streibich[1] (CEO)	117,820	18,320.74
Eric Duffaut	100,988	4,062.71
Dr. Wolfram Jost	100,988	3,173.00
Dr. Stefan Sigg (since April 1, 2017)	100,988	3,173.00
Arnd Zinnhardt	100,988	3,173.00

[1] Expenses under this plan relating to Mr. Streibich were spread over time until the expiration of his Management Board contract on July 31, 2018.

The change in present value from pension commitments (IFRS) in 2016 and the present value of pension commitments as of December 31, 2017 is as follows:

in €	Change in present value (DBO) from pension commitments 2017	Present value of pension commitments as of Dec. 31, 2017
Karl-Heinz Streibich (CEO)	–150,521.00	9,737,357.00
Eric Duffaut	0.00	0.00
Dr. Wolfram Jost	189,288.00	1,963,381.00
Dr. Stefan Sigg (since April 1, 2017)	409,651.00	409,651.00
Arnd Zinnhardt	302,936.00	2,734,908.00

Supervisory Board Remuneration

Remuneration for Supervisory Board members consists of fixed short-term compensation. Members receive additional remuneration for their work on the Committees (Committee for Compensation and Succession Issues, Audit Committee, Strategy Committee, Mediation Committee and Nominating Committee).

The fixed annual compensation per Supervisory Board member was €66,000 (2017: €66,000). Remuneration paid to the members of the Supervisory Board in fiscal year 2018 totaled €614 thousand (2017: €612 thousand).

Remuneration of the Chairperson/Deputy Chairperson

The Chairperson of the Supervisory Board receives 2.2-times the remuneration stated, and the Deputy Chairperson 1.5-times such amount.

Other arrangements

Members of the Supervisory Board also receive €2,000 each time they attend a meeting of one of their committees in person. Attendance compensation is paid only once for multiple committee sessions occurring on the same day or for a session that takes place over consecutive days. The attendance compensation is €4,000 for the committee chairs. This policy took effect on January 1, 2017.

Remuneration is payable one week after approval of the financial statements for the year by the Supervisory Board or, if applicable, the Annual Shareholders' Meeting. Members of the Supervisory Board who were on the Board for only a part of the fiscal year will receive remuneration for each day during the first month of activity and one-twelfth of the annual remuneration for each additional month.

Remuneration of Supervisory Board members for fiscal year 2018 was as follows:

in €	Fixed remuneration	Remuneration for committee work	Total
Dr. Andreas Bereczky (Chairman)	145,200.00	40,000.00	185,200.00
Guido Falkenberg (Deputy Chairman)	99,000.00	20,000.00	119,000.00
Eun-Kyung Park	66,000.00	12,000.00	78,000.00
Alf Henryk Wulf	66,000.00	20,000.00	86,000.00
Markus Ziener	66,000.00	8,000.00	74,000.00
Christian Zimmermann	66,000.00	6,000.00	72,000.00

The Supervisory Board's total remuneration is included in the Notes to the Consolidated Financial Statements and the Notes to the financial statements for Software AG (parent company).

Remuneration of Supervisory Board members for fiscal year 2017 was as follows:

in €	Fixed remuneration	Remuneration for committee work	Total
Dr. Andreas Bereczky (Chairman)	145,200.00	40,000.00	185,200.00
Guido Falkenberg (Deputy Chairman)	99,000.00	20,000.00	119,000.00
Eun-Kyung Park	66,000.00	10,000.00	76,000.00
Alf Henryk Wulf	66,000.00	20,000.00	86,000.00
Markus Ziener	66,000.00	8,000.00	74,000.00
Christian Zimmermann	66,000.00	6,000.00	72,000.00

Members of the Supervisory Board are insured under the Company's Directors & Officers (D&O) insurance policy. The deductible is equal to 10 percent of the damages but no more than 1.5-times the annual remuneration.

TAKEOVER-RELATED DISCLOSURES

Subscribed Capital and Voting Rights

Software AG's share capital totaled €74,000,000 before deducting treasury shares and is divided into 74,000,000 bearer shares. Each share represents €1.00 of the Company's share capital. Each share entitles its holder to one vote. Shareholders can exercise their rights at the Annual Shareholders' Meeting, when they exercise their voting rights in accordance with legal stipulations and the Company's Articles of Incorporation.

Conditional Capital

There was no conditional capital to report.

Authorized Capital

In accordance with the resolution passed at the Annual Shareholders' Meeting on May 31, 2016, there is authorized capital to report. The Management Board is authorized, with the consent of the Supervisory Board, to increase the Company's share capital on one or more occasions on or before May 30, 2021 up to a total of €39,500,000 issuing up to 39,500,000 new bearer shares against cash contributions or contributions in kind (authorized capital).

Share Buyback

Furthermore, the Company is authorized to purchase treasury shares representing up to 10 percent of the existing share capital at the time of the resolution of the par value on or before May 30, 2021 in order to realize benefits associated with the acquisition of treasury shares in the interest of the Company and its shareholders. The treasury shares may be purchased on the stock market or through a public purchase offer addressed to all shareholders of the Company.

p. 191 For more information on conditional capital, authorized capital and the acquisition of treasury stock, please refer to Note [29] in the Notes to the Consolidated Financial Statements.

Significant Shareholders

The Software AG Foundation, Darmstadt, Germany, holds approximately 34 percent of the outstanding shares in Software AG. The foundation is a separate non-profit legal entity and is devoted worldwide to the themes of therapeutic pedagogy, social therapy, education, services to youth and senior citizens, environment and research. No other shareholders hold more than 10 percent of Software AG's share capital.

Appointment/Dismissal of Management Board Members and Changes in the Articles of Incorporation

Management Board members are appointed and dismissed in accordance with section 84 et seqq. of the German Stock Corporation Act. Any changes in the Articles of Incorporation are resolved by the Annual Shareholders' Meeting by a majority of at least three-fourths of the share capital represented at the time of the resolution in accordance with section 179 of the German Stock Corporation Act.

Change of Control

Liabilities to banks in the amount of €200.0 million (2017: €210.0 million) could become due, in full or in part, in the event of a change of control on the part of the creditors. A member of the Management Board whose employment is terminated within 12 months of a change of control without good cause will receive a severance payment equal to one and a half (in three Management Board members' contracts) or three annual salaries (in one Management Board member's contract) based on the most recently agreed annual target remuneration. In case of resignation by a member of the Management Board, the above mentioned regulation is not applicable if the position of the Management Board member has only been altered marginally with the change of control.

In the event of a change of control, any stock appreciation rights granted by the Company under Management Incentive Plans 2017 and 2018 must be paid out at fair value to the relevant plan participants within the term of the rights.

Other takeover-related disclosures not mentioned in this section do not apply to Software AG.

STATEMENT ON CORPORATE GOVERNANCE

The Company submitted its Statement on Corporate Governance/Consolidated Statement on Corporate Governance February 7, 2019. It was published on February 28, 2019 on the following website: https://investors.softwareag.com/en/corporate-governance/governance-statement.

This statement includes the Declaration of Compliance with the German Corporate Governance Code pursuant to section 161 of the German Stock Corporation Act (AktG), which was issued separately and published at https://investors.softwareag.com/en/corporate-governance/compliance-declaration on January 30/February 1, 2019.

CONSOLIDATED FINANCIAL STATEMENTS

In some cases, rounding could mean that values do not add up to the exact sum given or percentages do not equal the values presented.

CONSOLIDATED INCOME STATEMENT

For fiscal years 2018 and 2017

in € thousands	Note	2018	2017
Licenses		249,365	250,134 [1]
Maintenance		415,400	420,205 [1]
SaaS		17,555	9,076 [1]
Services		182,540	198,778
Other		851	790 [1]
Total revenue	**[5]**	**865,711**	**878,983**
Cost of sales	[6]	–194,965	–213,349
Gross profit		**670,746**	**665,634**
Research and development expenses		–124,423	–120,644
Sales, marketing and distribution expenses	[7]	–244,721	–243,461
General and administrative expenses	[8]	–73,952	–75,941
Other taxes	[13]	–7,044	–7,183
Operating earnings		**220,606**	**218,405**
Other income	[9]	16,163	16,277
Other expenses	[10]	–12,220	–19,094
Financing income	[11]	10,482	10,055
Financing expenses	[11]	–6,161	–8,588
Earnings before income taxes		**228,870**	**217,055**
Income taxes	[12]	–63,675	–76,459
Net income		**165,195**	**140,596**
thereof attributable to shareholders of Software AG		164,875	140,333
thereof attributable to non-controlling interests		320	263
Earnings per share in € (basic)	[15]	2.23	1.88
Earnings per share in € (diluted)	[15]	2.23	1.88
Weighted average number of shares outstanding (basic)		73,978,520	74,645,119
Weighted average number of shares outstanding (diluted)		73,980,884	74,649,890

[1] To improve the informative value of its financial statements—particularly regarding earnings performance—Software AG restructured the revenue section of its income statement as of January 1, 2018. Accordingly, revenue from Software as a Service (SaaS) contracts is reported separately.
Figures from the previous year were adjusted to reflect the new presentation structure.

STATEMENT OF COMPREHENSIVE INCOME

For fiscal years 2018 and 2017

in € thousands	Note	2018	2017
Net income		**165,195**	**140,596**
Currency translation differences from foreign operations		11,557	–77,523
Net profit/(loss) from cash flow hedges		–6,472	176
Financial assets available for sale – net change in fair value		0	52
Currency translation gain/loss from net investments in foreign operations		1,768	–5,134
Items to be be reclassified to the income statement if certain conditions are met		**6,853**	**–82,429**
Net profit/(loss) from equity instruments designated to measurement at fair value through other comprehensive income		–4,858	0
Net actuarial gain/loss on pension obligations	[28]	5,772	–4,265
Items not to be reclassified to the income statement		**914**	**–4,265**
Gain/loss recognized in equity	**[29]**	**7,767**	**–86,694**
Total comprehensive income		**172,962**	**53,902**
thereof attributable to shareholders of Software AG		172,642	53,639
thereof attributable to non-controlling interests		320	263

CONSOLIDATED BALANCE SHEET

As of December 31, 2018 and 2017

ASSETS

in € thousands	Note	2018	2017
Current assets			
Cash and cash equivalents		462,362	365,815
Other financial assets	[16]	15,302	26,165
Trade and other receivables	[17]	207,494	226,314
Other non-financial assets	[18]	20,109	17,366
Income tax receivables	[19]	19,680	14,632
		724,947	**650,292**
Non-current assets			
Intangible assets	[20]	136,972	131,664
Goodwill	[20]	964,377	921,415
Property, plant and equipment	[21]	71,023	72,815
Other financial assets	[16]	19,563	54,730
Trade and other receivables	[17]	68,675	53,273
Other non-financial assets	[18]	2,924	199
Income tax receivables	[19]	9,416	8,575
Deferred tax receivables	[22]	10,007	14,507
		1,282,957	**1,257,178**
Total Assets		**2,007,904**	**1,907,470**

EQUITY AND LIABILITIES

in € thousands	Note	2018	2017
Current liabilities			
Financial liabilities	[23]	111,888	210,347
Trade and other payables	[24]	38,831	37,617
Other non-financial liabilities	[25]	145,839	150,416
Other provisions	[26]	30,630	43,708
Income tax liabilities	[27]	37,953	27,505
Deferred income		123,276	112,964
		488,417	**582,557**
Non-current liabilities			
Financial liabilities	[23]	201,432	100,250
Trade and other payables	[24]	3,245	3,677
Other non-financial liabilities	[25]	266	640
Other provisions	[26]	10,320	34,297
Provisions for pensions and similar obligations	[28]	34,621	43,869
Income tax liabilities	[27]	2,898	4,509
Deferred tax liabilities	[22]	11,398	11,599
Deferred income		16,245	7,790
		280,425	**206,631**
Equity	**[29]**		
Share capital		74,000	76,400
Capital reserves		22,612	22,715
Retained earnings		1,201,689	1,176,722
Other reserves		–59,138	–66,905
Treasury shares		–757	–91,249
Attributable to shareholders of Software AG		**1,238,406**	**1,117,683**
Non-controlling interests		**656**	**599**
		1,239,062	**1,118,282**
Total Equity and Liabilities		**2,007,904**	**1,907,470**

CONSOLIDATED STATEMENT OF CASH FLOWS [30]

For fiscal years 2018 and 2017

in € thousands	2018	2017
Net income	165,195	140,596
Income taxes	63,675	76,459
Net financial income/expense	–4,321	–1,467
Amortization/depreciation of non-current assets	32,069	41,202
Payments for cash-settled claims to optional share-based compensation	–53	0
Other non-cash income/expense	–1,033	3,715
Changes in receivables and other assets	31,810	2,159
Changes in payables and other liabilities	–39,513	8,993
Income taxes paid/received	–56,472	–83,040
Interest paid	–6,779	–9,277
Interest received	10,480	10,045
Net cash flow from operating activities	**195,058**	**189,385**
Proceeds from the sale of property, plant and equipment/intangible assets	304	591
Purchase of property, plant and equipment/intangible assets	–10,222	–25,444
Proceeds from the sale of non-current assets financial assets	1,811	1,932
Purchase of non-current financial assets	–2,836	–4,579
Proceeds from the sale of current financial assets	271	4,270
Purchase of current financial assets	–994	–681
Payments for acquisitions, net	–46,693	–49,420
Net cash flow from investing activities	**–58,359**	**–73,331**

in € thousands	2018	2017
Repurchase of treasury shares (including option premiums paid)	0	–89,587
Use of treasury shares	88	1,725
Dividends paid	–48,348	–44,553
Proceeds/payments for current financial liabilities	7,673	96,257
New non-current financial liabilities	100,028	80
Repayment of non-current financial liabilities	–100,021	–70,926
Net cash flow from financing activities	**–40,580**	**–107,004**
Change in cash and cash equivalents	96,119	9,050
Change in cash and cash equivalents from currency translation	428	–17,846
Net change in cash and cash equivalents	**96,547**	**–8,796**
Cash and cash equivalents at beginning of period	365,815	374,611
Cash and cash equivalents at end of period	**462,362**	**365,815**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY [29]

For fiscal years 2018 and 2017

in € thousands	Share capital		Capital reserves	Retained earnings
	Common shares outstanding (no.)			
Equity as of Jan. 1, 2017	**76,231,631**	**79,000**	**23,682**	**1,145,374**
Total comprehensive income				**140,333**
Transactions with shareholders				
Dividend payment				–44,343
Options issued MIP III	71,500		–967	
Redemption of treasury shares		–2,600		–64,642
Repurchase of treasury shares (including option premiums paid)	–2,326,892			
Transactions between shareholders				
Equity as of Dec. 31, 2017	**73,976,239**	**76,400**	**22,715**	**1,176,722**
Application of IFRS 15				–3,715
Application of IFRS 9				–154
Equity as of Jan. 1, 2018	**73,976,239**	**76,400**	**22,715**	**1,172,853**
Total comprehensive income				**164,875**
Transactions with shareholders				
Dividend payment				–48,085
Options issued MIP III	3,650		–103	
Redemption of treasury shares		–2,400		–87,954
Transactions between shareholders				
Equity as of Dec. 31, 2018	**73,979,889**	**74,000**	**22,612**	**1,201,689**

	Other reserves				Treasury shares	Attributable to shareholders of Software AG	Non-controlling interests	Total
	Currency translation differences from foreign operations	Net gain/loss on remeasuring financial assets	Net actuarial gain/loss on pension obligations	Currency translation gain/loss from net investments in foreign operations				
	38,190	**2,926**	**–33,352**	**12,025**	**–71,596**	**1,196,249**	**546**	**1,196,795**
	–77,523	**228**	**–4,265**	**–5,134**		**53,639**	**263**	**53,902**
						–44,343	–210	–44,553
					2,692	1,725		1,725
					67,242	0		0
					–89,587	–89,587		–89,587
	–39,333	**3,154**	**–37,617**	**6,891**	**–91,249**	**1,117,683**	**599**	**1,118,282**
						–3,715		–3,715
						–154		–154
	–39,333	**3,154**	**–37,617**	**6,891**	**–91,249**	**1,113,814**	**599**	**1,114,413**
	11,557	**–11,330**	**5,772**	**1,768**		**172,642**	**320**	**172,962**
						–48,085	–263	–48,348
					138	35		35
					90,354	0		0
	–27,776	**–8,176**	**–31,845**	**8,659**	**–757**	**1,238,406**	**656**	**1,239,062**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

In some cases, rounding could mean that values do not add up to the exact sum given or percentages do not equal the values presented.

GENERAL

[1] Basis of Presentation

Software AG's consolidated financial statements are prepared in accordance with the International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), as applicable in the European Union (EU), and in accordance with the additional provisions required under German commercial law as set forth in section 315e (1) of the German Commercial Code (HGB). The IFRS applicable as of December 31, 2018 were observed, as were the corresponding interpretations of the International Financial Reporting Interpretations Committee (IFRIC).

Software AG is a registered stock corporation under German law with registered offices in Darmstadt. It is the principal parent company of a Group that is globally active in the fields of software development, licensing and maintenance as well as IT services. The functional currency of Software AG is the euro.

Software AG's Management Board approved the consolidated financial statements on March 1, 2019. Software AG's Audit Committee discussed the the consolidated financial statements in its meeting on March 22, 2019. The Supervisory Board approved the consolidated financial statements in its meeting on March 22, 2019.

The consolidated financial statements of Software AG are expressed in thousands of euros unless otherwise stated. The figures presented in the report were rounded according to customary business practice. In some cases, rounding could mean that values in this report do not add up to the exact sum given or percentages do not equal the values presented.

The separate financial statements of the companies of the consolidated Group were prepared on the date of the consolidated financial statements.

[2] Scope of Consolidation

The consolidated financial statements include Software AG and all of the entities it controls. Control exists when Software AG can exercise power of control over the entity, is impacted by fluctuating returns on its share in the entity and can influence the amount of the returns.

The following affiliated entities are part of the Group of Software AG (parent company):

a) Domestic entities	Ownership interest %	Equit[1] Dec. 31, 2018 in € thousands	Earnings 2018 in € thousands
SAG Deutschland GmbH, Darmstadt and its foreign subsidiaries	100	17,481	2,266
• Alfabet Saudi Arabia LLC, Riyadh/Saudi Arabia	95		
in which Software AG (Gulf) S.P.C. also has a direct stake	5	166	–126
SAG Consulting Services GmbH, Darmstadt	100	378	499
SAG LVG mbH, Darmstadt and its foreign subsidiaries	100	959	0
• Software Dutch License Company C.V., Al's-Gravenhage/ Netherlands	99	4,925	20
FACT Unternehmensberatung GmbH, Darmstadt and its subsidiary	100	913	291
• FACT Informationssysteme und Consulting AG, Neuss	55	1,458	711
itCampus Software- und Systemhaus GmbH, Leipzig	100	–243	300
SAG Cloud GmbH, Darmstadt	100	374	93
Cumulocity GmbH, Düsseldorf	100	3,461	–1,071

[1] The figures specified are based on unconsolidated IFRS figures. Equity is translated into euros at the closing rate and earnings at the average exchange rate for the year.

