

SAP Half-Year Report 2023



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Introductory Notes

This Half-Year Group Report meets the requirements of German Accounting Standard No. 16 “Half-yearly Financial Reporting” (GAS 16). We prepared the financial data in the Half-Year Report section for SAP SE and its subsidiaries in accordance with International Financial Reporting Standards (IFRS). In doing so, we observed the IFRS both as issued by the International Accounting Standards Board (IASB) and as endorsed by the European Union (EU). This does not apply to numbers expressly identified as non-IFRS. For additional IFRS and non-IFRS information, see the [Supplementary Financial Information](#) section.

This Half-Year Group Report complies with the legal requirements in accordance with the German Securities Trading Act (Wertpapierhandelsgesetz, WpHG) for a Half-Year Financial Report, and comprises the consolidated Half-Year Management Report, condensed consolidated Half-Year Financial Statements, and the responsibility statement in accordance with the German Securities Trading Act, section 115 (2).

This Half-Year Group Report updates our consolidated Financial Statements 2022, presents significant events and transactions of the first half of 2023, and updates the forward-looking information as well as significant non-financial key figures contained in our Management Report 2022. This Half-Year Financial Report only includes half-year numbers. Our quarterly numbers are available in the Quarterly Statements for the first and second quarter 2023. Both the 2022 consolidated Financial Statements and the 2022 Management Report are part of our Integrated Report 2022, which is