b) Foreign entities	Ownership interest %	Equity[1] Dec. 31, 2018 in € thousands	Earnings 2018 in € thousands
Software A.G. Argentina S.R.L., Buenos Aires/Argentina	95		
in which SAG Deutschland GmbH also has a direct stake	5	2,418	1,590
Software AG Sydney PTY LTD, North Sydney/Australia	100 inactive	0	0
Software AG (Gulf) S.P.C., Manama/Bahrain and its subsidiary	100	4,724	557
• Software AG International FZ-LLC, Dubai/United Arab Emirates	100	1,837	–1,354
TrendMiner NV, Hasselt/Belgium (acquired as of June 29, 2018) and its subsidiaries	100	–1,119	–2,397
• TrendMiner B.V., BL Breda/Netherlands	100	–542	–190
• TrendMiner GmbH, Cologne/Germany	100	–145	–63
• TrendMiner Inc., Houston, Texas/USA	100	–1,654	–685
IDS Scheer Sistemas de Processamento de Dados, São Paulo/Brazil	100	60	-86
Software AG Development Center Bulgaria EOOD, Sofia/Bulgaria	100	2,178	625
Software AG China Ltd., Shanghai/China	100	–4,425	–484
Software AG (Hong Kong) Limited, Hong Kong/China	100	–2,677	–311
Software AG Denmark A/S, Hvidovre/Denmark and its subsidiary	100	5,246	2,885
• Software AG Nordic A/S, Oslo/Norway	100 inactive	27	–4
Software AG Finland Oy, Helsinki/Finland	100	1,456	484
Software AG France S.A.S, Paris La Défense Cedex/France	100	22,204	3,644
Software AG (U.K.) Limited, Derby/U.K. and its subsidiaries	100	58,399	15,596
• Software AG Belgium S.A., Watermael-Boitsfort/Belgium	76		
in which Software AG also has a direct stake	24	4,441	1,388
• PCB Systems Limited, Derby/U.K.	100 inactive	2,021	0
• SAG SALES CENTRE IRELAND LIMITED, Dublin/Ireland	100	272	116
SGML Technologies Limited, Derby/U.K.	100 inactive	1,967	0
Software AG India Sales Private Ltd, Bangalore, Karnataka, India	100	3,963	868
Software AG (India) Private Limited, Bangalore/India	100	19	–1
PT Software AG Indonesia Operations, Jakarta/Indonesia (founded on September 18, 2018)	99	129	–22
S.P.L. Software Ltd, OR-Yehuda/Israel and its subsidiary	100	63,992	3.974
• Software A.G. (Israel) Ltd, OR-Yehuda/Israel	100	18,261	1,304
Software AG Italia S.p.A, Milan/Italy	100	1,608	25
Software d.o.o., Split/Croatia (liquidated as of October 26, 2018)	100	0	0
SAG Software AG Luxembourg S.A., Capellen/Luxembourg	100	374	116

b) Foreign entities	Ownership interest %	Equity[1] Dec. 31, 2018 in € thousands	Earnings 2018 in € thousands
Software AG Nederland B.V., Den Haag/Netherlands	100	9,997	2,395
Software GmbH Österreich, Vienna/Austria	100	9,931	2,700
Software AG (Philippines), Inc., Makati City/Philippines	100	818	161
Software AG Polska Sp. z o.o., Warsaw/Poland	100	4,243	1,082
Limited Liability Company Software AG (RUS), Moscow/Russia	100	927	29
IDS Scheer Saudi Arabia LLC, Riyadh/Saudi Arabia (in liquidation)	95		
in which SAG Software Systems AG also has a direct stake	5	0	0
Software AG Saudi Arabia LLC, Riyadh, Saudi Arabia (liquidated as of January 22, 2018)	95	0	0
Software AG Sweden AB, Kista/Sweden	100	2,246	509
SAG Software Systems AG, Zurich/Switzerland	100	5,889	2,159
Software AG (Singapore) Pte LTD, Singapore	100	9,305	1,464
Software AG Development Centre Slovakia s.r.o., Košice/Slovakia	100	344	80
Software d.o.o., Ljubljana/Slowenien (liquidated as of April 6, 2018)	100	0	0
Software AG España, S.A. Unipersonal, Tres Cantos, Madrid/Spain and its subsidiaries	100	61,721	5,959
• Software AG Brasil Informática e Serviços Ltda, São Paulo/SP, Brazil	100	20,766	3,816
• Software AG Factoria S.A., Santiago de Chile/Chile	100	0	–1
• Software AG De Panamá, S.A., Corregimiento de Pueblo nuevo/Panama and its subsidiary	100	–697	21
•• Software AG De Costa Rica, S.A., San José/Costa Rica	100	43	91
• Software AG (Portugal) Alta Tecnologia Informática, Ltd., Lisbon/Portugal	97		
in which Software AG also has a direct stake	3	1,606	491
• Software AG De Puerto Rico, Inc., San Juan/Puerto Rico	100	907	305
• A. Zancani & Asociados, C.A., Chacao Caracas/Venezuela	100 inaktiv	0	0
• Software AG Venezuela, C.A., Caracas/Venezuela	100	2	506
Software AG South Africa (Pty) Ltd, Bryanston/South Africa	100	6,302	1,450
Software AG Bilgi Sistemleri Ticaret A.S., Istanbul/Turkey	100	2,263	504
Software AG, Inc., Reston, VA/USA and subsidiaries	100	394,109	804
• Software AG (Canada) Inc., Kitchener, Ontario/Canada	100	9,079	8,377
• Software AG, S.A. de C.V. (Mexico), Distrito Federal/Mexico	100	1,678	155
• Software AG Cloud Americas, Inc., Wilmington (New Castle)/USA	100	199	49
• Software AG CLOUD APJ PTY LTD, North Sydney/Australia	100	13	3
• Software AG USA, Inc., Reston, VA/USA and subsidiaries	100	548,514	103,398
•• Software AG Australia (Holdings) Pty. Ltd., North Sydney/ Australia and its subsidiary	100	15,457	–3,191
••• Software AG Australia Pty. Ltd., North Sydney/Australia	100	61,267	10,356
•• Software AG Bangalore Technologies Private Ltd., Derarabisanahalli Bangalore/India	100	12,249	3,610

b) Foreign entities	Ownership interest %	Equity[1] Dec. 31, 2018 in € thousands	Earnings 2018 in € thousands
• Software AG Chennai Development Center India Pvt Ltd, Chennai, India	100	1,829	377
• Software AG Kochi Pvt. Ltd., Bangalore, Karnataka/India	98	269	11
• Software AG Ltd. Japan, Minato-ku, Tokyo/Japan	100	1,365	669
• Software AG Operations Malaysia Sdn Bhd., Selango, Malaysia	100	4,350	1,711
• Software AG Korea, Ltd., Seoul/South Korea	100	1,509	612
• Software AG Distribution LLC, Reston, VA, USA	100	7,929	57,283
• Software AG Government Solutions, Inc., Herndon, VA/USA	100	34,846	15,799
• Operadora JackBe Mexico, Mexico City, Mexico	100	453	47
• Zementis Inc., San Diego/USA(merged with Software AG USA, Inc., as of December 31, 2018)	100	0	0
• Terracotta Inc., San Francisco/USA (merged with Software AG USA, Inc. as of December 31, 2018) and its subsidiary	100	0	0
• Terracotta Software India Pvt. Ltd., Bangalore, Karnataka/India	100 inactive	125	4

[1] The figures specified are based on unconsolidated IFRS figures. Equity is translated into euros at the closing rate and earnings at the average exchange rate for the year.

Changes in the consolidated Group

The scope of consolidation changed as compared to December 31, 2017 as follows:

	Germany	Foreign	Total
Dec. 31, 2017	**9**	**72**	**81**
Additions	1	4	5
Disposals (including mergers)	0	5	5
Dec. 31, 2018	**10**	**71**	**81**

The disposals relate to the liquidation of three consolidated companies and two mergers. The additions refer to the acquisition of TrendMiner NV in Hasselt, Belgium, and its subsidiaries in Germany, the Netherlands and the USA as well as the founding of a company in Indonesia. The change to the scope of consolidation had no significant effect on comparability to last year.

[3] Accounting Policies

Use of estimates

In the preparation of the consolidated financial statements, estimates and assumptions are made for certain items that have an impact on the recognition and measurement of recognized assets, liabilities, income, expenses and contingent liabilities. These estimates and assumptions are based on historical data and are reviewed on an ongoing basis. Actual amounts may differ from the estimates made. The primary areas of application for estimates and assumptions are revenue recognition, share-based remuneration accounting, acquisition accounting, subsequent accounting of goodwill and other intangible assets, measurement of pension obligations, assessment of legal risks, measurement of trade receivables and income tax and deferred tax accounting.

Principles of consolidation

The separate financial statements of the entities included in the consolidated financial statements were prepared in accordance with uniform accounting policies pursuant to IFRS as of the balance sheet date for the consolidated financial statements (December 31, 2018). The initial consolidation method applied to business combinations was based on the respective date of foundation in the case of companies founded by Software AG. Acquired companies are included for the first time on the date Software AG achieves control. Changes in ownership interests that do not lead to a loss of control are reported in equity.

Since the transition to IFRS on January 1, 2003, goodwill previously recognized in line with the Commercial Code has been measured in accordance with IAS 36.

Revenue, expenses and income and receivables and payables arising between consolidated entities have been eliminated. Intercompany earnings are eliminated where they have not arisen from services to third parties. Group equity and net income attributable to minority interests are reported separately from equity and net income attributable to the shareholders of the parent company.

Mergers

All mergers are recognized according to the purchase method. For every transaction,Software AG decides whether it recognizes the non-controlling interest in the acquired company at fair value or based on the corresponding share of identifiable net assets.

Currency translation

Financial statements of foreign subsidiaries are translated in accordance with the functional currency concept using the modified closing rate as set out in IAS 21. Since the subsidiaries operate independently from an organizational, financial, and business standpoint, the respective local currency is identical with the functional currency.

Income and expenses are translated at the relevant monthly average rate, assets and liabilities are translated at the closing rate, and the respective equity of the subsidiaries is translated at historical rates into euros.

Currency translation differences arising from equity consolidation are offset against equity and reported in a separate column in the Statement of Changes in Equity.

In the schedule of changes in property, plant and equipment, the balances at the beginning and the end of the fiscal year are translated at the applicable closing rates, and other items are translated at average rates. Any differences arising from exchange rate fluctuations are reported as currency translation differences as a separate line item under cost and accumulated depreciation/impairment.

In the separate financial statements of the consolidated entities, foreign currency receivables and payables are translated at the closing rate. Exchange rate gains and losses not yet realized as of the balance sheet date are included in profit or loss for the period, except for translation differences arising from non-current, intercompany monetary items that are part of a net investment in a foreign company. These differences are recognized directly in equity under "other reserves."

Software AG recognizes Venezuela and, since 2018, Argentina as hyperinflationary economies as defined by IAS 29. This had no material impact on the consolidated financial statements.

The exchange rates used for the translation of the most important currencies changed as follows compared to the previous year:

Closing Rate

€1	Dec. 31, 2018	Dec. 31, 2017	Change as %
U.S. dollar	1.1450	1.1993	4.5%
Brazilian real	4.4440	3.9729	–11.9%
Pound sterling	0.8945	0.8872	–0.8%
Australian dollar	1.6220	1.5346	–5,7%
Israeli shekel	4.2972	4.1635	–3.2%
South African rand	16.4594	14.8054	–11.2%
Canadian dollar	1.5605	1.5039	–3.8%

Average Rate

€1	Dec. 31, 2018	Dec. 31, 2017	Change as %
U.S. dollar	1.1815	1.1293	–4.6%
Brazilian real	4.3087	3.6041	–19.5%
Pound sterling	0.8847	0.8761	–1.0%
Australian dollar	1.5799	1.4729	–7.3%
Israeli shekel	4.2438	4.0608	–4.5%
South African rand	15.6134	15.0434	–3.8%
Canadian dollar	1.5302	1.4644	–4.5%

Total revenue

Since the introduction of IFRS 15, accounting policies for revenue recognition are as follows:

Categories of sales revenue

Software AG sales revenues consist primarily of revenue from granting software licenses of temporary or indefinite duration, revenue from Software as a Service (SaaS) offerings, maintenance revenue and revenue from services. With respect to SaaS offerings, a customer is not entitled to terminate a hosting agreement or take the software into its own possession, either to operate in its own IT infrastructure or to engage an entity other than Software AG to provide software hosting or management services. These categories of sales revenue also reflect the impact of economic factors on type, amount, date and uncertainty of revenue and cash flows.

Identification of contractual obligations

Software AG's contracts with customers often include various products and services. The products and services described in the last section, Categories of Sales Revenue, are usually to be treated as separate contractual performance obligations. The relevant portion of the contractual price is recognized separately. The determination as to whether a product or a service is treated as a separate contractual performance obligation nevertheless requires judgment to be exercised.

When customers purchase products or services, Software AG sometimes offers them options for buying additional products or services. Software AG exercises its own judgment when determining whether such options give the customer a substantive right that it wouldn't have without signing this agreement. In making this determination, the Company considers whether the options entitle the customer to a discount that is greater than the discount provided with the relevant products or services sold with the option.

Determination of transaction price

Software AG also exercises judgment when determining the consideration that it expects to receive in exchange for the transfer of products or services to a customer. This includes estimations as to whether and to what extent the customer is entitled to subsequent concessions or payments and whether the customer will pay the contractually agreed consideration as expected. In this exercise of judgment, primarily previous experiences with a specific or a comparable customer are considered. These estimates are reviewed every balance sheet date. Software AG's contracts generally do not contain variable considerations. There may, however, be individual cases when retrospective adjustments are made to the transaction price, which must be recognized as revenue corrections on the date they were made.

Some agreements include significant financing elements. Software AG recognizes financing elements when the period of time between the transfer of purchased products or services to the customer and payment of these products or services by the customer is at least one year.

Division of transaction price

The transaction price is generally divided between the individual contractual performance obligations based on the individual sales prices. Software licenses of indefinite duration are often sold in combination with maintenance and service contracts. In this case, when an agreement involves multiple elements, revenue recognition is based on the individually identifiable performance obligations of the transaction. Because it is impossible to calculate reliable individual sale prices for software licenses, revenue is divided between the different revenue types using the residual method. Under the residual method, all determinable individual sale prices are deducted from the total transaction value, and the residual amount is distributed among the software licenses using list prices.

Temporary software licenses are often sold in combination with maintenance services. The two performance obligations are usually inextricably linked (subscriptions). The Company exercises its own judgment in dividing up the transaction price. The transaction price for software licenses of indefinite duration is used as the basis for dividing the transaction price. The average term of these subscription agreements is estimated.

Recognition of sales revenue

Software AG accounts for revenue from SaaS based on time elapsed during the period in which the relevant services are rendered.

Software license revenues are recognized as of the date on which the customer is granted access to the software and the license period begins when access is granted. Software AG recognizes revenues for these on-premise licenses as of the date on which the customer receives access to and thus control over the software. When deciding whether software offerings grant customers the right to use Software AG's intellectual property and not the right to access its intellectual property, the usefulness of its software for customers—without subsequent updates—is considered.

Maintenance revenues are recognized proportionately over the term of the maintenance contract period.

Revenue resulting from services invoiced on the basis of hours performed is recognized according to services rendered by a Software AG entity. Revenues and expenses from fixed-price service contracts are recognized in accordance with the percentage-of-completion (POC) method if Software AG's service generates an asset that does not provide Software AG with any alternative options for use and Software AG is legally entitled to payment for services already rendered. Should Software AG's service from a fixed-price contract generate or improve an asset and should the customer have control over the asset, the PoC method is also used for revenue recognition. The stage of completion of a contract is calculated on the basis of the proportion of contract costs incurred for work performed as of the balance sheet date to the estimated total contract costs. Some of the costs for making this calculation are estimated using the number of consulting hours/consulting days charged.

Software AG's contracts generally do not contain withdrawal, reimbursement or other similar obligations.

Incremental costs when acquiring new orders

The assets that Software AG capitalizes as costs associated with acquiring a new customer order consist primarily of sales employee commissions. The assets are amortized over the expected contract term using the straight-line method. Amortization periods range from two to five years. The amortization of capitalized costs for the acquisition of new orders is included in sales and marketing expenses.

Software AG recognizes incremental costs for acquiring new orders as expenses as of the date on which they are incurred when the amortization period is not assumed to be longer than one year.

Cost of sales

Cost of sales includes all production-related full costs based on normal capacity utilization. In particular, the cost of sales includes the individual unit costs that can be directly allocated to orders as well as fixed and variable overheads.

Research and development expenses

Research and development expenses are recognized in the income statement as incurred.

New products are not technologically realizable until shortly prior to being ready for market launch. In the run-up to technological realizability, research and development processes are closely linked. Any research and development expenses incurred after technological realizability has been achieved are immaterial.

Sales, marketing and distribution expenses

Sales, marketing and distribution expenses include costs for personnel and materials as well as amortization allocated to sales and marketing and advertising costs.

General and administrative expenses

General and administrative expenses include costs for personnel and materials as well as amortization allocated to administration.

Government grants

Government grants are not recognized until there is reasonable assurance that the conditions attaching to them will be complied with and that the grant will be received by Software AG. This is normally the case upon receipt of payment. Government grants are reported under "other income."

If loans from the government are granted at an interest rate below the market rate, the interest-rate advantage is valued as the difference between the original carrying amount of the loan, calculated in accordance with IRFS 9, and the payments received. The interest-rate advantage is reported under "other income," as soon as all conditions for receiving government grants have been met.

Borrowing costs

Borrowing costs that are directly attributable to the acquisition, construction, or production of a qualifying asset are capitalized as part of the cost of the asset. Other borrowing costs are recognized as an expense for the period in which they were incurred. No borrowing costs were capitalized in fiscal 2018 or 2017.

Share-based payment

In accordance with IFRS 2, share-based payment transactions are divided into cash-settled and equity-settled transactions. The latter plays only a minor role for Software AG because there is only a very small number of rights left that can be settled in equity. Both types of payment transactions are measured at their fair value as of the grant date The value is then recognized over the vesting period as remuneration expenses. Rights granted under cash-settled share-based payment transactions are remeasured at fair value on each reporting date until settlement.

If Software AG has a choice of settling either in cash or by providing equity instruments (shares), the right granted is accounted for as an equity-settled transaction, unless there is a present obligation to settle in cash.

Non-derivative financial assets

Software AG recognizes non-derivative financial assets as of the date it acquires the contractual right to receive cash or other financial assets from another entity. Standard purchases and sales are measured at fair value as of the value date.

ASubsequent measurement is carried out based on the following categories of financial assets:

a) **amortized cost (AC)**

b) **fair value through profit or loss (FVPL)**

c) **fair value through other comprehensive income (FVOCI)**

Software AG classified its balance of equity securities as of January 1, 2018 at fair value through other comprehensive income. Software AG generally uses the option that allows it to classify each new equity security individually as fair value through comprehensive income or fair value through profit or loss.

Trade receivables

Trade receivables are classified based on the business model (hold to collect versus hold to sell). Receivables which are not intended for sale and/or sale is not an option are measured at amortized cost (about 80 percent of receivables balance). Receivables categorized as hold to collect and sell account for about 20 percent of Software AG's receivables balance and are recognized at fair value through other comprehensive income provided deviations from recognition at amortized cost are material. If the deviations are immaterial, receivables categorized as hold to collect and sell are also allocated to financial assets measured at amortized cost.

Software AG applies a simplified impairment model based on an impairment matrix. This impairment matrix is based primarily on historical data on credit losses and current data on receivables overdue.

Furthermore, outstanding receivables are monitored on an ongoing basis at local and central levels to determine if the relevant receivables show any objective indications of jeopardized creditworthiness. If, using this approach, Software AG arrives at the assumption that realization of a receivable is improbable, the relevant receivables are written down in part or in whole based on the values in the impairment matrix.

Derivative financial instruments

If the derivative financial instruments are financial assets or financial liabilities in accordance with IAS 32, they are recognized at fair value. Instruments for which hedge accounting is not applied are classified as fair value through profit or loss. Changes in the fair value of the instruments are recognized directly in profit or loss.

If the criteria for hedge accounting in accordance with IFRS 9 are met, the derivative financial instrument is designated as a hedging instrument and accounted for pursuant to the hedge accounting provisions of IFRS 9.

Accordingly, in the case of cash flow hedges, the effective portion of changes in the fair value of derivatives is recognized directly in equity. The ineffective portion is recognized directly in profit or loss. Cumulative amounts previously recognized in equity are reclassified to the income statement for the fiscal years in which the hedged item affects profit or loss.

The Company did not recognize any fair value hedges.

If the derivative financial instruments are equity instruments in accordance with IAS 32, they are reported as equity. Accordingly, paid premiums for acquired call options that entitle Software AG to buy back a set number of treasury shares for a set amount are deducted from equity.

All hedge accounting relationships as of December 31, 2017 continued to meet the hedge accounting requirements set forth by IFRS 9.

Non-derivative financial liabilities

In accordance with IFRS 9, Software AG classifies non-derivative financial liabilities at amortized cost or at fair value through profit or loss.

Subsequent measurement of financial liabilities classified as at amortized cost is carried out using the effective interest rate.

Financial liabilities are derecognized when the contractual obligation has been settled, canceled or has expired.

Cash and cash equivalents

Cash and cash equivalents include cash on hand, bank balances and term deposits with maturities of up to three months as well as short-term, highly liquid securities classified as current assets that are readily convertible to known amounts of cash and are only subject to negligible risk of changes in value.

Intangible assets

Intangible assets for which a useful life can be established are measured at cost less any accumulated amortization and impairment losses. The amortization period and method of amortization for key intangible assets are as follows:

	Amortization period in years	Amortization method
Acquired software	5–12.5	straight line
Acquired customer base	5–17	straight line
Acquired order portfolio	—	in accordance with order completion

Intangible assets with an indefinite useful life are measured at cost less any accumulated impairment losses. Intangible assets with an indefinite useful life are tested for impairment at least once per year. Or, as soon as there is any indication that goodwill might be impaired, an impairment test is carried out.

Goodwill

Goodwill resulting from mergers is recognized at cost. Goodwill is not amortized. Instead, it is tested for impairment at least once per year (as of December 31) and written down to its recoverable amount in case of impairment. Or, as soon as there is any indication that goodwill might be impaired, an impairment test is carried out. Any impairment losses are reported directly in the income statement and cannot be recovered in the following period.

Property, plant and equipment

Property, plant and equipment are carried at cost less any accumulated depreciation. When items of property, plant and equipment are sold or scrapped, the corresponding cost and any accumulated depreciation are derecognized, and any gains or losses from disposal are recognized in the Consolidated Income Statement.

The cost of items of property, plant and equipment consists of the purchase price, including any import duties and non-refundable purchase taxes and any directly attributable costs required to prepare the asset for operation in its intended use. Any subsequent expenditure, such as service or maintenance charges arising once the asset has been put into operation, is recognized as an expense in the period in which it is incurred. Subsequent expenditures relating to an item of property, plant and equipment are only capitalized if the expenditure improves the condition of the asset beyond its originally assessed standard of performance.

Items of property, plant and equipment are generally depreciated using the straight-line method in accordance with their useful economic lives.

	Years
Buildings	25–50
Improvements to buildings/leasehold	5–15
Operating and office equipment	3–13
Computer hardware and accessories	1–7

The terms of useful economic life and methods of depreciation are reviewed on a regular basis to ensure that they are in accordance with the expected pattern of economic benefits of the asset in question.

Assets under construction are recognized at cost. Depreciation on these items begins only after they have been put into operation.

Impairment of intangible assets and property, plant and equipment

As soon as there is any indication that an intangible asset with an indefinite useful life or an item of property, plant and equipment might be impaired, an impairment test is carried out and, if an impairment loss is ascertained, the carrying amount of the asset is written down to its lower recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and its value in use. The value in use is the present value of estimated future cash flows expected to arise from the continued use of the asset and from its disposal at the end of its useful life. Impairment losses are reversed provided the reasons for a previously scheduled impairment no longer exist.

Impairment losses are reported under costs of the relevant functional area or under other expenses.

Deferred taxes

Deferred tax assets and liabilities are recognized for temporary differences between the carrying amounts in the tax accounts (tax base) and the carrying amounts in the Consolidated Balance Sheet. Deferred tax assets also include claims for tax reductions resulting from the anticipated use of tax loss carryforwards in subsequent years, the realization of which is deemed probable.

Deferred taxes are calculated on the basis of tax rates anticipated to apply in the relevant countries in accordance with the legal situation prevailing at the time of realization (reversal of tax deferrals).

Deferred tax assets and liabilities are not discounted. The carrying amounts of the recognized assets and liabilities are regularly examined and adjusted if necessary.

Other provisions

Other provisions are reported when the Company has a current legal or constructive obligation towards a third party due to a past event that is likely to result in a future outflow of resources and for which the amount of the obligation can be reliably estimated. Estimates are regularly reviewed and adjusted.

If the effect of discounting is significant, the provision is recognized in the amount of the present value of the expected future cash flows.

Provisions for pensions and similar obligations

The present value of pension obligations for defined benefit plans and the associated expenses are determined using actuarial principles in accordance with the projected unit credit method set out in IAS 19 (revised in 2011, IAS 19R). This approach takes into account anticipated future increases in pensions and salaries in addition to the pensions known as of the balance sheet date.

The pension provisions are reported at the full present value of the defined obligation, less the fair value of the reinsurance cover taken out for life insurance policies—provided they are pledged and thus protected from access by other creditors—or less the fair value of the plan assets accumulated to cover pension entitlements. The result of the recalculated net obligation is recognized as other comprehensive income in the Statement of Comprehensive Income. It is comprised of actuarial gains and losses, the return on plan assets and changes in the effects of the asset cap less amounts previously recognized as net interest.

Payments for defined contribution pension plans are recognized as expenses in profit or loss for the period provided the employee has met the stated performance target.

Deferred income

Deferred income consists of advance payments received from customers for maintenance services to be rendered in future periods. The deferred item is reversed and taken to income in the period in which the service is rendered.

Treasury shares

The amount paid for treasury shares, including directly attributable costs, is deducted from shareholders' equity. Treasury shares are reported as a separate item in the equity statement.

New accounting rules to be applied starting in the fiscal year

Application of IFRS 15

The IASB published IFRS 15, "Revenue from Contracts with Customers," in May 2014. IFRS 15 replaces IAS 11 "Production Orders" and IAS 18 "Revenue Income" and the corresponding interpretations. According to the new standard, revenue recognition should reflect the transfer of promised goods or services to a customer as the amount of the consideration that the company expects to receive in exchange for these goods or services. Revenue is recognized when the customer receives power of control over the goods or services. Furthermore, IFRS 15 includes requirements on disclosing assets or liabilities from contracts with customers depending on the relationship between the service rendered by the company and payment made by the customer. In addition, the new standard requires disclosure of various quantitative and qualitative data that enable users of the consolidated financial statements to understand the type, the amount, the timing and possible uncertainty of revenues and cash flows from contracts with customers. In September 2015 the IASB decided to postpone the date of first-time application of the standard to fiscal years that begin on or after January 1, 2018; early application is permitted. In April 2016 a number of clarifications to IFRS 15 were published, in particular with regard to identifying separate contractual obligations, differentiating between principal and agent and recognizing licensing income. These clarifications were published on November 9, 2017 in the Official Journal of the European Union; IFRS 15 and the amendment to IFRS 15 on postponement of the date of first-time application were published on October 29, 2016 in the Official Journal of the European Union.

Software AG analyzed the rules of IFRS 15 and depicted how they will impact its business model. The relevant departments of the Company (Business & Sales Management, Finance, Product Management) received in-depth training and instruction.

Software AG did not exercise the option of early application before fiscal year 2018. In addition to complete retrospective application of IFRS 15, the standard permits modified retrospective application. The standard will be applied only after the date of first-time application so that periods being compared do not need to be adjusted retrospectively, with the exception of adjustments to equity. In that case, as of the date of first application, a company must balance only those contracts that, pursuant to the current accounting principles, have not yet expired prior to the date of first application in accordance with the new rules. Software AG applied the standard using a modified retrospective method starting January 1, 2018.

Effects of application of IFRS 15

The findings of an in-depth impact analysis show that IFRS 15 requires a new way of determining the point in time at which sales revenue for some contractual obligations is recognized. The effects of first-time application of IFRS 15 described below do not account for deferred taxes. According to rules in effect until 2017, income from temporary licenses resembling a transfer of use in nature (leasing licenses and subscriptions) was recognized in installments during the period of use. According to IFRS 15, revenue allocated to the license portion is recognized at the beginning of the transfer of use. This aspect of application of IFRS 15 resulted in a positive conversion effect recognized in equity as of January 1, 2018 in the amount of €735 thousand; trade receivables increased by the corresponding amount. This value refers to the license portion of licenses and subscriptions, which, according to previous revenue recognition policies, was to be recognized in subsequent periods, and which, pursuant to IFRS 15, must be allocated in whole at the time of transfer of use. This license revenue will therefore not be reported as revenues in the Consolidated Income Statement in subsequent periods (so called "black hole"). As a result, license revenue in fiscal 2018 went down by €411 thousand and trade receivables as of January 1, 2018.

IFRS 15 requires license revenue from leasing licenses and subscriptions to be recognized as of the beginning of the transfer of use. Previously applied reporting policies required it to be recognized over the period of use.

Software AG utilized the transition to new reporting policies to better address the recent change in customer behavior. It drew up significantly more subscription-based agreements (OPEX, operational expenditure) than unlimited transfer of use agreements (CAPEX, capital expenditure). As discussed above, the contractual license percentages must be recognized immediately in these types of agreements so that the date of revenue recognition is not affected by the change in license model. Due to this approach, Software AG expects to be able to close deals faster and achieve higher cash flows from the customer base. The Company concluded contracts for subscription license revenue in the amount of €38,576 in fiscal 2018. This would have resulted in license revenue of €3,410 thousand pursuant to IAS 18 policies in effect until December 31, 2017. The rise in subscription agreements closed in 2018—from €1,130 thousand (license revenue pursuant to IFRS 15) in 2017 to €38,576 thousand in fiscal 2018—would not have occurred without the intentional change in licensing approach resulting from adoption of IFRS 15. The overall effect of adoption of IFRS 15 on license revenue in the amount of €35,166 thousand is therefore a bookkeeping figure and of very little economic significance. Trade receivables were up by €33,299 thousand as of December 31, 2018; deferred income was down by €1,867 thousand.

According to the accounting methods used up to and including 2017, the revenue portion attributable to software licenses in a multi-component transaction was regularly determined using the residual method. Under the residual method, all determinable market values were deducted from the total transaction value. Some agreements offered customers options to purchase future services. According to IFRS 15, these options represent a substantive right to which a separate value must be assigned. Application of IFRS 15 resulted in a negative conversion effect recognized in equity in the amount of €5,304 thousand as of January 1, 2018; deferred income increased accordingly by €3,910 thousand and trade receivables decreased by €1,394 thousand. This conversion effect will be recognized as maintenance revenue over the assumed term of the substantive right in subsequent years, of that €1,315 thousand were recognized in fiscal 2018. Deferred income was up by €3,989 thousand as of December 31, 2018.

Some of Software AG's agreements grant customers rights of use for a limited period of time. When such a contract is renewed, the customer's temporary rights of use are extended. According to accounting methods in effect until 2017, the resulting license revenue could be recognized before the period of renewal began. According to IFRS 15, license revenue cannot be recognized before the period of renewal has begun. Application of IFRS 15 resulted in a negative conversion effect recognized in equity in the amount of €4,585 thousand as of January 1, 2018; trade receivables decreased accordingly. This conversion effect had to be recognized as license revenue in fiscal 2018.

With regard to determination of the transaction price for an individual contract, IFRS 15 calls for an estimate of the transaction price amount on the date the contract is concluded and on every balance sheet date. There may be individual cases when retrospective changes are made to the transaction price, which must be recognized as revenue adjustments on the date they were made. First-time application of this approach in accordance with IFRS 15 resulted in a decrease in license revenue of €7,355 thousand, in maintenance revenue of €1,374 thousand and in service revenue of €1,014 thousand in fiscal 2018; trade receivables went down accordingly. Pursuant to the accounting policies used through the year 2017, sales and marketing expenses would have been €7,355 thousand higher and the cost of sales €2,388 thousand higher.

The total effect of the adoption of IFRS 15 on Digital Business Platform (DBP) product revenue was €27,910 thousand in fiscal 2018. The majority of this amount results from the conversion of licensing approach and the associated intensified focus of the go-to-market model on OPEX. This proactive adaptation of contract modalities would not have happened without the adoption of IFRS 15. The aforementioned figure is therefore a theoretical IFRS 15-induced amount of no economic significance. Had Software AG applied IFRS 15 equally in fiscal year 2018 and 2017, DBP product revenue would have increased by a similar total rate as presented in the last consolidated financial statements with the change in reporting policies from IAS 18 to IFRS 15.

The effects of the adoption of IFRS 15 on Adabas & Natural (A&N) product revenue were €4,012 thousand in fiscal 2018.

Pursuant to IFRS 15, costs incurred from acquiring new orders must be capitalized and then amortized subsequently. Software AG did not capitalize costs related to new orders until 2018. The application of IFRS 15 resulted in a positive conversion effect recognized in equity as of January 1, 2018 in the amount of €4,294 thousand due to capitalization of costs from new orders; other non-financial assets increased accordingly. Sales and marketing expenses have been recognized in that amount through profit or loss since January 1, 2018.

Operating expenses went down by €1,018 thousand due to the reduction of sales and marketing expenses in fiscal 2018. This resulted from capitalization of sales commissions as non-financial assets less amortization of the capitalized amounts. Costs capitalized from new orders totaled €5,311 thousand as of December 31, 2018.

The effects of adoption of IFRS 15 presented above resulted in a net improvement in operating income of €6,918 thousand, not including revenue from subscription agreements. Including the effect on earnings from the switch to subscription agreements in the amount of €34,755 thousand, the improvement in operating income is €41,673 thousand. As described above, this value is an accounting figure and of very little economic significance.

Application of IFRS 9

The IASB published the final version of IFRS 9 "Financing Instruments" in July 2014, which replaces all previous versions and concludes the project to replace IAS 39 "Financing Instruments." IFRS 9 is introducing a uniform approach for classification and measurement of financial assets. The standard uses cash flow characteristics and the business model by which they are managed as its reference. It is also introducing a new impairment model that is based on expected loan defaults. Furthermore, IFRS 9 contains new rules on hedge accounting.

Software AG adopted IFRS 9 on January 1, 2018 when it took effect. Software AG is exercising its right to optional exceptions to rules regarding complete retrospective application and will show the effects of the first-time application as an adjustment to the initial balance of retained earnings.

Effects of application of IFRS 9

Software AG was able to retain the existing classification for the majority of its financial assets. There are thus no significant effects from the changed classification or subsequent valuation. Shareholders' equity in the amount of €9,736 thousand was reclassified from measurement at amortized cost to measurement at fair value through other comprehensive income (FVOCI). The carrying amounts were not affected by the reclassification.

Regarding classification of trade receivables based on business model (hold to collect versus hold to sell), approximately 80 percent of receivables are classified as AC and approximately 20 percent as FVOCI. Because the deviations between classification at amortized cost and classification at fair value through other comprehensive income were not significant, the existing measurement category at amortized cost was kept for all trade receivables (for more information, refer to trade receivables). An analysis of past defaults on trade receivables and the resulting impairment matrix showed a decrease in trade receivables by €154 thousand and a corresponding negative conversion effect recognized in equity as of January 1, 2018.

Because all hedge accounting relationships as of January 1, 2018 met the requirements of hedge accounting in accordance with IFRS 9, there were no resulting effects.

Software AG therefore considers the effects of first-time application of IFRS 9 and the consequences described above to be insignificant to its consolidated financial statements.

In addition, the IASB and the IFRIC issued a number of other pronouncements that were required to be applied as of January 1, 2018. However, these changes did not have a significant impact on Software AG's consolidated financial statements.

Published but not yet applicable accounting rules

The IASB has published the following standards, interpretations and amendments to standards that are not yet required to be applied and with regard to which Software AG has not opted for early application to the consolidated financial statements for the year ended December 31, 2018.

The IASB published IFRS 16 "Leases" in January 2016. IFRS 16 replaces the previous directive on leases, including IAS 17 "Leases," IFRIC 4 "Determining Whether an Agreement Includes a Lease," SIC-15 "Operating Leases—Incentives" and SIC-27 "Evaluating the Substance of Transactions in the Legal Form of a Lease." IFRS 16 introduces a uniform accounting model whereby leases must be recognized in the balance sheet of the lessee. A lessee recognizes a right that represents its right to use an underlying asset and a debt from the lease that represents its obligation to make lease payments. There are exceptions to the rules for short-term leases and leases related to low-value assets. The lessor's financial reporting is comparable to the current standard, meaning that the lessor will continue to classify leases as financing or operating leases. The standard is to be applied for the first time in the first reporting period of a fiscal year beginning on or after January 1, 2019. Early application is permitted for companies that apply IFRS 15 "Revenue from Contracts with Customers" when they first apply IFRS 16 or earlier. Accordingly, Software AG did not exercise the option of early application. Software AG is currently reviewing what implications application of IFRS 16 will have on its consolidated financial statements. At present, Software AG assumes that—except leases for rented office buildings—there are very few leases in the Software AG Group which do not fall under the exceptions for short-term leases and leases associated with low-value assets. Through application of IFRS 16, straight-line expenses associated with operating leases will be replaced by depreciation expenses associated with use rights and interest expenses associated with leasing obligations. This results in a negative impact on cash flows from financing activities and a positive impact on cash flow from operating activities. The expected increase in assets and liabilities (assets from use rights and leasing obligations) resulting from leases for rented office buildings is likely to be around €48 million. The standard is not expected to have any other significant impact on Software AG.

In addition, the IASB and the IFRIC have issued a number of other pronouncements that were not yet required to be applied as of December 31, 2018. However, Software AG does not expect these changes to have a significant impact on its consolidated financial statements.

[4] Business Combinations

Software AG acquired 100 percent of shares in TrendMiner NV and in Built.io operations in fiscal 2018. The basic data of the acquisitions is as follows:

Company	TrendMiner NV, Hasselt (Belgium)	Built.io LLC operations
Line of business	Internet of Things (IoT); intuitive, Web-based analytics platform enabling flexible visualization of industrial processes and measurement data	integration Platform as a Service (iPaaS)
Ownership interest recognized on the balance sheet as of December 31, 2018	100%	n/a (asset deal)
Percentage of acquired shareholders' equity with voting rights	100%	n/a
Date of acquisition	June 2018	September 2018
Number of employees	approximately 70	approximately 40
Purchase price	€34,609 thousand	€17,084 thousand

Both acquisitions were made for the purpose of technological supplementation, to broaden Software AG's products with related, synergetic market segments.

The following table shows the allocation of the cost of the business combination to the net assets acquired.

in € thousands	Carrying amount prior to acquisition	Remeasurement to fair value	Opening balance
Cash and cash equivalents	387	0	387
Intangible assets	1	23,406	23,407
Goodwill	0	30,294	30,294
Other assets	3,716	0	3,716
Deferred tax assets	0	2,740	2,740
Assets	**4,104**	**56,440**	**60,544**
Liabilities and provisions	1,877	0	1,877
Deferred tax liabilities	0	3,987	3,987
Deferred income	2,600	0	2,600
Equity and liabilities	**4,477**	**3,987**	**8,464**
Acquired assets and assumed liabilities, net	**–375**	**52,453**	**52,080**
Payments to shareholders			47,080
Considerations not yet paid			5,000
Acquisition cost, gross			**52,080**
Cash and cash equivalents			387
Net cost of the business combination			**51,693**

The full amount of goodwill resulting from the purchase price allocations was assigned to the DBP segment.

The recognition of goodwill resulted mainly from the fact that synergies and staff are not separable intangible assets within the meaning of IAS 38. With the exception of goodwill resulting from the acquisition of Built.io in the amount of €9,066 thousand, the goodwill arising from these acquisitions is not tax deductible.

The earnings of the companies and/or operations acquired have been included in the Consolidated Income Statement as of the respective date of acquisition. Since those dates, they are attributable for about €1.9 million of Software AG’s Group revenue and –€4.6 million of Group earnings.

Providing fictitious amounts for Group revenue and net income for the fiscal year calculated under the assumption that all corporate acquisitions during the fiscal year had taken place at the beginning of the year is not possible with the information available and due to the seasonality of the business.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

[5] Total Revenue

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Revenue by segment and region is presented in the segment report in Note [31]. All revenue presented resulted solely from customer contracts. Revenue in fiscal 2018 included €123,935 thousand in revenue that was included in the balance of contractual obligations recognized under deferred income at the beginning of the period. The transaction price allocated to the remaining obligations as of December 31, 2018 was €585,170 thousand.

Software AG anticipates recognition of the corresponding revenue over the following periods of time:

in € thousands	2019	2020	2021–2024
Anticipated revenue to be recognized	329,404	100,928	154,838

[6] Cost of Sales

The cost of sales in fiscal years 2018 and 2017 was as follows:

in € thousands	2018	2017
Personnel expenses	153,805	163,853
Other costs of sales	33,288	36,511
Amortization of intangible assets	7,872	12,985
	194,965	**213,349**

[7] Sales, Marketing and Distribution Expenses

Sales, marketing and distribution expenses in fiscal years 2018 and 2017 were as follows:

in € thousands	2018	2017
Personnel expenses	193,116	186,276
Other sales and distribution expenses	21,247	22,539
Other marketing expenses	17,081	18,018
Amortization of intangible assets	13,277	16,628
	244,721	**243,461**

[8] General and Administrative Expenses

General and administrative expenses in fiscal years 2018 and 2017 were as follows:

in € thousands	2018	2017
Personnel expenses	71,335	72,366
Other general and administrative expenses	2,617	3,575
	73,952	**75,941**

[9] Other Income

Other income includes the following items:

in € thousands	2018	2017
Foreign exchange gains	12,271	8,256
Government grants in the form of low-interest-rate loans	3,843	0
Income from the reversal of provisions and deferred liabilities	49	7,237
Miscellaneous other income	0	784
	16,163	**16,277**

[10] Other Expenses

Other expenses consist of the following items:

in € thousands	2018	2017
Foreign exchange losses	11,337	11,382
Expenses relating to legal disputes	0	7,000
Miscellaneous other expense	883	712
	12,220	**19,094**

[11] Net Financial Income/Expense

Financial income included interest on financial assets in the amount of €9,704 thousand (2017: €8,334 thousand). Financial expense included interest on financial liabilities in the amount of €3,710 thousand (2017: €5,375 thousand), including €0 thousand (2017: €493 thousand) from interest swaps.

[12] Income Taxes

Software AG's income taxes can be broken down by origin as follows:

in € thousands	2018	2017
Current domestic taxes	–13,677	–11,151
Current foreign taxes	–44,640	–70,603
	–58,317	**–81,754**
Deferred domestic taxes	–3,124	3,435
Deferred foreign taxes	2,234	1,860
	–5,358	**5,295**
	–63,675	**–76,459**

In Germany, a uniform corporate income tax of 15 percent applies. Based on the average municipal trade tax collection rate and a solidarity surcharge of 5.5 percent on corporate tax, the income tax rate for German entities will be 31.83 percent (2017: 31.83 percent) in 2018. Tax rates abroad range between 10 and 39 percent (2017: between 10 and 39 percent).

The income tax expense of €63,675 thousand for fiscal year 2018 (2017: €76,459 thousand) is €9,175 thousand lower than the expected income tax expense of €72,850 thousand (2017: €69,089 thousand) that resulted from applying the domestic tax rate of 31.83 percent currently applicable (2017: 31.83 percent) at Group level. The Group's effective income tax rate is 27.82 percent (2017: 35.23 percent).

The difference between the expected and current tax expense can be attributed to the following:

in € thousands	2018	2017
Earnings before income taxes	**228,870**	**217,055**
Expected income tax (31.83%; 2017: 31.26%)	–72,850	–69,089
Difference vs. foreign tax rates and changes in tax rates	12,340	4,114
Aperiodic income tax effects	5,851	–4,165
Tax increases (-) due to tax-exempt income or non-deductible expenses	–4,232	–2,716
Adjustment of tax loss carryforwards and changes in valuation adjustments to deferred tax assets	–85	–541
Non-deductible or applicable foreign and withholding taxes	–4,638	–4,054
Other adjustments	–61	–8
Reported income tax expense	**–63,675**	**–76,459**

Expense from deferred taxes totaled €5,358 thousand and consisted of €323 thousand (2017: –€16,709 thousand in income) in tax expenses relating to temporary differences that arose.

The changed income tax rates led to a total negative effect of €760 thousand (2017: positive effect of –€6,004 thousand) in fiscal 2018, primarily in the USA.

The expense from deferred taxes fell by €715 thousand (2017: €1,438 thousand) and the current tax expense by €88 thousand (2017: €85 thousand) as a result of the reversal of loss carryforwards in 2018.

[13] Other Taxes

Other taxes decreased by €139 thousand to €7,044 thousand (2017: €7,183 thousand) and included royalty-related indirect taxes in Brazil, property taxes, vehicle taxes and other indirect taxes.

[14] Personnel Expenses

Personnel expenses in fiscal years 2018 and 2017 were as follows:

in € thousands	2018	2017
Wages and salaries	413,815	404,882
Social benefits	57,653	60,062
Pension expenses	10,204	9,877
	481,672	**474,821**

In fiscal 2018, the average number of employees (part-time employees were taken into account on a pro-rata basis only) by area of activity was as follows:

	2018	2017
Maintenance and Services	1,913	1,923
R&D	1,245	1,159
Sales and Marketing	916	869
Administration	612	612
	4,686	**4,563**

In absolute terms (part-time employees are counted in full), the Group employed 4,938 (2017: 4,717) people as of December 31, 2018.

[15] Earnings per Share

Earnings per share are calculated by dividing net income for the period attributable to Software AG's shareholders by the weighted average number of shares issued during the period under review. Software AG has only issued common shares. In fiscal year 2018, the average weighted number of shares was 73,978,520 (2017: 74,645,119).

A total of 6,650 (2017: 71,500) stock options were exercised in 2018. In order to service stock options, 3,650 (2017: 71,500) treasury shares were used. The number of shares outstanding increased accordingly by 3,650 (2017: 71,500). Software AG did not repurchase treasury shares (2017: 2,326,892) and redeemed 2,400,000 (2017: 2,600,000) treasury shares in 2018. The number of treasury shares therefore went down year-on-year by 2,403,650 to total 20,111 (2017: 2,423,761). The treasury shares are not expected see a dilution effect, since they can be sold at market prices.

An additional 5,750 (2017: 12,400) stock options from the Management Incentive Plan III (MIP III) may be exercised.

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Net income	165,195	140,596
Less earnings attributable to non-controlling interests	–320	–263
Net income attributable to shareholders of Software AG	164,875	140,333
Weighted average number of shares outstanding	73,978,520	74,645,119
Effect of dilutive share-based payment	2,364	4,771
Weighted average number of shares outstanding (diluted)	73,980,884	74,649,890
Earnings per share in € (basic)	2.23	1.88
Earnings per share in € (diluted)	2.23	1.88

NOTES TO THE CONSOLIDATED BALANCE SHEET

[16] Other Financial Assets

Other financial assets as of December 31 were as follows:

	Dec. 31, 2018		
in € thousands	Current	Non-current	Total
Equity securities	0	3,873	3,873
Investment funds	2,125	994	3,119
Loans and other financial receivables	2,015	9,737	11,752
Derivatives	11,162	4,959	16,121
Total	**15,302**	**19,563**	**34,865**

	Dec. 31, 2017		
in € thousands	Current	Non-current	Total
Equity securities	0	9,736	9,736
Investment funds	2,285	567	2,852
Loans and other financial receivables	1,130	9,349	10,479
Derivatives	22,750	35,078	57,828
Total	**26,165**	**54,730**	**80,895**

p. 199 For more information on the valuation of financial assets, please refer to Note [32].

[17] Trade Receivables and Other Receivables

Trade receivables and other receivables as of December 31 were as follows:

	Dec. 31, 2018		
in € thousands	Current	Non-current	Total
Trade receivables	206,766	67,973	274,739
Other receivables	728	702	1,430
Total	**207,494**	**68,675**	**276,169**
of which pertaining to the hold-to-collect business model			217,855
of which pertaining to the hold-to-collect-and-sell business model			58,314

	Dec. 31, 2017		
in € thousands	Current	Non-current	Total
Trade receivables	225,656	52,692	278,348
Other receivables	658	581	1,239
Total	**226,314**	**53,273**	**279,587**
of which pertaining to the hold-to-collect-business model			n/a
of which pertaining to the hold-to-collect-and-sell business model			n/a

Gross receivables and impairments for expected credit losses were as follows:

in € thousands	Dec. 31, 2018	Jan. 1, 2018
Trade and other receivables before impairments	278,299	283,012
Impairments for expected credit losses	2,331	4,664
Carrying amount	**274,739**	**278,348**

Total amortization of trade receivables was less than €500 thousand in fiscal 2018.

The following trade receivables were not yet due or past due as of the reporting date:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Carrying amount	274,739	278,348
of which neither impaired nor past due as of the balance sheet date	241,211	242,706
of which past due in the following time periods as of the balance sheet date		
1 to 3 months	25,817	29,225
4 to 6 months	3,049	5,028
7 to 12 months	2,868	1,389
> 12 months	1,794	0

[18] Other Non-Financial Assets

Other non-financial assets can be broken down as follows:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Prepaid expenses	13,731	12,445
Capitalized costs from acquisition of new customer orders (sales commission)	5,312	0
Receivables from finance authorities	2,489	2,021
Other	1,501	3,099
	23,033	**17,565**

[19] Income Tax Receivables

Tax receivables in the amount of €29,096 thousand (2017: €23,207 thousand) consist primarily of receivables due to excessive advance payments made in relation to income taxes.

[20] Intangible Assets and Goodwill

Changes in intangible assets and goodwill as of December 31, 2018

in € thousands	Goodwill	Intangible assets	Total
Cost			
Balance as of Jan. 1, 2018	**923,315**	**485,440**	**1,408,755**
Currency translation differences	12,668	11,561	24,229
Additions from acquisitions	30,294	23,407	53,701
Additions	0	1,983	1,983
Disposals	0	–162	–162
Balance as of Dec. 31, 2018	**966,277**	**522,229**	**1,488,506**
Accumulated impairment/amortization			
Balance as of Jan. 1, 2018	**–1,900**	**–353,776**	**–355,676**
Currency translation differences	0	–9,201	–9,201
Additions	0	–22,442	–22,442
Disposals	0	162	162
Balance as of Dec. 31, 2018	**–1,900**	**–385,257**	**–387,157**
Residual carrying amount as of Jan. 1, 2018	921,415	131,664	1,053,079
Residual carrying amount as of Dec. 31, 2018	964,377	136,972	1,101,349

Changes in intangible assets and goodwill as of December 31, 2017

in € thousands	Goodwill	Intangible assets	Total
Cost			
Balance as of Jan. 1, 2017	**938,506**	**502,042**	**1,440,548**
Currency translation differences	–46,855	–37,786	–84,641
Additions from acquisitions	31,664	23,033	54,697
Additions	0	696	696
Disposals	0	-2,545	–2,545
Balance as of Dec. 31, 2017	**923,315**	**485,440**	**1,408,755**
Accumulated impairment/amortization			
Balance as of Jan. 1, 2017	**–1,900**	**–352,622**	**–354,522**
Currency translation differences	0	27,694	27,694
Additions	0	–31,391	–31,391
Disposals	0	2,543	2,543
Balance as of Dec. 31, 2017	**–1,900**	**–353,776**	**–355,676**
Residual carrying amount as of Jan. 1, 2017	936,606	149,420	1,086,026
Residual carrying amount as of Dec. 31, 2017	921,415	131,664	1,053,079

Intangible assets mainly include software, customer bases and brand names obtained in connection with acquisitions.

The following intangible assets with limited useful lives were of particular significance for the consolidated financial statements:

in € thousands	Carrying amount as of Dec. 31, 2018	Carrying amount as of Dec. 31, 2017	Remaining amortization period in years
Software obtained through Cumulocity acquisition	9,396	11,374	4.8
Software obtained through TrendMiner acquisition	9,043	0	6.0
Software obtained through Zementis acquisition	8,188	8,567	10.5
Software obtained through Built.io acquisition	7,886	0	5.8

In addition, the following important intangible assets with indefinite useful lives existed as of December 31, 2018:

in € thousands	Carrying amount as of Dec. 31, 2018	Carrying amount as of Dec. 31, 2017	Reason for assuming indefinite useful life
Brand names (ARIS & others) obtained through IDS Scheer AG acquisition	22,300	22,300	Use and future expansion of the brand name is planned for an indefinite period of time.
Brand name (webMethods) obtained through webMethods acquisition	21,836	20,848	Use and future expansion of the brand name is planned for an indefinite period of time.

Brand names are not subject to amortization. Any changes in the carrying amounts result from currency translation effects.

The carrying amounts of goodwill were allocated to the segments as follows:

Segment

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Adabas & Natural (A&N)	322,908	324,661
Digital Business Platform (DBP)	617,869	573,402
Consulting	23,600	23,352
Goodwill	**964,377**	**921,415**
of which from acquisition of SAG Inc. USA 2001	174,591	174,591
of which from acquisition of webMethods Inc. USA 2007	238,062	227,322
of which from acquisition of IDS Scheer AG 2009	240,759	240,759

The carrying amounts of intangible assets with indefinite useful lives were allocated to the segments as follows:

Segment

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Adabas & Natural (A&N)	0	0
Digital Business Platform (DBP)	41,535	40,574
Consulting	5,439	5,439
Intangible assets with indefinite useful lives	**46,974**	**46,013**

The segments represent the smallest cash-generating units in the Group. They represent the smallest identifiable group of cash inflow-generating assets which are largely independent of inflows from other assets.

Goodwill as well as intangible assets with an indefinite useful life are tested for impairment at least once per year by comparing the carrying amount of the cash-generating unit to which the goodwill or the intangible asset is allocated with the recoverable amount. Testing for impairment involves regularly checking the recoverable amount with regard to fair value less costs to sell.

Fair value less costs to sell is calculated using discounted cash flows based on strategic budgets calculated and approved by management, which are for a period of five (2017: three) years. Budget planning for 2019 was largely carried out as in previous years. Accordingly, revenue and the directly attributable costs were budgeted for each segment, and costs not directly attributable to the segments were coded. Revenue in the DBP segment is budgeted separately for Digital Business Platform (not including Cloud & IoT) and for Cloud & IoT. The somewhat separate budgets for revenue streams in the DBP segment does not mean that there is also a high degree of independence with regard to liquidity inflows as defined by IAS 36 due to the tightly enmeshed sales methods. Planning for the years 2020 to 2023 reflects the Company's realignment developed as part of the Helix strategy project. This medium-term plan prioritizes consideration of overall development given the transition from perpetual licenses to temporary licenses—primarily transfer of use in nature (rental licenses and subscriptions). The overall development accounted for in the medium-term plan was not specifically broken down by segment. In other words, revenue is planned by segment but not earnings. The Consulting segment's earnings contribution can be derived from the consulting revenue accounted for in the medium-term plan and the separately budgeted cost of sales in this segment. In accordance with planning for the years 2020 to 2023, the relevant cash flows for the A&N and DBP segments were derived by allocating costs proportionate to the resulting distribution between the A&N and DBP segments in the 2019 budget.

Planning is based on past experience, insights derived from current operating results, and management estimates of future developments. Revenue trends at country level, for instance, is one element of management estimates of future developments that is particularly prone to uncertainty. This approach is rated as level 3 of the valuation hierarchy in accordance with IFRS 13.

The forecasts take into account historical values and estimates of future developments. Costs to sell are assumed to amount to 2 percent (2017: 2 percent) of the relevant fair value.

As described above, expected cash flows in the A&N segment are calculated both based on the budget but also on the segment revenue presented in the medium-term financial plan under the assumption that costs develop proportionately to the distribution laid out in the 2019 budget. The expected cash flows calculated as described above were discounted using a post-tax weighted average cost of capital (WACC) of 7.5 percent (2017: 6.7 percent). The sustainable growth rate was assumed to be 0 percent (2017: 0 percent). A discount of 20 percent (2017: 20 percent) on the last year of detailed planning was used to determine sustainable cash flows. Even using a discount of 90 percent on the last year of detailed planning, the fair value less costs to sell would exceed the carrying amount.

Corresponding to the approach used in the A&N segment, cash flows in the DBP segment are also calculated using the budget as well as the medium-term financial plan. The expected cash flows calculated as described were determined using a post-tax WACC of 6.1 percent (2017: 6.4 percent) and a sustainable growth rate of 1 percent (2017: 1 percent). An average annual growth rate of approximately 11 percent and a significant margin (EBITA margin) improvement were assumed in the period of detailed planning. However, given a sustainable growth rate of 0 percent and 0 percent revenue growth assumed for the period of detailed planning, the fair value less costs to sell would still exceed the carrying amount.

A post-tax WACC of 6.4 percent (2017: 6.5 percent) and a sustainable growth rate of 1 percent (2017: 1 percent) for perpetual annuity were assumed for the Consulting segment. Even if a sustainable growth rate of 0 percent were used for perpetual annuity, the fair value less costs to sell would be greater than the carrying amount.

[21] Property, Plant and Equipment

Changes in property, plant and equipment as of December 31, 2018

in € thousands	Land and buildings	Operating and office equipment	Total
Cost			
Balance as of Jan. 1, 2018	**90,182**	**32,391**	**122,573**
Currency translation differences	103	82	185
Additions from acquisitions	28	73	101
Additions	956	7,038	7,994
Disposals	–1,642	–4,396	–6,038
Balance as of Dec. 31, 2018	**89,627**	**35,188**	**124,815**
Accumulated depreciation			
Balance as of Jan. 1, 2018	**–31,178**	**–18,580**	**–49,758**
Currency translation differences	–16	–122	–138
Additions	–3,461	–6,165	–9,626
Disposals	1,614	4,116	5,730
Balance as of Dec. 31, 2018	**–33,041**	**–20,751**	**–53,792**
Residual carrying amount as of Jan. 1, 2018	59,004	13,811	72,815
Residual carrying amount as of Dec. 31, 2018	56,586	14,437	71,023

Changes in property, plant and equipment as of December 31, 2017

in € thousands	Land and buildings	Operating and office equipment	Total
Cost			
Balance as of Jan. 1, 2017	**89,300**	**33,098**	**122,398**
Currency translation differences	–672	–2,262	–2,934
Additions from acquisitions	0	43	43
Additions	2,602	5,774	8,376
Disposals	–1,048	–4,262	–5,310
Balance as of Dec. 31, 2017	**90,182**	**32,391**	**122,573**
Accumulated depreciation			
Balance as of Jan. 1, 2017	**–28,957**	**–17,882**	**–46,839**
Currency translation differences	363	1,717	2,080
Additions	–3,435	–6,377	–9,812
Disposals	851	3,962	4,813
Balance as of Dec. 31, 2017	**–31,178**	**–18,580**	**–49,758**
Residual carrying amount as of Jan. 1, 2017	60,343	15,216	75,559
Residual carrying amount as of Dec. 31, 2017	59,004	13,811	72,815

Most of the land and buildings are owned by the parent company and the Spanish subsidiary. The properties pertain mainly to the central administrative buildings of these entities.

Operating and office equipment mainly includes office furniture and IT equipment. The capital expenditure of €7,038 thousand (2017: €5,774 thousand) primarily relates to expenses for the initial purchase of computer equipment.

[22] Deferred Taxes

Deferred taxes were composed of the following as of the balance sheet date (before offsetting):

	Deferred tax assets		Deferred tax liabilities	
in € thousands	**Dec. 31, 2018**	**Dec. 31, 2017**	**Dec. 31, 2018**	**Dec. 31, 2017**
Intangible assets	1,503	1,453	33,183	32,386
Property, plant and equipment	747	731	2,309	2,574
Receivables and financial assets	5,678	3,014	6,835	3,632
Other obligations	10,321	11,497	3,332	2,986
Provisions for pensions and similar obligations	9,173	9,850	0	0
Deferred income	2,545	1,687	19	71
Tax loss carryforwards	14,320	16,325	0	0
Total	**44,287**	**44,557**	**45,678**	**41,649**
Amount offset	–34,280	–30,050	–34,280	–30,050
Amount recognized in the balance sheet	10,007	14,507	11,398	11,599

Deferred tax assets on tax loss carryforwards fell from the prior year by €2,005 thousand. The change results from ongoing consumption due to taxable income and the change in the scope of consolidation.

As of December 31, 2018, the consolidated Group had unutilized tax loss carryforwards in the amount of €14,236 thousand (2017: €15,299 thousand) for which no deferred tax assets were recognized. Of the losses carried forward for which no deferred taxes were recognized, €6,829 thousand will expire in the period from 2019 to 2027, €2,048 thousand in the period from 2028 to 2037, and €5,359 thousand can be utilized indefinitely.

As of the reporting date, taxable temporary differences associated with investments in subsidiaries existed in the amount of €12,945 thousand (2017: €12,270 thousand), on which no deferred tax liabilities had been recognized in accordance with IAS 12.39 given that neither disposals nor profit distributions are planned in the near future.

In fiscal year 2018, deferred taxes totaling €9,943 thousand (2017: €7,813 thousand) were offset against equity. These amounts mainly resulted from actuarial gains/losses recognized directly in equity based on changes in the measurement of pension obligations as well as from financial instruments also recognized directly in equity.

[23] Financial Liabilities

Financial liabilities can be broken down as follows:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Current financial liabilities		
Liabilities to banks	104,008	207,038
Other current financial liabilities	5,957	943
Derivatives	1,923	2,366
	111,888	**210,347**

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Non-current financial liabilities		
Liabilities to banks	200,063	100,078
Other non-current financial liabilities	109	101
Derivatives	1,260	71
	201,432	**100,250**

Financial liabilities changed as follows:

in € thousands		Liabilities to banks	Financial liabilities	Derivatives	Total
	Dec. 31, 2017	**307,116**	**1,044**	**2,437**	**310,597**
Change in cash and cash-equivalents	**Proceeds**				
	New non-current financial liabilities, net	100,028			100,028
	New current financial liabilities, net	7,673			7,673
	Payments				
	Repayment of current and non-current financial liabilities, net	–107,694			–107,694
Non-cash changes	**Financial purchase of assets**				
	Open purchase price payables		5,000		5,000
	Measurement				
	Interest adjustment for government loans	–2,037			–2,037
	Other adjustments	–1,015	22	746	–247
	Dec. 31, 2018	**304,071**	**6,066**	**3,183**	**313,320**
	Total change +/–	**–3,045**	**5,022**	**746**	**2,723**
		Thereof current financial liabilities			111,888
		Thereof non-current financial liabilities			201,432

in € thousands		Liabilities to banks	Financial liabilities	Derivatives	Total
	December 31, 2016	279,158	20,110	2,248	301,516
Change in cash and cash-equivalents	Proceeds				
	New current financial liabilities, net	98,919			98,919
	Payments				
	Repayment of current and non-current financial liabilities, net	–77,100	–19,012		–96,112
Non-cash changes	Financial purchase				
	Credit-financed purchase of MIP hedges	7,673			7,673
	Measurement				
	Interest adjustment for government loans	1,656			1,656
	Other adjustments	–1,117	–54	189	–982
	FX effects	–2,073			–2,073
	December 31, 2017	307,116	1,044	2,437	310,597
	Total change +/–	27,958	–19,066	189	9,081
				Thereof current financial liabilities	210,347
				Thereof non-current financial liabilities	100,250

Liabilities to banks and other financial liabilities had the following maturities as of the reporting date:

in € thousands	Up to 1 year	>1 year
Loans with variable interest rates	90,008	175,063
Loans with fixed interest rates	14,000	25,000

The fair values of the liabilities to banks with variable interest rates are equal to their carrying amounts. The fair values of the liabilities with fixed interest rates amounted to €39,409 thousand. The fair values were calculated by discounting the future cash flows using current market rates.

[24] Trade Payables and other Liabilities

Trade payables and other liabilities can be broken down as follows:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Payables to suppliers	31,339	29,102
Advance payments received on orders	6,174	7,179
Other liabilities	4,563	5,013
	42,076	**41,294**

[25] Other Non-Financial Liabilities

Other non-financial liabilities relate to the following items:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Liabilities due to employees	111,175	111,794
Tax liabilities	22,128	28,717
Liabilities for social security	6,874	5,428
Remaining other non-financial liabilities	5,928	5,117
	146,105	**151,056**

[26] Other Provisions

Other provisions changed as follows:

in € thousands	Other personnel-related provisions	Miscellaneous other provisions	Total other provisions
Balance as of Jan. 1, 2018	**59,762**	**18,243**	**78,005**
Currency translation differences	–3	–52	–55
Additions to the group of consolidated companies	1	0	1
Additions	10,723	1,177	11,900
Utilization	–46,888	–1,077	–47,965
Reversal	–69	–867	–936
Balance as of Dec. 31, 2018	**23,526**	**17,424**	**40,950**
of which with a remaining term of more than 1 year	10,232	88	10,320

in € thousands	Other personnel-related provisions	Miscellaneous other provisions	Total other provisions
Balance as of Jan. 1, 2017	**53,732**	**22,020**	**75,752**
Currency translation differences	–99	–124	–223
Additions to the group of consolidated companies	0	507	507
Additions	22,293	8,639	30,932
Utilization	–15,290	–7,989	–23,279
Reversal	–874	–4,810	–5,684
Balance as of Dec. 31, 2017	**59,762**	**18,243**	**78,005**
of which with a remaining term of more than 1 year	34,209	88	34,297

Miscellaneous other provisions

Miscellaneous other provisions can be broken down as follows:

in € thousands	Dec. 31, 2018	Dec. 31, 2017
Litigation	15,440	16,081
Anticipated losses related to consulting projects	70	113
Other onerous contracts	676	697
Asset retirement obligations	828	845
Other provisions	410	507
	17,424	**18,243**

For further information on litigation, please refer to p. 209 Note [36].

[27] Income Tax Liabilities

in € thousands	2018	2017
Balance as of Jan. 1	**32,014**	**28,224**
Currency translation differences	–579	–1,358
Additions to the group of consolidated companies	9	0
Additions	15,578	17,160
Utilization	–4,298	–11,592
Reversal	–1,873	–420
Balance as of Dec. 31	**40,851**	**32,014**
of which with a remaining term of more than 1 year	2,898	4,509

[28] Provisions for Pensions and Similar Obligations

Defined benefit plans

	Defined benefit obligation (DBO)		Fair value of plan assets		Effects of asset caps		Net defined benefit balance	
in € thousands	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**
Germany	42,467	38,930	21,712	19,416	0	0	20,755	19,514
U.K.	79,381	90,035	69,553	69,168	0	0	9,828	20,867
Switzerland	6,649	5,901	4,772	4,019	0	0	1,877	1,882
Other insignificant pension plans and similar plans							2,161	1,606
							34,621	**43,869**

Pension benefits in Germany consist of fixed commitments to a specified group of people. They are partially covered by life reinsurance policies. There are no minimum funding requirements or laws in Germany.

Pension benefits in the United Kingdom relate to commitments made by Software AG (U.K.) Limited. They comprise post-employment benefits for employees as well as benefits payable to their surviving dependents on the employees' death during their active service period.

The commitments in Switzerland result from legal requirements of the BVG (law on occupational, survivor and disability planning). The law stipulates that every employer must grant entitled employees benefits after termination of their employment.

The defined benefit commitments result in risks to the Company due to possible fluctuations in obligations from defined benefit plans and fluctuations in plan assets. Fluctuations in defined benefit obligations result primarily from changes to financial assumptions such as discount interest rates and changed demographic assumptions (changing life expectancies). Possible changes in expected long-term wage and salary increases have no significant impact on the obligations due to the structure of the commitments. The fair value of plan assets and the fluctuation thereof depends mainly on the situation of the capital markets. Software AG seeks to account for this by controlling its asset investments.

	Defined benefit obligation (DBO)		Fair value of plan assets		Net defined benefit balance	
in € thousands	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**
Balance as of Jan. 1	**134,866**	**129,976**	**–92,603**	**-89,278**	**42,263**	**40,698**
Current service cost	2,765	2,415	0	0	2,765	2,415
Net interest income/expense	2,997	3,143	–2,129	–2,313	868	830
	5,762	**5,558**	**–2,129**	**–2,313**	**3,632**	**3,245**
Expense/income resulting from adjustments						
Return on plan assets net of income recognized as net interest income/expense	0	0	4,772	–1,239	4,772	–1,239
Expectation adjustment	–65	–1,738	0	0	–65	–1,738
Net actuarial gains/losses from changes to demographic assumptions	30	0	0	0	30	0
Net actuarial gains/losses from changes to financial assumptions	–10,949	8,961	0	0	–10,949	8,961
	–10,984	**7,223**	**4,772**	**–1,239**	**–6,212**	**5,984**
Currency-related changes	–139	–7,177	–121	2,840	–260	–4,337
Employer contributions	0	0	–6,701	–6,351	–6,701	–6,351
Employee contributions	375	396	–376	–396	–1	0
Plan-related payments	–1,383	–1,110	842	619	–542	–491
Settlement payments	0	0	280	3,515	280	3,515
	–1,008	**–714**	**–5,956**	**–2,613**	**–6,964**	**–3,327**
Balance as of Dec. 31	**128,497**	**134,866**	**–96,037**	**–92,603**	**32,460**	**42,263**

The significant assumptions used for calculating the present value of the defined benefit obligations (DBO) are as follows:

as %	**2018**	**2017**
Discount rate		
Germany	2.00	2.00
U.K.	3.00	2.50
Switzerland	1.00	0.75
Salary trend		
Germany	2.00	2.00
U.K.	5.00	5.00
Switzerland	1.50	1.50
Pension trend		
Germany	1.75	1.75
U.K.	3.25	3.50
Switzerland	0.00	0.00

A change in the above discount rates by a half of a percentage point would have the following impact on the respective DBOs:

	Change in DBO		
in € thousands	**Germany**	**U.K.**	**Switzer-land**
Discount rate (–0.5%)	3,897	8,732	666
Discount rate (+0.5%)	–3,427	–8,732	–579
Salary trend (–0.5%)	–202	–794	–83
Salary trend (+0.5%)	207	794	87
Pension trend (–0.5%)	–2,936	3,175	n/a [1]
Pension trend (+0.5%)	3,272	–3,175	398

[1] Pension trend was assumed at 0 percent for Switzerland (see above)

Sensitivities were calculated by varying the respective parameter with otherwise constant assumptions.

The plan assets can be broken down as follows:

	Fair value	
in € thousands	**2018**	**2017**
Equities	37,529	50,751
Fixed-interest securities	27,571	10,943
Life insurance policies	26,484	23,434
Cash and cash equivalents	4,453	7,475
	96,037	**92,603**

There was a market price quote in an active market for every component of the plan assets except for the life insurance policies.

Contributions from the Software AG Group to defined benefit plans for fiscal year 2019 are expected to amount to €4,708 thousand.

Expected benefit payments during the next 10 years are expected to be as follows:

in € thousands	Expected benefit payments
2019	3,536
2020	2,711
2021	2,510
2022	2,748
2023	2,529
2024 – 2028	18,776

Defined contribution plans

There is a minor volume of defined contribution pension commitments. Defined contributions are paid to external insurance companies or funds. Furthermore, Software AG makes contributions to the state and/or public pension fund primarily in Germany. Defined contribution pension commitments accounted for expenses of €14,944 thousand (2017: €14,447 thousand) in 2018.

[29] Equity

Share capital

As of December 31, 2018, Software AG's share capital totaled €74,000 thousand (2017: €76,400 thousand), Software AG's share capital is divided into 74,000,000 (2017: 76,400,000) registered shares. Each share entitles its holder to one vote.

Conditional capital

Like last year, there was no conditional capital as of December 31, 2018.

Authorized capital

As of December 31, 2018, Software AG's Management Board was authorized, subject to the consent of the Supervisory Board, to increase the Company's share capital on one or more occasions on or before May 30, 2021 by up to a total of €39,500 thousand by issuing up to 39,500,000 new registered shares in return for cash contributions and/or contributions in kind (authorized capital).

The Management Board did not make use of this authorization in fiscal year 2018.

Acquisition of treasury shares

At the beginning of the reporting period Software AG held 2,423,761 treasury shares representing €2,423,761 or 3.2 percent of the share capital.

Software AG's balance of treasury shares changed as follows in the fiscal year:

Date/period	No. of shares	Reason for change
Jan. 1, 2018	**2,423,761**	
Q1 2018	–2,400,000	Redemption and capital decrease
Q2 2018	–3,650	Used for settling share-based plans (MIP III)
Dec. 31, 2018	**20,111**	

As of December 31, 2018, Software AG held 20,111 treasury shares representing €20,111, or 0.03 percent, of the share capital.

Pursuant to the Annual Shareholders' Meeting resolution from May 31, 2016, Software AG is authorized until May 30, 2021 to purchase Software AG shares totaling a maximum of 10 percent of the share capital at the time of the resolution. The shares purchased, together with other treasury shares that the Company has already purchased and still holds or that are attributable to it in accordance with sections 71d and 71e of the German Stock Corporation Act, may not account for more than 10 percent of the respective share capital at any time.

Equity management

The Software AG Group has an obligation to achieve long-term, profitable growth. Since software companies typically have a low level of capital expenditure for property, plant and equipment, equity is not a focus of corporate management. The dividend is based on Software AG's averaged net income (attributable to Software AG shareholders) and free cash flow. This results in a total dividend sum of €52,526 thousand (2017: €48,085 thousand) and a payout ratio of €30.1 percent (2017: 31.8 percent).

Dividend

Pursuant to the proposal of the Management Board and the Supervisory Board, the Annual Shareholders' Meeting resolved on May 30, 2018 to appropriate €48,085 thousand (2017: €44,343 thousand) for a dividend payout from the net retained profits of €83,914 thousand (2017: €139,097 thousand) reported by Software AG, the controlling Group company, in 2017. This corresponded to a dividend of €0.65 (2017: €0.60) per share. A total amount of €35,829 thousand (2017: €94,754 thousand) was carried forward.

Based on the number of shares outstanding as of March 1, 2019, the Management Board and Supervisory Board will propose to the Annual Shareholders' Meeting to distribute the net retained profits of €85,520 thousand reported by Software AG in 2018, as follows: to appropriate €52,526 thousand for dividends and to carry forward €32,994 thousand. This corresponds to a dividend of €0.71 per share.

Other reserves

Other reserves changed as follows, taking into account tax effects:

	2018			2017		
in € thousands	**Pre-tax amount**	**Tax effect**	**Net amount**	**Pre-tax amount**	**Tax effect**	**Net amount**
Currency translation differences from foreign operations	11,557	0	11,557	–77,523	0	–77,523
Net gain/loss on remeasuring financial assets	–14,165	2,835	–11,330	370	–142	228
Currency translation gains/losses from net investments in foreign operations	1,768	0	1,768	–5,134	0	–5,134
Net actuarial gain/loss on pension obligations	6,478	–706	5,772	–5,871	1,606	–4,265
Gain/loss recognized in equity	**5,638**	**2,129**	**7,767**	**–88,158**	**1,464**	**–86,694**

Cash flow hedges had the following effects on the income statement and other comprehensive income:

in € thousands	**Total profit/(loss) recognized in other comprehensive income from hedges**	**Ineffective portion recognized in earnings**	**Items from the income statement**	**Costs recognized in other comprehensive income from hedges**	**Amount reclassified from other comprehensive income to the income statement**	**Items from the income statement**
Fiscal year ending Dec. 31, 2018 Expected payments relating to awards to members of the Management Board, managers and employees	–8,746	0	n/a	0	2,862	Functional costs
Fiscal year ending Dec. 31, 2017 Expected payments relating to awards to members of the Management Board, managers and employees	286	0	n/a	0	3,830	Functional costs

OTHER DISCLOSURES

[30] Notes to the Statement of Cash Flows

Cash and cash equivalents include €12 thousand (2017: €46 thousand), which were held by the sales subsidiary in Venezuela. Due to current legal limitations relating to foreign currency transactions in Venezuela, Software AG has only limited access to these funds.

Dividends paid reported in the statement of cash flows include dividend payments of €263 thousand (2017: €210 thousand) to minority shareholders of subsidiaries.

Net payments for acquisitions in 2018 amounted to €46,693 thousand (2017: €49,420 thousand) and consisted of €47,080 thousand (2017: €50,111 thousand) in considerations paid and €387 thousand (2017: €691 thousand) in cash and cash equivalents received.

Operating cash inflows and outflows are managed centrally based on free cash flow. Software AG defines free cash flow as cash flow from operating activities less cash flow from investing activities, not including cash outflows for investments in current financial assets, proceeds from the sale of current financial assets, proceeds from the sale of disposal groups or net cash outflows for acquisitions. Accordingly, free cash flow totaled €184,115 thousand (2017: €161,885 thousand) in fiscal 2018. Free cash flow is controlled at Group level, not based on the business segments. For this reason, no data is collected on cash flow in the segments.

Software AG has a credit line of about €205,000 thousand. Approximately €98,000 thousand of that was unused as of December 31, 2018.

[31] Segment Reporting

Notes on segment reporting

Segmentation is in accordance with the internal control of the Group. Internal control focuses primarily on product revenue at constant currency for the two product segments. Margins and earnings are controlled largely at Group level. Of considerably less importance are the segments' contributions and earnings at secondary level of control. Software AG therefore reports on the following three segments:

- Digital Business Platform
  (DBP: integration, business process management and big data with the webMethods, ARIS, Alfabet, Apama and Terracotta product families)

- Adabas & Natural
  (A&N: data management with the Adabas-Natural products)

- Consulting
  (implementation of Software AG products)

The table below shows the segment data for the 2018 and 2017 fiscal years:

Segment Report for Fiscal Years 2018 and 2017

in € thousands	Digital Business Platform (including Cloud & IoT) (DBP) 2018 IFRS	2018 acc[2]	2017 IFRS[1]	Adabas & Natural (A&N) 2018 IFRS	2018 acc[2]	2017 IFRS[1]
Licenses	174,915	178,723	180,183	74,450	75,826	69,951
Maintenance	272,231	281,461	267,107	143,169	150,934	153,098
SaaS	17,555	17,914	9,076	0	0	0
Product revenue	**464,701**	**478,098**	**456,366**	**217,619**	**226,760**	**223,049**
Services	0	0	0	0	0	0
Other	47	53	87	703	703	680
Total revenue	**464,748**	**478,151**	**456,453**	**218,322**	**227,463**	**223,729**
Cost of sales	–35,945	–36,790	–34,417	–6,263	–6,533	–10,119
Gross profit	**428,803**	**441,361**	**422,036**	**212,059**	**220,930**	**213,610**
Sales, marketing and distribution expenses	–181,200	–186,257	–174,308	–32,820	–33,776	–33,359
Segment contribution	**247,603**	**255,104**	**247,728**	**179,239**	**187,154**	**180,251**
Research and development expenses	–100,612	–102,502	–96,851	–23,811	–23,609	–23,793
Segment earnings	**146,991**	**152,602**	**150,877**	**155,428**	**163,545**	**156,458**
General and administrative expenses						
Other taxes						
Operating earnings						
Other operating income/expenses, net						
Net financial income/expenses						
Earnings before income taxes						
Income taxes						
Net income						

[1] To improve the informative value of its financial statements—particularly regarding earnings performance—Software AG restructured the revenue section of its income statement as of January 1, 2018. Accordingly, revenue from Software as a Service (SaaS) contracts is reported separately. Figures from the previous year were adjusted to reflect the new presentation structure.
[2] Items presented at constant currency are translated using monthly average rates from the previous year. Currency translation effects on balance sheet items related to intra-group transactions are not taken into account in expenses.

The segment contribution does not include the amortization expense associated with acquisitions of intangible assets. These charges are therefore shown separately under reconciliation. This presentation corresponds with internal control and reporting lines (management approach). The majority of sales and marketing expenses are classified based on revenue percentage. A focus on absolute earnings contributions therefore only makes sense in certain scenarios given the interdependency between the two product segments. Research and development expenses are assigned to the segments based on expense components directly attributable to the R&D department as well as the overhead coded to R&D. They have no direct impact on internal management.

	Consulting			Reconciliation		Total		
	2018 IFRS	**2018 acc[2]**	**2017 IFRS[1]**	**2018 IFRS**	**2017 IFRS**	**2018 IFRS**	**2018 acc[2]**	**2017 IFRS[1]**
	0	0	0			249,365	254,549	250,134
	0	0	0			415,400	432,395	420,205
	0	0	0			17,555	17,914	9,076
	0	**0**	**0**			**682,320**	**704,858**	**679,415**
	182,540	186,724	198,778			182,540	186,724	198,778
	101	101	23			851	857	790
	182,641	**186,825**	**198,801**			**865,711**	**892,439**	**878,983**
	–144,885	–147,962	–155,828	–7,872	–12,985	–194,965		–213,349
	37,756	**38,863**	**42,973**	**–7,872**	**–12,985**	**670,746**		**665,634**
	–17,425	–17,949	–19,166	–13,276	–16,628	–244,721		–243,461
	20,331	**20,914**	**23,807**	**–21,148**	**–29,613**	**426,025**		**422,173**
	0	0	0	0	0	–124,423		–120,644
	20,331	**20,914**	**23,807**	**–21,148**	**–29,613**	**301,602**		**301,529**
						–73,952		–75,941
						–7,044		–7,183
						220,606		**218,405**
						3,943		–2,817
						4,321		1,467
						228,870		**217,055**
						–63,675		–76,459
						165,195		**140,596**

DBP Segment with Revenue Distribution for Fiscal Years 2018 and 2017

	DBP (Cloud & IoT)			
in € thousands	**2018 IFRS**	**2018 acc[2]**	**2017 IFRS[1]**	
Licenses	8,702	8,711	3,493	
Maintenance	4,061	4,091	2,366	
SaaS	17,555	17,914	9,076	
Product revenue	**30,318**	**30,716**	**14,935**	
Services	0	0	0	
Other	1	1	0	
Total revenue	**30,319**	**30,717**	**14,935**	
Cost of sales				
Gross profit				
Sales, marketing and distribution expenses				
Segment contribution				
Research and development expenses				
Segment earnings				

[1] To improve the informative value of its financial statements—particularly regarding earnings performance—Software AG restructured the revenue section of its income statement as of January 1, 2018. Accordingly, revenue from Software as a Service (SaaS) contracts is reported separately. Figures from the previous year were adjusted to reflect the new presentation structure.

[2] Items presented at constant currency are translated using monthly average rates from the previous year. Currency translation effects on balance sheet items related to intra-group transactions are not taken into account in expenses.

DBP (not including Cloud & IoT)			DBP (including Cloud & IoT)		
2018 IFRS	2018 acc[2]	2017 IFRS[1]	2018 IFRS	2018 acc[2]	2017 IFRS[1]
166,213	170,012	176,690	174,915	178,723	180,183
268,170	277,370	264,741	272,231	281,461	267,107
0	0	0	17,555	17,914	9,076
434,383	**447,382**	**441,431**	**464,701**	**478,098**	**456,366**
0	0	0	0	0	0
46	52	87	47	53	87
434,429	**447,434**	**441,518**	**464,748**	**478,151**	**456,453**
			–35,945	–36,790	–34,417
			428,803	**441,361**	**422,036**
			–181,200	–186,257	–174,308
			247,603	**255,104**	**247,728**
			–100,612	–102,502	–96,851
			146,991	**152,602**	**150,877**

Information on geographic regions

Revenue is distributed across geographic regions as follows (based on headquarters of the respective Group entity):

Geographic distribution of revenues

	2018			
in € thousands	**Germany**	**USA**	**Other countries**	**Software AG Group**
Licenses	30,295	95,945	123,125	249,365
Maintenance	60,911	143,684	210,805	415,400
SaaS	4,769	4,664	8,122	17,555
Services	34,974	24,834	122,732	182,540
Other	665	47	139	851
Total	**131,614**	**269,174**	**464,923**	**865,711**

	2017			
in € thousands	**Germany**	**USA**	**Other countries**	**Software AG Group**
Licenses	38,296	97,191	114,647	250,134
Maintenance	58,216	147,609	214,380	420,205
SaaS	474	3,300	5,302	9,076
Services	34,888	27,717	136,173	198,778
Other	724	0	66	790
Total	**132,598**	**275,817**	**470,568**	**878,983**

Countries included in "other countries" are presented separately once the revenue generated in the country in question reaches a significant level. Revenue generated in the USA was reported separately as it was greater than 10 percent of Group revenue. These revenues are generated in U.S. dollars, so when comparing consecutive periods, exchange rate fluctuations should be considered.

Non-current assets

Non-current assets are comprised of intangible assets and property, plant and equipment.

in € thousands	2018	2017
USA	580,048	557,191
Germany	427,478	432,608
Other countries	164,846	136,095
Software AG Group	**1,172,372**	**1,125,894**

[32] Additional Information on Financial Instruments and Risk Management

The table below shows the carrying amounts of financial assets and liabilities as well as fair values in accordance with the levels of the fair-value hierarchy. The three levels are defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2: Inputs other than quoted market prices included within Level 1 that are observable for the asset or liability either directly or indirectly

Level 3: Inputs for the asset or liability that are not based on observable market data

December 31, 2018

	Valuation category		Carrying amount	
in € thousands	**At amortized cost**	**At fair value**	**Other at FVPL (mandatory)**	**Fair value of hedging instruments**
Assets				
Cash and cash equivalents	462,362			
Trade and other receivables	276,169			
Other financial assets				
Financial assets available for sale				
Shareholders' equity		3,873		
Investment funds		3,119		
Loans and other financial receivables	11,752			
Derivative financial instruments				
Designated as hedging instrument				
Stock options		4,959		4,959
Not designated as hedging instrument				
Forward currency contracts		69	69	
Forward equity contracts		446	446	
Receivables from mature equity derivatives				
Stock options		10,647		10,647
Liabilities				
Trade and other payables	42,076			
Financial liabilities				
Non-derivative financial liabilities				
Loans	304,071			
Other non-derivative financial liabilities	6,067			
Derivative financial liabilities				
Not designated as hedging instrument				
Forward currency contracts		629	629	
Forward equity contracts		2,554	2,554	

					Fair value			
	Financial assets at amortized cost	**Equity instruments FVOCI**	**Other financial liabilities**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
	462,362			462,362				
	276,169			276,169				
		3,873		3,873			3,873	3,873
		3,119		3,119	3,119			3,119
	11,752			11,752				
				4,959		4,959		4,959
				69		69		69
				446		446		446
				10,647		10,647		10,647
				42,076				
			304,071	304,071		304,480		304,480
			6,067	6,067		6,067		6,067
				629		629		629
				2,554		2,554		2,554

December 31, 2017

	Valuation category		Carrying amount	
in € thousands	**At amortized cost**	**At fair value**	**(FVPL) Held for trading purposes**	**Hedging instruments**
Assets				
Cash and cash equivalents	365,815			
Trade and other receivables	279,587			
Other financial assets				
Financial assets available for sale				
Shareholders' equity	9,736			
Investment funds		2,852		
Loans and other financial receivables	10,479			
Derivative financial instruments				
Designated as hedging instrument				
Stock options		25,366		25,366
Not designated as hedging instrument				
Forward equity contracts		11,123	11,123	
Stock options		8,607	8,607	
Receivables from mature equity derivatives				
Stock options		12,732		12,732
Liabilities				
Trade and other payables	41,294			
Financial liabilities				
Non-derivative financial liabilities				
Loans	301,631			
Other non-derivative financial liabilities	6,529			
Derivative financial liabilities				
Designated as hedging instrument				
Forward currency contracts		2,437	2,437	

					Fair value			
	Loans and receivables	**FVOCI**	**Other financial liabilities**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
	365,815			365,815				
	279,587			279,587				
		9,736		9,736				
		2,852		2,852	2,852			2,852
	10,479			10,479				
				25,366		25,366		25,366
				11,123		11,123		11,123
				8,607		8,607		8,607
				12,732		12,732		12,732
				41,294				
				310,597				
			301,631	301,631		302,303		302,303
			6,529	6,529		6,529		6,529
				2,437		2,437		2,437

No financial assets or liabilities were reclassified to different levels of the fair-value hierarchy during fiscal 2017 or 2018. All equity instruments were designated to measurement at fair value through other comprehensive income (FVOCI), to reflect a more long-term investment intension in earnings.

The following table illustrates how the fair values of financial assets and liabilities are determined:

Financial assets/ financial liabilities	Hierarchy level	Valuation technique and key inputs	Significant unobservable inputs	Correlation between unobservable inputs and fair value
Interest rate swaps	2	Discounted cash flow approach; future cash flows are estimated based on forward interest rates (observable interest rate curves as of balance sheet date) and fixed interest rates, discounted at an interest rate that accounts for the credit risk associated with the counter parties.	n/a	n/a
Forward currency contracts	2	Discounted cash flow approach; future cash flows are estimated based on forward exchange rates (observable exchange rates as of balance sheet date) and fixed forward exchange rates, discounted at an interest rate that accounts for the credit risk associated with the counter parties.	n/a	n/a
Stock options	2	Option pricing model, which accounts for influential option pricing factors (share price, exercise price of the option, share price volatility, dividends as dividend yield, interest rates, option’s remaining term).	n/a	n/a
Equity forward contracts	2	Fair values are measured based on the intrinsic values of the forward equity contracts, which are calculated using the share prices from an active market.	n/a	n/a
Investment funds	1	Prices quoted on active market.	n/a	n/a
Shareholders' equity (currently non-listed securities only)	3	Comprehensive valuation approach based on multiple quantitative and qualitative factors such as current/ planned earnings, liquidity, recent/planned transactions.	n/a	n/a

The fair values of cash and cash equivalents, time deposits, current receivables, trade payables and other current financial liabilities correspond approximately with their carrying amounts, primarily due to the short terms of these instruments.

The Company uses various parameters to measure non-current receivables, mainly interest rates and the customers’ individual credit ratings. Software AG calculates bad debt allowances to reflect expected defaults based on the measurement results. Accordingly, the carrying amounts of these receivables corresponded approximately with their fair values as of December 31, 2018 and December 31, 2017.

Software AG calculates the fair values of liabilities to banks and other financial liabilities as well as other non-current financial liabilities by discounting the estimated future cash flows using the interest rates applicable to similar financial liabilities with comparable maturities.

The net gain/loss from loans and receivables is only affected significantly by currency translation and interest effects. The net gain from derivatives without qualifying hedging relationships amounted to €8,110 thousand (2017: €1,477 thousand) in fiscal 2018. The net gain from derivatives designated as cash flow hedges was included in the income statement and amounted to €12,873 thousand in fiscal 2018 (2017: €12,550 thousand).

Equity instruments were impaired in the amount of €4,858 thousand which were recognized in other comprehensive income in fiscal 2018. Last year, net changes in fair value of equity instruments available for sale were recognized in other comprehensive income in the amount of €52 thousand; impairments to other equity instruments were recognized in net financial income/expense in the amount of €1,480 thousand.

Market risk and the use of derivative financial instruments

As a result of its international operating activities as well as its investing and financing activities, Software AG is exposed to various financial risks. Management continuously monitors these risks. Derivative financial instruments are used in accordance with internal guidelines in order to reduce risks arising from changes in interest rates, exchange rates, cash flows, or the value of cash investments. Derivatives are generally entered into to hedge existing balance sheet exposures and highly probable forecast transactions.

a) Interest rate risk

The Company is subject to interest rate fluctuations that affect both assets and equity and liabilities on the balance sheet.

On the assets side, income from investing available cash and cash equivalents and future interest income resulting from discounting non-current receivables are particularly subject to interest rate risk. On the equity and liabilities side, interest expenses for current and non-current financial liabilities as well as pension provisions and other items related to long-term borrowings are especially exposed to interest rate risk.

The sensitivity analysis required by IFRS 7 relates to interest rate risk arising from monetary financial instruments bearing variable interest rates.

Based on the current structure of the interest-bearing financial instruments, a hypothetical increase in the market interest level of 100 basis points would raise earnings by €1,392 thousand (2017: €1,192 thousand).

b) Exchange rate risks

In order to hedge the risk of future fluctuations in exchange rates, the Company enters into currency forward contracts. Foreign currency receivables and liabilities are offset if possible, and only the remaining net exposure is hedged selectively. Estimated cash flows can also be hedged in accordance with internal guidelines.

Hedging transactions are measured at their fair value. The amounts are reported in the balance sheet under other financial assets or financial liabilities. Since hedging transactions are not normally designated as hedge accounting, changes in fair value are immediately recognized through profit or loss in the Consolidated Income Statement.

The sensitivity analysis required by IFRS 7 relates to exchange rate risk arising from monetary financial instruments that are denominated in a currency other than the functional currency in which they are measured. Exchange differences arising from the translation of financial statements into the Group currency (translation risk) and non-monetary items are not taken into account. Most significant monetary financial instruments are denominated in the functional currency. For Software AG, significant effects on earnings (earnings before income taxes) result only from the relationship of the euro to the U.S. dollar. Hedging transactions are based on existing hedges or estimated cash flows and thus reduce any potential effects on earnings. In the case of designated cash flow hedges, exchange rate changes affect other reserves included in equity.

Based on the monetary financial instruments available as of the reporting date, a devaluation of the euro in amount of 10 percent against the U.S. dollar would have increased earnings by €1,376 thousand (2017: €906 thousand) and other reserves by €2,818 thousand (2017: €2,414 thousand). This amount only represents a theoretical risk for Software AG as these instruments are hedges of balance sheet transactions, rather than open trading positions.

c) Market risk

In line with Group policy, assets are controlled in terms of maturity, interest type, and rating such that the Company does not expect any significant fluctuations in value.

d) Credit risk

Software AG is exposed to default risk in its operating business and in connection with certain financial transactions if contracting parties fail to meet their obligations. Major cash investments as well as derivative financial instruments are entered into with banks with credit ratings of at least investment grade and whose credit default swap (CDS) rates are monitored continuously. The theoretical maximum default risk exposure is indicated by the carrying amounts. The guidelines defined by management ensure that the credit risk from financial instruments is spread across various banks.

Receivables are monitored as part of operations on an ongoing basis. The need for impairment is evaluated on every balance sheet date using an impairment matrix for determining expected credit loss. As of December 31, 2018, there was no indication of the existence of any risk beyond that taken into account through bad debt allowances. There is no concentration of credit risks with respect to single customers as a result of the size of Software AG's customer base or due to the distribution of our revenues across various sectors and countries. The theoretical maximum exposure to credit risk is reflected in the carrying amounts of the receivables, without taking any collateral into account.

e) Liquidity risk

A liquidity risk arises from the possibility that Group entities may not be able to satisfy their existing financial liabilities, for example, arising from loan agreements, lease agreements or trade accounts payable. The risk is limited by active working capital management and Group-wide liquidity control and is, if necessary, balanced by available cash and bilateral lines of credit.

Under credit agreements having a total volume of €200.0 million (2017: €200.0 million), Software AG is required to limit net debt within the Group to a maximum of 3.25- times EBITDA and not fall below an interest coverage ratio of 4.25. As of year-end 2018, the Company's net debt in relation to EBITDA was significantly lower than this limit and the interest coverage ratio was significantly higher.

The table below shows the contractually fixed payments arising from financial liabilities. Liabilities in foreign currency are calculated at the exchange rate as of December 31, 2018.

2018

in € thousands	Up to 1 year	>1 to 5 years	> 5 years	Total
Trade payables and other financial liabilities (of this item)	32,656	3,245	0	35,901
Financial non-derivative liabilities	109,965	100,173	100,000	310,138
Derivative financial liabilities	1,923	1,260	0	3,183

2017

in € thousands	Up to 1 year	>1 to 5 years	> 5 years	Total
Trade payables and other financial liabilities (of this item)	30,438	3,677	0	34,115
Financial non-derivative liabilities	211,673	100,091	0	311,764
Derivative financial liabilities	2,366	71	0	2,437

Volume and measurement of derivative financial instruments

Derivative financial instruments are used only to hedge existing or estimated currency risk, interest rate risk, or other market risk.

The table below shows the notional amounts, the carrying amounts, and the fair values of derivative financial instruments as of December 31, 2018 and December 31, 2017. The fair values of forward currency contracts are determined on the basis of forward foreign exchange rates. The fair values of stock options and equity forward contracts used to hedge the performance phantom share plan as well as the MIP plans are based on market prices, which reflect the current market situation and are equivalent to the replacement costs as of the balance sheet date.

	2018			2017		
in € thousands	**Notional amount**	**Fair value**	**Carrying amount**	**Notional amount**	**Fair value**	**Carrying amount**
Derivatives with positive fair value						
Derivatives (without qualifying hedging relationship)		516	516		19,730	19,730
Forward currency contracts remaining term < 1 year	12,673	69	69			
Stock options/forward equity contracts	6,686	446	446	76,526	19,730	19,730
Derivatives (cash flow hedges)		4,959	4,959		25,366	25,366
Stock options	103,788	4,959	4,959	53,570	25,366	25,366
Receivables from mature equity derivatives		10,647	10,647		12,732	12,732
Stock options	n/a	10,647	10,647	n/a	12,732	12,732
Derivatives with negative fair value						
Derivatives (without qualifying hedging relationship)		–3,183	–3,183		–2,437	–2,437
Forward currency contracts remaining term < 1 year	49,879	–589	–589	52,406	–2,366	–2,366
Forward currency contracts remaining term < 1 year	349	-40	–40	1,084	–71	–71
Stock options/forward equity contracts	12,090	–2,554	–2,554	0	0	0

The derivative financial instruments are designated to hedge the fair value of recognized assets or liabilities. Changes in the value of hedging instruments were recognized through profit or loss in the Consolidated Income Statement.

Forward currency contracts and currency option transactions are entered into for the purpose of hedging foreign exchange risks related to future cash flows.

In order to hedge the risks arising from changes in value of the phantom share program and the MIPs, the Company has entered into hedging instruments on Software AG stock with banks.

The financial instruments for hedging currency and interest rate risk have maximum terms to maturity of 1.1 years. Hedging transactions on the phantom share and MIP plans have remaining maximum terms of 2.6 years.

Cash investment policy

Software AG takes a conservative approach with regard to its cash investments. The Company invests primarily in short-term time deposits and short-term fixed-income securities with a credit rating of at least "investment grade." Software AG has introduced a process in order to monitor the creditworthiness of the banks with which we maintain relationships whereby performance of the relevant credit default swaps (CDS) and external ratings are monitored continuously and investment decisions are adapted accordingly. In fiscal 2018, the interest rates for term deposit investments in euros were between 0 percent and 0.1 percent p.a., whereas up to 53 percent p.a. was reached for investments in foreign currencies abroad.

[33] Disclosures on Leases

The Group's rental agreements and operating leases relate chiefly to office space, vehicles and IT equipment. Lease payments under operating leases are recognized as an expense over the term of the lease.

2018

in € thousands	Up to 1 year	> 1 to 5 years	> 5 years	Total
Contractually agreed payments	17,627	39,741	1,806	59,174
Estimated income from subleases	958	1,851	0	2,809

2017

in € thousands	Up to 1 year	> 1 to 5 years	> 5 years	Total
Contractually agreed payments	15,754	39,375	4,574	59,703
Estimated income from subleases	671	2,216	0	2,887

Software AG made payments on leases in the amount of €17,680 thousand (2017: €17,445 thousand) in 2018.

[34] Contingent Liabilities

For more information on reportable contingent liabilities,
p. 209 please refer to the section on Litigation in Note [36].

[35] Seasonal Influences

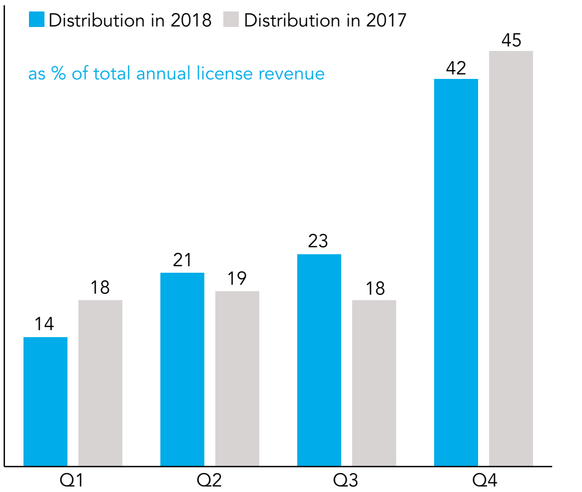
Revenues and pre-tax earnings were distributed over fiscal year 2018 as follows:

in € thousands	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018
License revenue	34,165	53,471	56,743	104,987	249,365
as % of license revenue for the year	14	21	23	42	100
Total revenue	186,634	205,701	208,817	264,559	865,711
as % of revenue for the year	21	24	24	31	100
Earnings before taxes	41,629	51,520	54,240	81,481	228,870
as % of earnings for the year	18	22	24	36	100

Based on historical data, the revenue and earnings distribution from 2018 is not fully representative. The distribution of revenue and earnings is regularly affected by large individual deals and is thus difficult to predict.

The following graph illustrates the development of license revenues in 2018 and 2017:

License Revenue in 2018 and 2017



[36] Litigation

In February 2010, a software company in Virginia, USA sued Software AG together with 11 additional defendants, including IBM and SAP, for infringement of several of its software patents. The lawsuit was filed with a court in Virginia. By order of the court, the proceedings were suspended for Software AG and all other defendants except for one, which was actively pursued. The court dismissed the case to set a precedent, upon which the plaintiff filed an appeal. The court of appeals rejected the appeal in January 2012. In response to further legal action brought by the plaintiff, the appellate court partially acknowledged the case and partially referred it back to the court of first instance in October 2013. In September 2014 the court ordered for proceedings to remain suspended until the U.S. Patent Office makes a decision regarding its review of the patents in question, which was initiated by the defendants. In summary proceedings in May 2015, the court decided in favor of one defendant; the plaintiff filed an appeal against the decision and, as reported on August 18, 2016, won in part. After the original judge withdrew herself from the case, a new judge was assigned. The U.S. Patent Office has since confirmed a decision relating to the invalidity of a TecSec patent. The proceedings are still pending for Software AG.

A number of legal actions have been filed with the Regional Court of Saarbrücken in connection with the control and profit transfer agreement with IDS Scheer AG. In these proceedings, the petitioners are seeking an increase in their cash settlements and annual compensatory payments. Software AG considers the objections as to valuation to be groundless. The Regional Court of Saarbrücken ruled on June 6, 2018 to reject the plaintiff's appeal. Multiple plaintiffs filed complaints against the decision within the appeal period.

In connection with the merger of IDS Scheer AG and Software AG, a large number of legal challenges were filed with Regional Court of Saarbrücken, in which the plaintiffs seek a legal review of the set exchange ratio and cash compensation. Software AG considers the objections as to valuation to be groundless. In its decision of March 15, 2013, the Regional Court of Saarbrücken determined that the market value ratio method be employed for valuation and that cash compensation in the amount of €7.22 plus interest for every share held by outside shareholders be paid. This could result in a maximum risk of approximately €7.6 million plus interest. Software AG appealed the decision. The court-ordered expert witness submitted a report in the third quarter of 2017. Software AG presented a detailed opinion on the report in the fourth quarter of 2017. The court resolved on January 12, 2018 that the expert witness must appear for a hearing to explain the report and add to it prior to the appointment. The date has not yet been scheduled. Provisions are set up based on the estimated probable actual resource outflow.

The Spanish cartel authority (Comisión Nacional de los Mercados y la Competencia, CNMC) searched the offices of Software AG España, S.A. Unipersonal (Software AG Spain) on October 28 and 29, 2015 for suspicion of an inadmissible anti-competitive agreement. On April 25, 2016 the CNMC published on its website that it was initiating antitrust proceedings against 11 companies, including Software AG Spain. CNMC extended the case to three additional companies on October 19, 2017. CNMC is accusing Software AG Spain of inadmissible price fixing and "covert tenders." Following a hearing on June 12, 2018, the CNMC ruled on July 31, 2018 to impose a penalty on 11 companies, including Software AG Spain. The penalty for Software AG Spain was €6 million, which was paid in January 2019. Software AG appealed the agency's decision.

After a customer of Software AG in the USA, Shelby County, Tennessee, requested exemption from possible claims filed against the county and/or its employees by Software AG in 2017 and 2018, Software AG Cloud Americas, Inc. was added as a defendant in a class-action lawsuit in the U.S. District Court for the Western District of Tennessee on January 18, 2019. The backdrop to this are various lawsuits against a customer of Software AG, Shelby County, Tennessee. The class-action suit has not yet been admitted by the courts.

Status proceedings were brought to the Regional Court of Frankfurt am Main on the matter of a motion submitted by shareholder Erzberger to determine whether Software AG's Supervisory Board must be constituted in accordance with the requirements of the Codetermination Act. The regional court ruled to reject the motion on December 21, 2017. The plaintiff had filed a complaint against the decision on the last day of the appeal period, which it has since rescinded. The proceedings are therefore resolved.

The risk evaluation for other litigation and legal risks was updated; and provisions were set up based on a new calculation of the probable actual resource outflow.

Provisions for litigation totaled €15,440 thousand (2017: €16,081 thousand) as of December 31, 2018.

In addition, contingent liabilities in the amount of €20,678 thousand (2017: €19,593 thousand) existed. But since a resource outflow as of the balance sheet date was not probable, no provisions were set up. Those relate to individual lawsuits and €8,200 for tax-related risks.

There were no other changes with respect to the legal disputes reported as of December 31, 2017, nor were there any new legal disputes or other legal risks that could potentially have a significant effect on the Group's financial position, financial performance or cash flows.

[37] Stock Option Plans

Software AG has various stock option plans for members of the Management Board, managers and other Group employees.

Share-based remuneration resulted in a total expense of €10,969 thousand (2017: €20,678 thousand) in fiscal 2018.

No expenses for share-based compensation transactions were capitalized as inventories or non-current assets.

Management Incentive Plan 2018

A share-performance-based Management Incentive Plan 2018 for members of the Management Board, upper management and key members of staff was approved in December 2017, as in the previous year. It consists of standard European call options to be settled in cash. Allocation took place in four tranches, differing only by terms. Gains on the exercise for members of the Management Board are paid contingent upon an exercise threshold. The exercise threshold has been reached if Software AG's volume weighted average share price (VWAP) in Xetra trading exceeds a defined price on ten consecutive trading days during the relevant period of time. The relevant share price is equal to the exercise target (€54.32) less dividends received since the beginning of of the plan.

Allocation was based on the following parameters:

Reference price at issue/base price	€45.27
Term of rights	
Tranche 1	36 months
Tranche 2	39 months
Tranche 3	42 months
Tranche 4	45 months
Exercise target	€54.32
Relevant period for reaching the exercise threshold (only applies to members of the Management Board)	Dec. 1, 2019 until Nov. 30, 2020
Cap	€67.91

In December 2017, 1,464,122 rights were awarded under Management Incentive Plan 2018.

The rights granted under Management Incentive Plan 2018 changed as follows in fiscal year 2018:

Balance as of Dec. 31, 2017	**1,464,122**
Granted	288,912
Expired	–378,226
Balance as of Dec. 31, 2018	**1,374,808**

Fair values were calculated based on the prices of hedging transactions entered into with a bank; the parameters of the transactions correspond to the employees' awards.

The fair values as of December 31, 2018 and December 31, 2017 were:

in €	2018	2017
Tranche 1	1.02	6.61
Tranche 2	1.23	6.73
Tranche 3	1.43	6.81
Tranche 4	1.51	6.72

A total expense of €3,943 thousand (2017: €0 thousand) was incurred under this plan in fiscal 2018. This figure is the balance of an expense of €589 thousand in original commitments plus €3,354 thousand in expenses from hedging the commitments as cash flow hedges.

Provisions totaled €589 thousand as of December 31, 2018.

Management Incentive Plan 2017

A share-performance-based Management Incentive Plan 2017 for members of the Management Board, upper management and key members of staff was approved in December 2016. It consists of standard European call options to be settled in cash. Allocation took place in four tranches, differing only by terms. Gains on the exercise for members of the Management Board are paid contingent upon an exercise threshold. The exercise threshold has been reached if Software AG's daily VWAP in Xetra trading exceeds a defined price on ten consecutive trading days during the relevant period of time. The relevant share price is equal to the exercise target (€39.82) less dividends received since the beginning of the plan.

Allocation was based on the following parameters:

Reference price at issue/base price	€33.18
Term of rights	
Tranche 1	36 months
Tranche 2	39 months
Tranche 3	42 months
Tranche 4	45 months
Exercise target	€39.82
Relevant period for reaching the exercise threshold (only applies to members of the Management Board)	Dec. 1, 2018 to Nov. 30, 2019
Cap	€49.77

In December 2016, 1,654,570 rights were awarded under Management Incentive Plan 2017.

The rights granted under Management Incentive Plan 2017 changed as follows in fiscal years 2018 and 2017:

Balance as of Dec. 31, 2016	**1,654,570**
Granted	167,206
Expired	–36,100
Balance as of Dec. 31, 2017	**1,785,676**
Granted	0
Expired	–82,575
Balance as of Dec. 31, 2018	**1,703,101**

Fair values were calculated based on the prices of hedging transactions entered into with a bank; the parameters of the transactions correspond to the employees' awards.

The fair values as of December 31, 2018 and December 31, 2017 were:

in €	2018	2017
Tranche 1	2.05	9.27
Tranche 2	2.35	9.08
Tranche 3	2.58	8.90
Tranche 4	2.57	8.58

A total expense of €2,092 thousand (2017: €3,260 thousand) was incurred under this plan in fiscal 2018. This figure is the balance of earnings of €2,442 thousand from original commitments plus €4,534 thousand in expenses from hedging the commitments as cash flow hedges.

Provisions totaled €2,850 thousand (2017: €5,292 thousand) as of December 31, 2018.

Management Incentive Plan 2016

A share-performance-based Management Incentive Plan 2016 for members of the Management Board, upper management and key members of staff was approved in December 2015. The rights had an original term of three years. Exercise benefits are paid out conditional up an exercise threshold. The exercise threshold has been reached if Software AG's VWAP in Xetra trading exceeds a defined price on ten consecutive trading days during a defined period of time. If the exercise target is achieved, the gross exercise benefit is equal to Software AG's VWAP from November 15 to December 15 of the third year of the term. The maximum possible exercise benefit per right is capped at 200 percent of the reference price.

Allocation was based on the following parameters:

Reference price at issue	€25.94
Base price	€0
Term of rights	3
Exercise target	€30.00
Period in which exercise threshold is to be reached	Dec. 1, 2017 to Nov. 30, 2018
Cap	€51.88

The exercise threshold was reached in December 2017. All 411,199 rights outstanding as of December 31, 2017 were therefore vested.

With the exception of the 32,722 rights paid off in December in connection with the premature exit of a Management Board member, all other 378,477 rights were paid off in January 2019. The fair value as of December 31, 2018 was equal to the payoff amount per right of €35.49 (2017: €43.34).

Total income of €753 thousand (2017: -€7,516 thousand) was generated under this plan in fiscal 2018. This figure is the balance of €1,407 thousand (2017: -€13,200 thousand) in earnings from original commitments plus €654 thousand (2017: -€5,684 thousand) in expenses from hedging the commitments as cash flow hedges.

The commitment equal to the disbursement amount of €13,432 thousand was paid to members of the Management Board, managers and employees in January 2019. Payment on claims to hedges was received in the same period in the amount of €10,647 thousand and was reported in other financial assets as of December 31, 2018.

Provisions totaled €17,079 thousand as of December 31, 2017.

Management Incentive Plan 2015 (MIP V)

A share-performance-based Management Incentive Plan (MIP V) for members of the Management Board, upper management and key members of staff was approved in December 2014. The rights had a term of three years. The fair value as of December 31, 2017 was equal to the exercise benefit of €42.44 per right.

The commitment as of December 31, 2017 equaling the disbursement amount of €20,921 thousand was paid out to members of the Management Board in January 2018. Payment on claims to hedges was received in the same period in the amount of €12,732 thousand and was reported in other financial assets as of December 31, 2017.

Management Incentive Plan 2007–2011 (MIP III)

In 2007, a share-based incentive plan for members of the Management Board and upper management was launched. A total of 7,342,500 participation rights have been issued to Management Board members and managers under the plan.

The performance targets were achieved at the end of fiscal year 2010. The rights have therefore been exercisable since that date.

Conditions for the rights are as follows:

A standard call option with a base price of €24.12. Software AG may opt to settle in cash or equity instruments. There is a cap at €45.00, which limits the maximum benefit from exercising a right to €20.88.

The term of the rights expires after June 30, 2019.

The rights granted under Management Incentive Plan 2007-2011 (MIP III) changed as follows in fiscal years 2018 and 2017:

	Number of rights outstanding	Exercise price per right in €	Weighted average remaining term (years)	Aggregated intrinsic value (€ thousands)
Balance as of Jan. 1, 2017	**83,900**	**24.12**	**2.5**	**870** [1]
Exercised	–71,500	24.12		
Balance as of Dec. 31, 2017	**12,400**	**24.12**	**1.5**	**282** [1]
Exercised	–6,650	24.12		
Balance as of Dec. 31, 2018	**5,750**	**24.12**	**0.5**	**42** [1]
thereof exercisable as of Dec. 31, 2018	5,750	24.12		

[1] Based on the respective closing prices fo the year

The 6,650 rights exercised in 2018 were exercised at a weighted average price of €41.34 per share. Of those, 3,650 were settled in treasury shares. The remaining 3,000 were settled in cash.

The 71,500 rights exercised in 2017 were exercised at a weighted average price of €42.62 per share. They were settled in treasury shares only.

No expenses were incurred under this plan in fiscal 2017 or 2018.

Performance Phantom Share Plan

A portion of the variable management remuneration is paid out as a medium-term component on the basis of a performance phantom share (PPS) plan. As in the previous year, the portion accruing for fiscal year 2018 will be converted into PPS on the basis of the average share price of Software AG stock in February 2018, less 10 percent. The resulting number of shares will become due in three identical tranches with terms of one, two, and three years. On the due dates in March 2019 to 2021, the number of PPS will be multiplied by the then-applicable share price for February. The beneficiaries will receive an amount per PPS equal to the dividends paid to Software AG shareholders prior to payment of a phantom share tranche.

Beneficiaries may elect to let Software AG dispose of any PPS that have become due after the defined vesting period for up to six years and four months after leaving the Company and thus to continue to participate in the success of the Company.

At the time of payment, the number of shares is multiplied by the average price of Software AG stock on the sixth to tenth trading days after the decision to exercise the relevant phantom shares. The decision to exercise options must be disclosed to the Company from the date of publication of the financial results until the following fifth trading day. Those entitled receive an amount per phantom share equal to the dividends paid to Software AG shareholders prior to payment of the phantom shares.

This plan resulted in expenses of €5,687 thousand (2017: €4,631 thousand) in fiscal 2018. This figure is the balance of earnings of €2,977 thousand (2017: –€12,377 thousand) in original commitments plus an expense of €8,630 thousand (2017: –€7,746 thousand) from hedging transactions with banks for the commitments.

The provisions for the rights outstanding under the PPS plan amounted to €15,456 thousand (2017: €29,766 thousand) as of December 31, 2018.

The intrinsic value of the rights exercisable under the performance phantom share plan as of December 31, 2018 amounted to €9,216 thousand (2017: €15,340 thousand) as of December 31, 2018.

[38] Corporate Bodies

Members of the Supervisory Board:

Dr. Andreas Bereczky
Dr.-Ing. in mechanical engineering
Shareholder representative
Chairman

Director of Production of ZDF, Mainz
(until December 31, 2018)
Resident of: Aachen

Supervisory board or other comparable seats:

- *Member of the supervisory board, GFT Technologies SE, Stuttgart*

Guido Falkenberg
Graduate in computer science
Employee representative
Deputy Chairman

Employee of Software AG, Darmstadt
Resident of: Mühltal-Traisa

Supervisory board seats:

- *none*

Eun-Kyung Park
Graduate in business administration
Shareholder representative

CEO
SevenOne AdFactory GmbH, Unterföhring
(until August 31, 2018)
CEO
ProSiebenSat.1 Digital GmbH, Unterföhring and
CEO
ProSiebenSat.1 TV Deutschland GmbH,
Unterföhring (since September 1, 2018)
Resident of: Munich

Supervisory board seats:

- *Member of the supervisory board of ad pepper media International N.V., Amsterdam, Netherlands*

Alf Henryk Wulf
Graduate in engineering
Shareholder representative

Chief Executive Officer
GE Power AG, Mannheim
(until December 31, 2018)
Resident of: Stuttgart

Supervisory board seats:

- *Member of the supervisory board of Pfisterer Holding AG, Winterbach (since July 5, 2018)*
- *Member of the supervisory board of 1NCE GmbH, Cologne (since January 1, 2018)*
- *Member of the supervisory board of DEA Deutsche Erdoel AG, Hamburg*
- *Member of the supervisory board of GE Grid GmbH, Frankfurt am Main*

Markus Ziener
Graduate in economics
B.A. in business administration
Shareholder representative

Member of the board of the Software AG Foundation, Darmstadt
Resident of: Seeheim-Jugenheim

Supervisory board seats:

- *Member of the Supervisory Board of Amryt Pharma plc, Dublin, Ireland*

Christian Zimmermann
Graduate in business information-systems
Employee representative

Employee of SAG Deutschland GmbH, Darmstadt
Resident of: Alsbach-Hähnlein

Supervisory board seats:

- *none*

Members of the Management Board:

Sanjay Brahmawar
M.B.A. in finance and marketing; bachelor's degree in civil engineering

Chief Executive Officer
Global Human Resources, Global Legal, Global Information Services (IT), Corporate Communications, Global Processes, Audits & Quality and Corporate Office (since August 1, 2018)
Resident of: Munich

Supervisory board seats:
- *none*

Karl-Heinz Streibich
Graduate in communications engineering

Chief Executive Officer
Global Human Resources, Global Legal, Global Information Services (IT), Corporate Communications, Global Processes, Audits & Quality and Corporate Office (until July 31, 2018)
Resident of: Frankfurt am Main

Supervisory board seats:
- *Member of the supervisory board of Siemens Healthineers AG, Erlangen (since March 1, 2018)*
- *Chairman of the supervisory board of Dürr AG, Bietigheim-Bissingen (since January 1, 2018)*
- *Member of the supervisory board of WITTENSTEIN SE, Igersheim (not listed on a stock exchange) (since September 19, 2017)*
- *Member of the supervisory board of Deutsche Telekom AG, Bonn (since October 1, 2013)*
- *Member of the supervisory board of Deutsche Messe AG, Hannover (not listed on a stock exchange) (since January 1, 2013)*

Eric Duffaut
Graduate in economics, finance and business management (Master's)

Chief Customer Officer
Global Sales, Marketing, Consulting Services and Support (until October 31, 2018)
Resident of: Frankfurt am Main

Supervisory board seats:
- *none*

Dr. rer. nat. Wolfram Jost
Graduate in business administration

Chief Technology Officer
Product Management, Product Marketing, Analyst Relations, CTO Community, Strategic Customer Programs (until January 8, 2019)
Resident of: Schmelz

Supervisory board seats:
- *none*

John Schweitzer
B.S. in economics and finance

Chief Revenue Officer
Global Sales, Marketing, Consulting Services and Support (since November 1, 2018)
Resident of: Los Gatos, CA, USA

Supervisory board seats:
- *none*

Dr. Stefan Sigg
Graduate in mathematics

Chief Product Officer
Product Development and Delivery, Research and University Alliances, Global Support, Product Design and Architecture, R&D Operations and Shared Services
Resident of: Heidelberg

Supervisory board seats:
- *none*

Arnd Zinnhardt
Graduate in business administration

Chief Financial Officer
Finance, Controlling, Treasury, Taxes, M&A, Business Operations, Investor Relations, Global Procurement
Resident of: Königstein im Taunus

Supervisory board and other seats:
- *Member of the administrative board of Landesbank Hessen-Thüringen Girozentrale, Frankfurt am Main*

Remuneration of the Management Board pursuant to section 314 (1), no. 6 of the German Commercial Code (HGB)

Total remuneration for members of the Management Board, including newly issued MIP 2018 (2017: MIP 2017) options, was €19,070 thousand (2017: €18,573 thousand) in fiscal 2018. This includes awards under the new MIP 2018 stock option plan in the amount of €295 thousand (2017: €4,015 thousand). This value was determined by an external auditor.

The remuneration of the Management Board still includes the consideration paid for 88,022 (2017: 113,985) committed PPS totaling €2,855 thousand (2017: €4,835 thousand). The awarded phantom shares had a fair value as of the grant date of €32.43 (2017: €42.42) per PPS.

Remuneration under this plan totaled €3,204 thousand (2017: €5,187 thousand) in fiscal 2018.

Remuneration for former Management Board members totaled €582 thousand (2017: €367 thousand).

Pension provisions, offset against plan assets for former Management Board members, totaled €12,767 thousand (2017: €11,751 thousand). The figure from the previous year was adjusted to accommodate for a relinquished life insurance policy. Pension obligations for former Management Board members amounted to €24,831 thousand (2017: €14,086 thousand). The figure from the previous year was adjusted to accommodate for a relinquished life insurance policy. These amounts include provisions for periods of time in which two members of the Management Board were executive employees or members of the Group Executive Board.

Software AG did not grant any advances or loans to Management Board members in fiscal 2018 or in fiscal 2017. It also did not set up any contingent liabilities for these individuals.

Detailed disclosures on the remuneration paid to Management Board members are made in the Remuneration Report, which forms part of the Combined Management Report.

Remuneration of the Supervisory Board pursuant to section 314 (1), no. 6a of the German Commercial Code (HGB)

Total remuneration for the Supervisory Board in fiscal 2018 amounted to €614 thousand (2017: €612 thousand).

Software AG did not grant any advances or loans to Supervisory Board members in fiscal 2018 or in fiscal 2017. It also did not set up any contingent liabilities for these individuals.

Detailed disclosures on the remuneration paid to Supervisory Board members are made in the Remuneration Report, which forms part of the Combined Management Report.

[39] Related Party Transactions

A related party as defined by IAS 24 Related Party Disclosures is any legal or natural person able to exercise control over Software AG or a Software AG subsidiary, that is controlled by Software AG or a Software AG subsidiary, or in which Software AG or a Software AG subsidiary has an interest that gives it significant influence over such legal or natural person. This also includes any legal or natural person having an interest in Software AG that gives it significant influence over Software AG (Software AG Foundation), unconsolidated subsidiaries, and the members of Software AG's executive bodies, whose remuneration is specified in Note [38] as well as in the Remuneration Report contained in the Corporate Governance section of the Combined Management Report.

Disclosures on remuneration paid to related parties pursuant to IAS 24

Parties related to Software AG consist of the members of the Management Board and the Supervisory Board.

Remuneration paid to the Management Board can be broken down as follows:

in € thousands	2018	2017
Short-term benefits	12,210	9,735
Post-service benefits[1]	5,562	830
Share-based compensation[2]	2,885	16,203
	20,657	**26,768**

[1] The service cost of pension obligations pursuant to IAS 19 and legal/voluntary benefits to pension insurance companies is shown here.
[2] Expenses incurred under the PPS plan, the Management Incentive Plan V (MIP V), the Management Incentive Plan 2016 (MIP 2016), the Management Incentive Plan 2017 (MIP 2017) and the Management Incentive Plan 2018 (MIP 2018) are shown here.

Net pension obligations for Management Board members amounted to €47 thousand (2017: -€202 thousand). The negative number as of December 31, 2017 resulted from over funding of provisions through reinsurance policies. Gross pension obligations for Management Board members amounted to €7,454 thousand (2017: €14,845 thousand).

Furthermore, obligations from share-based compensation plans, including bonuses converted to PPS at year-end, for members of the Management Board amounted to €7,275 thousand (2017: €50,382 thousand).

Obligations to members of the Management Board from short-term variable remuneration components amounted to €3,265 thousand (2017: €6,536 thousand).

Remuneration paid to the members of the Supervisory Board in fiscal year 2018 totaled €614 thousand (2017: €612 thousand). This remuneration included a fixed short-term component and compensation for committee work.

Remuneration of the Management and Supervisory Boards is outlined in detail in the Remuneration Report. The Remuneration Report presents the structure and amount of the individual components. The Remuneration Report is included in the Combined Management Report.

No other business transactions took place between Software AG and the members of the Management Board or the Supervisory Board in fiscal year 2018.

[40] Auditor Fees

Software AG's general and administrative expenses included expenses for auditors' fees paid to BDO AG, the Group auditor, totaling €932 thousand (2017: €887 thousand). Of this amount, €867 thousand (2017: €821 thousand) related to the audit of the domestic entities' and the Group's financial statements, €34 thousand (2017: €38 thousand) to other testation services and €31 thousand (2017: €28 thousand) to tax advisory services. Other testation services refer primarily to audits in the context of the combined non-financial statement and EMIR compliance. Tax advisory services include tax advising only in the context of submitting tax returns and e-balance sheets.

[41] Events After the Balance Sheet Date

The Management Board announced its decision regarding the Company's strategic realignment (Helix project) on January 31, 2019. For more information on the strategic realignment, please refer to the Forecast section of the Combined Management Report.

There were no further events that occurred between December 31, 2018 and the date of release of the consolidated financial statements that were of significance to the consolidated financial statements.

[42] Statement on Corporate Governance

Pursuance to section 315 d of HGB and in conjunction with 289 et seq. of HGB, Software AG submitted its Statement on Corporate Governance on February 7, 2019. It will be available online from February 28, 2019 at: https://investors.softwareag.com/en/corporate-governance/governance-statement.

This statement includes the declaration of compliance with the German Corporate Governance Code pursuant to section 161 of the German Stock Corporation Act (AktG), which was issued separately and published on January 31/February 1, 2019 at: https://investors.softwareag.com/en/corporate-governance/compliance-declaration

[43] Exemption for Domestic Group Companies Pursuant to Section 264 (3) of the German Commercial Code (HGB)

With the approval of the relevant shareholders' meetings, SAG Deutschland GmbH, Darmstadt, SAG Consulting Services GmbH, Darmstadt and SAG LVG mbH, Saarbrücken, which are included in the consolidated financial statements of Software AG, have been exempt from the duty to prepare and publish annual financial statements and a management report, and from the duty to have them audited, in compliance with provisions applicable to corporations in accordance with section 264 (3) of the German Commercial Code.

Date and authorization for issue

Software AG's Management Board approved the consolidated financial statements on March 1, 2019.

Darmstadt, March 1, 2019

Software AG

S. Brahmawar J. Schweitzer

Dr. S. Sigg A. Zinnhardt

ADDITIONAL INFORMATION

In some cases, rounding could mean that values do not add up to the exact sum given or percentages do not equal the values presented.

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group. And the Combined Management Report includes a fair review of the development and performance of the business and the position of the Company and Group, together with a description of the principal opportunities and risks associated with the expected development of the Company and Group.

Darmstadt, March 1, 2019

Software AG

S. Brahmawar

J. Schweitzer

Dr. S. Sigg

A. Zinnhardt

INDEPENDENT AUDITORS' REPORT

To the Software Aktiengesellschaft, Darmstadt

Report on the Audit of the Consolidated Financial Statements and of the Combined Management Report

Audit opinions

We have audited the consolidated financial statements of Software Aktiengesellschaft, Darmstadt, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2018 and the Consolidated Income Statement, Statement of Comprehensive Income, Consolidated Statement of Cash Flows and Consolidated Statement of Changes in Equity for the financial year from January 1, 2018 to December 31, 2018, and Notes to the Consolidated Financial Statements, including a summary of significant accounting policies. In addition, we have audited the Combined Management Report of the Group for the financial year from January 1, 2018 to December 31, 2018. In accordance with German legal requirements, we have not audited the content of those parts of the Combined Management Report listed in the "other information" section.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph 1] HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at December 31, 2018, and of its financial performance for the financial year from January 1, 2018 to December 31, 2018, and
- the accompanying Combined Management Report as a whole provides an appropriate view of the Group's position. In all material respects, this Combined Management Report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the Combined Management Report does not cover the content of the parts of the combined management report listed in the "other information" section.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the Combined Management Report.

Basis for the audit opinions

We conducted our audit of the consolidated financial statements and of the Combined Management Report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements.

In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the Combined Management Report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from from January 1, 2018 to December 31, 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon, we do not provide a separate audit opinion on these matters.

We have identified the following items as key audit matters:

1. Revenue recognition for software licenses

2. Impairment of goodwill

3. Recognition and measurement of income taxes

Revenue recognition for software licenses

Facts and circumstances

In the consolidated financial statements of Software AG, revenue amounting to €865.7 million was disclosed in the Consolidated Income Statement and was mainly generated by granting software licenses (€249.4 million), from maintenance (€415.4 million) and from services (€182.5 million). Frequently, the Company's customers are granted software licenses combined with maintenance and/or services in multiple element contracts. To ensure that revenue generated from these highly complex business transactions is uniformly and consistently recognized, Software AG has implemented detailed accounting policy guidelines in line with the applicable accounting standards and has established uniform processes throughout the Group. Due to the size of individually large contracts, management decisions requiring significant judgment may materially affect the consolidated financial statements. These decisions by management may especially be necessary in identifying performance obligations of a contract,as well as determining and allocating the transaction price to those separate obligations. Beginning January 1, 2018, Software AG adopted the new accounting standard IFRS 15 - Revenue from Contracts with Customers. First-time application made it necessary to identify the differences, to determine the amounts relating to those differences and to adjust Software AG's accounting policy. In line with the modified retrospective method, the cumulative effect of first-time application amounting to €3.7 million was recognized directly in equity as of January 1, 2018. Additionally, there were material effects on the Group-wide established systems and processes for revenue recognition as well as a significant increase of disclosures in the consolidated financial statements.

The respective revenue disclosures presented by Software AG are found in the Notes to the Consolidated Financial Statements in sections [3] Accounting Policies and Measurement Methods, [5] Total Revenue and [31] Segment Reporting.

Audit response and findings

We examined whether the Software AG accounting policies complied with IFRS—15 Revenue from Contracts with Customers. We assessed the processes and controls for recognizing revenues generated by granting software licenses, especially in transactions involving multiple element contracts established by the Group, and examined their effectiveness. In particular, controls involving the proper identification of performance obligations, the determination and the allocation of the transaction price were thereby tested. By involving our IT specialists, we additionally assessed the related systems used in accounting for revenue—especially the necessary changes due to IFRS 15—Revenue from Contracts with Customers. For all of the significant contracts and a selection of the remaining contracts for granting software licenses we performed substantial audit procedures and assessed management decisions with regards to the identification of performance obligations, determination of the transaction price and allocation of this price among the separate performance obligations. We examined the contracts to the extent required for assessing if they were presented in the consolidated financial statements in accordance with IFRS, and if the accounting policies of Software AG had been uniformly applied throughout the Group. By giving appropriate instructions to the component auditors and then performing an assessment of the reporting from their audit, we ensured that the audit procedures were performed uniformly throughout the Group. Furthermore, we examined the completeness and accuracy of the additional disclosures presented in the notes concerning the first-time application of IFRS 15—Revenue from Contracts with Customers, with particular focus on the description of the differences compared to the former accounting rules and calculations used to arrive at the disclosed amounts for these differences.

Based on the audit procedures we performed, we are of the opinion that the underlying assumptions and management's judgment used for revenue recognition, in particular in the area of identifying performance obligations, determining transaction prices and allocation of the transaction prices among separate obligations were presented fairly, in all material respects. We have assured ourselves of the appropriateness of the design and effectiveness of the established processes and controls in connection with the transition to IFRS 15.

Impairment of goodwill

Facts and circumstances

In the consolidated financial statements of Software AG, goodwill as presented under non-current assets, amounts to €964.4 million, representing 48 percent of the balance sheet total. Goodwill was allocated to cash-generating units.

Cash-generating units with goodwill are subject to impairment tests by the Company at least once a year as well as to an additional impairment test if there are any indications of an impairment. The valuation is thereby made by using the discounted cash flow method. If the carrying amount of a cash-generating unit is higher than its recoverable amount, the carrying amount is written down to the recoverable amount. Assessing the recoverability of goodwill is complex and requires that management make numerous estimates and use significant judgment, especially with regard to revenue growth and the development of profit margins within a detailed five year budget period, a sustainable growth rate for cash flows expected for a forecast beyond the detailed budget period, and the discount rate to be used. This is a key audit matter due to the significance of the balance for goodwill in the consolidated financial statements of Software AG and because of considerable uncertainties associated with such a measurement.

Software AG's disclosures concerning goodwill are contained in section [20] Intangible Assets and Goodwill in the Notes to the Consolidated Financial Statements.

Audit response and findings

In the course of our audit we assessed the appropriateness of the material assumptions and the valuation parameters as well as the calculation methods used for impairment testing by involving our valuation specialists. We gained an understanding of the planning system and planning processes of management as well as of the significant assumptions they used. The budget for the subsequent year, as approved by the Supervisory Board, thereby constitutes the starting point for forecasting future cash flows within the detailed budget period. We examined the underlying budget assumptions and growth rates assumed for the expected cash flows beyond the detailed budget period by comparing past developments and current industry-specific market expectations. We reconciled the forecast of future cash flows in the first year of the detailed budget period with the budget approved by the Supervisory Board and determined reasonableness of the Company's historical forecasting accuracy by means of an analysis of budget-to-actual variances. Furthermore, we critically analyzed the discount rates used on the basis of the average costs of capital of a peer group. Our audit also encompassed sensitivity analyses made by Software AG. Regarding the effects of possible changes in costs of capital and the growth rates assumed, we additionally performed our own sensitivity analyses.

Overall, we were able to gain reasonable assurance that the assumptions made by management when performing impairment tests and the valuation parameters used were traceable and within an appropriate range.

Recognition and measurement of income taxes

Facts and circumstances

In the consolidated financial statements of Software AG, income taxes reduced earnings before income taxes by 27.8 percent. This reduction comprised expenses for current taxes (25.5 percent) as well as for deferred taxes (2.3 percent). Software AG conducts business in numerous jurisdictions and is consequently subject to many tax laws worldwide. The recognition and measurement of income tax liabilities and tax receivables, including estimating the probability and extent income tax-related issues result in payment obligations, require significant judgment, and demand a high degree of expertise. In addition, the assessment of the extent to which tax authorities will question tax-related facts is subject to a high amount of uncertainty. Along with current taxes, tax items also encompass deferred taxes that result from temporary differences and tax loss carryforwards that will be realized in future financial years. In particular, the assessment of recoverability for deferred tax assets, which result from deductible temporary differences and tax loss carryforwards, requires significant judgment by management.

Software AG's disclosures on income taxes and deferred taxes are contained in sections [12] Income Taxes, [19] Income Tax Receivables, [22] Deferred Taxes and [27] Income Tax Liabilities in the Notes to the Consolidated Financial Statements.

Audit response and findings

We involved internal specialists from our Tax Department, who worked closely with the audit team. With their support we assessed, amongst others, the methodical procedures for determining, measuring, and accounting for all tax items. We examined the calculations of income tax liabilities and of tax receivables on the basis of our knowledge of the relevant tax regulations as well as their present application by government authorities and courts. In order to assess income tax risks, we furthermore read the correspondence with tax authorities as well as the transfer pricing documentation critically. The plausibility of the assumptions of the legal representatives about the future taxable income situation was assessed, as it serves as the basis for the recognition and measurement of deferred tax assets resulting from deductible temporary differences and tax loss carryforwards. Tax specialists in our international network supported us in assessing tax items as well as in estimating the tax risks of significant foreign entities and reported the results of their assessments to us. We had our tax specialists analyze these reports.

On the basis of the accounting procedures performed by us, we were, on the whole, able to gain reasonable assurance over the underlying assumptions held and the judgment used by management in accounting for and measuring current and deferred taxes.

Other information

The members of the Management Board are responsible for other information. Other information comprises:

- the non-financial statement included in the Combined Non-Financial Statement of the Combined Management Report
- the separately published Statement on Corporate Governance to which sthe Statement on Corporate Governance of the Combined Management Report refers
- the remaining parts of the Annual Report, with the exception of the audited consolidated financial statements and Combined Management Report and our Auditor's Report.

Our audit opinions on the consolidated financial statements and on the Combined Management Report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the Combined Management Report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Management Board and the Supervisory Board for the consolidated financial statements and the Combined Management Report

The members of the Mangement Board are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the members of the Mangement Board are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the members of the Mangement Board are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the members of the Mangement Board are responsible for the preparation of the Combined Management Report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the members of the Mangement Board are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a Combined Management Report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the Combined Management Report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the Combined Management Report.

Auditor's responsibilities tor the audit of the consolidated financial statements and of the Combined Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the Combined Management Report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the Combined Management Report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. 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 consolidated financial statements and this Combined Management Report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the Combined Management Report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. 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.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' 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 Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective audit opinions. 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 Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Further information pursuant to article 10 of the EU Audit Regulation

We were elected as group auditor by the Annual Shareholders' Meeting on May 30, 2018. We were engaged by the Supervisory Board on September 10, 2018. We have been the group auditor of the Software AG without interruption since the financial year 1997.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to article 11 of the EU Audit Regulation (long-form audit report).

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Ralf Pfeiffer.

Berlin, March 4, 2019

BDO AG
Wirtschaftsprüfungsgesellschaft

Eckmann	Pfeiffer
German Public Auditor	German Public Auditor

INDEPENDENT PRACTITIONER'S REPORT

Independent Practitioner's Report on a Limited Assurance Engagement on Non-Financial Reporting Statement[1]

To the Supervisory Board of Software AG, Darmstadt

We have performed a limited assurance engagement on the non-financial group statement of Software AG, Darmstadt, according to § 315b HGB (Handelsgesetzbuch; German Commercial Code), which is combined with the non-financial statement of the Parent Company according to § 289b HGB, consisting of the Combined Non-Financial Statement in the Combined Management Report as well as the Business Model section which was incorporated by reference for the period from January 1 to December 31, 2018.

Management's Responsibility

The legal representatives of the Company are responsible for the preparation of the Combined Non-Financial Statement in accordance with §§ 315c in conjunction with 289c to 289e HGB.

This responsibility includes the selection and application of appropriate methods to prepare the Combined Non-Financial Statement as well as making assumptions and estimates related to individual disclosures, which are reasonable in the circumstances. Furthermore, the legal representatives are responsible for such internal controls that they have considered necessary to enable the preparation of the combined non-financial statement that is free from material misstatements, whether due to fraud or error.

Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Combined Non-Financial Statement based on the assurance engagement we have performed.

We are independent from the entity in accordance with the provisions under German commercial law and professional requirements, and we have fulfilled our other professional responsibilities in accordance with these requirements.

Our audit firm applies the national statutory regulations and professional pronouncements, in particular the Professional Code for German Public Auditors and German Chartered Accountants (Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer—BS WP/vBP) as well as the Standard on Quality Control issued by the Institute of Public Auditors in Germany, Incorporated Association, (Institut der Wirtschaftsprüfer in Deutschland e.V.; IDW) Requirements for quality control in audit firms (IDW Qualitätssicherungsstandard: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis; IDW QS 1).

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether the combined non-financial statement of the Company has been prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB. In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's professional judgement.

[1] We have performed a limited assurance engagement on the German version of the Combined Non-Financial Statement and issued an Independent Practitioner's Report in German, which is authoritative. The preceding text is a translation of the original German Independent Practitioner's Report.

Within the scope of our assurance engagement, which substantially was conducted in February 2019, we performed, among other things, the following assurance and other procedures:

- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement
- Inquiries of personnel involved in the preparation of the Combined Non-Financial Statement regarding the preparation process, the systems of internal controls relating to this process and regarding disclosures in the Combined Non-Financial Statement
- Identification of likely risks of material misstatements in the Combined Non-Financial Statement
- Analytical evaluations of quantitative disclosures
- Evaluation of selected internal and external documents
- Evaluation of the presentation of the disclosures

Assurance conclusion

Based on our assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the Combined Non-Financial Statement of Software AG, Darmstadt, for the period from January 1 to December 31, 2018, has not been prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB.

Intended use of the assurance report

We issue this report on the basis of the engagement agreed with the Supervisory Board of the Company. The assurance engagement has been performed for purposes of the Supervisory Board of Software AG, Darmstadt, and the report is solely intended to inform this as to the results of the assurance engagement and must not be used for purposes other than those intended. The report is not intended to provide third parties with support in making (financial) decisions.

Our responsibility lies solely towards the Supervisory Board of Software AG, Darmstadt, and this is limited in accordance with the Special Terms and Conditions of BDO AG Wirtschaftsprüfungsgesellschaft as of January 1, 2018 and the General Engagement Terms issued by the IDW as of January 1, 2017 (www.bdo.de) as agreed with the Supervisory Board. We refer to the provisions contained there. We do not assume any responsibility or liability towards third parties.

Hamburg, March 4, 2019

BDO AG Wirtschaftsprüfungsgesellschaft

Heckroth
Wirtschaftsprüfer
(German Public Auditor)

Nils Borcherding
Wirtschaftsprüfer
(German Public Auditor)

LIST OF ABBREVIATIONS

acc	at constant currency
AI	artificial intelligence
Americas	North and South America
API	application programming interface
APJ	Asia-Pacific and Japan
ARIS	Architecture for Integrated Information Systems
ARR	annual recurring revenue
AUD	Australian dollar
A&N	Adabas & Natural
Bitkom	German Association of Information, Telecommunications and New Media
BRL	Brazilian real
CAD	Canadian dollar
CAPEx	capital expenditures
CDS	credit default swap
CNMC	Spanish Authority for Markets and Competition (Comisión Nacional de los Mercados y la Competencia)
CoC	Code of Conduct
DACH	Germany, Austria, Switzerland
DBO	defined benefit obligation
DBP	Digital Business Platform
DevOps	development and IT operations
DMS	data protection management system
EBIT	earnings before interest and taxes
EBITA	earnings before interest, taxes and amortization
EITO	European Information Technology Observatory
EMEA	Europe, Middle East, Africa (without DACH)
EMIR	European Market Infrastructure Regulation
EMP	employee
EPS	earnings per share
FC&A	Finance, Controlling & Administration
FTE	full-time equivalent
GBP	British pound sterling
GCGC	German Corporate Governance Code
GDPR	General Data Protection Regulation
GIS	Global Information Services
IAS	International Accounting Standards
ICS	Internal Control System
ICT	Information and Communications Technology
IDW	German Institute of Public Auditors
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IfW	Institute for the World Economy (Kiel)
ILO	International Labor Organization
ILS	Israeli shekel
IMF	International Monetary Fund
IMS	information management system
IoT	Internet of Things
ISAE 3000	International Standard on Assurance Engagements
ISMS	information security management system
ISO	International Organization for Standardization
kWh	kilowatt hour
LATAM	Latin America
M&A	mergers & acquisitions
MAR	Market Abuse Regulation
MIP	Management Incentive Plan
OECD	Organization for Economic Cooperation and Development
OEM	original equipment manufacturer
OpenSAMM	Open Software Assurance Maturity Model
PPS	performance phantom share
QMS	quality management system
RMS	risk management system
ROM	risk and opportunity management
R&D	research and development
SaaS	Software as a Service
SME	small and medium-sized enterprises
STEM	science, technology, engineering, math
TCV	total contact value
USD	U.S. dollar
VWAP	volume-weighted average price
WACC	weighted average cost of capital
ZAR	South African rand

GLOSSARY

Adabas (Adaptable Database System)
Invented by Software AG founder Peter Schnell, Adabas is the first high-performance transactional database that is so fast it can process more than 320,000 calls or 80,000 transactions per second. Since its launch in 1971, Adabas—together with Natural—has formed the backbone of many large corporations' and public institutions' IT.

Adabas & Natural (A&N)
A Software AG business line encompassing database management, application development and mainframe application technologies. The products in this business line have occupied a permanent space in the IT landscapes of companies and public institutions around the world for many years. With its Adabas & Natural 2050+ initiative, Software AG will develop the A&N product portfolio through the year 2050 and beyond and will support A&N customers in maximizing the long-term innovation potential of digitalization.

ADAMOS (Adaptive Manufacturing Open Solutions)
ADAMOS is a strategic alliance launched on October 1, 2017, between machinery and industrial equipment manufacturers DMG MORI, Dürr, ZEISS, ASM PT and Software AG to address the pioneering fields of Industry 4.0 and the Industrial Internet of Things (IIoT). The alliance aims to bundle its expertise in machinery construction, production and information technology and establish ADAMOS as a global industry standard in the mechanical and plant engineering sector. ADAMOS is open to additional members and partners. Since its launch, ENGEL Austria GmbH, global market leader in injection-mold equipment, and the KARL MAYER Group, a market leader in textile machinery, have joined the alliance.

Alfabet
Alfabet is a technology platform that allows users to map their entire IT environment for comprehensive IT infrastructure planning and optimization.

Apama
Apama Streaming Analytics is designed to help organizations develop customer-centric streaming data applications. Streaming analytics provides intelligent, automated management of big data. It allows enterprises to analyze and recognize patterns within high-volume business operations and customer interactions in real time.

ARIS (Architecture for Integrated Information Systems)
A scientific method for describing business processes. The foundation of the ARIS software product family, it enables process analysis, modeling, implementation and measurement.

Artificial Intelligence (AI)
The term artificial intelligence, AI for short, refers to computer systems that imitate intelligent human behavior. The ideal AI does not currently exist. Until now, AI has mainly referred to simulations of intelligent behavior based on provided or learned patterns.

Big Data
Big data is a universal term for the vast amounts of data produced by digital technologies. Organizations can achieve competitive advantages by conducting fast and effective analysis of this data (data analytics), which tools in the Digital Business Platform can provide.

Business Process Management (BPM)
The methods, techniques and tools used to design, enact, control and analyze business operations involving people, systems, applications, data and organizations. Software AG's offering is known as the webMethods Business Process Management Suite.

Cloud
Cloud (computing) refers to the growing shift from data and application storage to the Internet.

Corporate Social Responsibility (CSR)
Corporate social responsibility encompasses societal and ecological aspects as well as sustainable business. CSR is based on the assumption that a business model geared to these factors goes hand-in-hand with economic success.

Cumulocity
Cumulocity GmbH develops innovative solutions for the Internet of Things (IoT) and offers an application and device management platform with its IoT cloud to enable easy integration of networked devices and sensors. Software AG strengthened its IoT technology leadership with the acquisition of Cumulocity GmbH in March 2017. Adding Cumulocity's IoT solutions to the Software AG product portfolio enables businesses to integrate their IT applications more quickly and easily with operating IoT devices.

Digital Business Platform (DPB)
Software AG unveiled the world's first Digital Business Platform at the end of 2014. It is an agile software platform that helps organizations achieve adaptive applications and customized software solutions quickly and flexibly. The combination of process, data, integration and (real-time) decision logic with versatile applications lays the foundation for enterprise digital transformation. Digital Business Platform is also the name of Software AG's biggest business line, in existence since 2015.

Edge Computing
Decentralized data processing at the edge of a network. In edge computing, data is processed right where it is collected. Modern methods of analytics and machine learning can be applied directly to data generated by sensors. Edge computing accelerates data streaming and enables real-time data processing, especially in open distributed IT architectures. With Software AG's Cumulocity IoT/Apama-based solution, data analysis at the edge of a network is possible, ensuring that sensor data is utilized optimally.

Enterprise Architecture Management (EAM)
A complete management concept to optimize IT system landscapes. EAM includes the documentation of the current landscape as well as the design and planning of an ideal IT landscape for the future.

EVP (Employee Value Proposition)
A company can use its EVP to describe its offerings and expectations to potential and existing employees. Software AG's EVP, "BeYourBestYou," defines its core values: Performance, Engagement, Team, Innovation and Accountability. Software AG strives to provide its employees with an environment in which they can fully maximize their personal potential.

Global Reporting Initiative (GRI)
The GRI is an independent international organization that has pioneered sustainability reporting since 1997. The GRI guidelines for sustainability reporting provide reporting fundamentals and information on standards as well as implementation instructions for creating sustainability reports for all organizations, regardless of size, industry or location.

Helix
Helix is the name of Software AG's new strategy aimed at sustainable, organic and profitable growth. This strategy was developed using extensive input from the Company's employees, customers and partners. It is based on Software AG's core strengths and many years of expertise. A focus on high-growth markets, the Company's ability to execute and a powerful team are the key components of Helix.

Industrial Internet of Things (IIoT)
The IIoT is a variation of the Internet of Things that focuses on IoT applications in industrial and manufacturing environments.

Industry 4.0
This term refers to smart manufacturing (the fourth industrial revolution), which is possible today thanks to mega trends in ICT like the cloud, mobility, collaboration and big data. It entails the digital connectivity of all parts of the value chain, resulting in boosted productivity and quality as well as creation of new value.

Internal Control System (ICS)
Software AG's ICS operationalizes business risks. It contains internal policies on business policies and practices as well as Groupwide guidelines for effective internal controls with continuous compliance monitoring.

Internet of Things (IoT)
The Internet of Things describes a vision whereby computers become more and more obsolete and are replaced by smart objects such as embedded devices and sensors. The connectivity of physical objects in the virtual world within an Internet-like structure will inconspicuously help humans carry out many activities.

iPaaS (integration Platform as a Service)
iPaaS stands for integration Platform as a Service. It refers to cloud-based services that integrate applications and data from different cloud and on-premise environments. It eliminates the need to deploy and manage hardware and middleware for the purpose of integration. Software AG's webMethods Integration Cloud features both cloud-to-cloud integration and integration between cloud and on-premise systems.

Middleware
Integration software in a complex IT infrastructure whose task is to simplify mechanisms for accessing underlying layers. Middleware such as Software AG's webMethods facilitates data exchange between legacy application silos.

Natural
Software AG's high-performance development and deployment environment designed to support creation of enterprise applications for mainframe and open systems platforms (Linux, UNIX, Windows). Since its market launch in 1979, Natural and Adabas have formed the backbone of many large companies' and public institutions' IT.

Terracotta
Terracotta enables real-time management of big data and is a distributed, scalable in-memory data management platform with extremely low, predictable latency. Featuring integrated in-memory technology, large amounts of data can be searched within just a few microseconds. The Terracotta product family works with the Apama products for intelligent business operations.

webMethods
Systems, partners, data, devices and SaaS applications can be integrated quickly using webMethods. The webMethods product family includes Agile Applications, API Management, Business Process Management, Integration and Operational Intelligence.

Zementis
Artificial intelligence, machine learning and predictive analytics are the foundation of the next generation of Software. Zementis creates a shared, standard-based framework that can provide intelligent solutions for all industries and application areas. With Zementis, organizations gain fast insights into their data and make smart business decisions supported by predictive analytics.

FINANCIAL CALENDAR

Highlights

2020

January 29	Q4/FY 2019 financial results (IFRS, unaudited)

2019

October 22	Q3/2019 financial results (IFRS, unaudited) Publication of Q3/2019 quarterly statement
August 14	Publication of 2019 Half-Year Report
July 23	Q2/2019 financial results (IFRS, unaudited)
May 28	Annual Shareholders' Meeting Darmstadt, Germany
April 18	Q1/2019 financial results (IFRS, unaudited) Publication of Q1/2019 quarterly statement

For the latest information on events and roadshows, please visit: SoftwareAG.com/financialcalendar.

TEN-YEAR SUMMARY

Key Group Figures

in € millions (unless otherwise stated)	**2018**	**2017**	**2016**
Revenue	**865.7**	**879.0**	**871.8**
By type			
Licenses	249.4	250.1	263.0
Maintenance	415.4	420.2	412.2
SaaS [4]	17.6	9.1	—
Services and other revenue	183.3	199.6	196.6
By business line [1]			
Digital Business Platform (DBP, including Cloud & IoT)	464.7	456.5	441.4
Adabas & Natural (A&N)	218.3	223.7	234.6
Consulting	182.6	198.8	195.8
EBIT [2]	**231.6**	**222.8**	**213.9**
as % of revenue	26.8	25.3	24.5
Net income	**165.2**	**140.6**	**140.4**
as % of revenue	19.3	16.0	16.1
Employees (full-time equivalents)	**4,763**	**4,596**	**4,471**
in Germany	1,243	1,155	1,148
Balance sheet			
Total assets	**2,007.9**	**1,907.5**	**1,957.2**
Cash and cash equivalents	462.3	365.8	374.6
Net debt/net cash [3]	149.0	55.2	73.1
Equity	1,239.1	1,118.3	1,196.8
as % of total assets	61.7	58.6	61.1

[1] 2009 to 2011: Pro forma figures; changed segment reporting as of Jan. 1, 2012
[2] EBIT: Net income + income taxes + other taxes + net financial income/expense
[3] 2009 to 2012: Pro forma figures based on previous balance sheet structure
[4] In 2009–2016 SaaS revenue was included in licenses or maintenance; (2009–2016 is therefore only comparable with 2017 and 2018 to a limited extent)

2015	2014	2013	2012	2011	2010	2009
873.1	**857.8**	**972.7**	**1,047.3**	**1,098.3**	**1,119.5**	**847.4**
271.9	270.1	330.1	318.9	295.2	327.4	269.9
406.9	371.3	375.6	393.3	378.7	369.4	310.6
—	—	—	—	—	—	—
194.3	216.4	267.0	335.1	424.4	422.7	266.9
431.5	394.5	422.9	384.7	339.6	321.5	247.2
248.0	245.3	274.5	310.5	313.9	355.4	328.5
193.6	218.0	275.4	352.1	444.8	442.6	271.7
209.4	**176.0**	**205.5**	**248.3**	**269.2**	**268.6**	**218.2**
24.0	20.5	21.1	23.7	24.5	24.0	25.8
139.6	**110.6**	**134.0**	**164.7**	**177.2**	**175.6**	**140.8**
16.0	12.9	13.8	15.7	16.1	15.7	16.6
4,337	**4,421**	**5,238**	**5,419**	**5,535**	**5,644**	**6,013**
1,178	1,216	1,711	1,768	1,881	2,051	2,149
1,814.8	**1,848.9**	**1,996.9**	**1,771.9**	**1,680.7**	**1,599.6**	**1,654.9**
300.6	318.4	450.0	315.6	216.5	102.5	218.1
25.7	132.9	168.8	–49.6	60.9	167.2	271.8
1,089.7	1,013.4	965.6	1,060.1	951.5	769.3	647.2
60.0	54.8	48.4	59.8	56.6	48.1	39.1

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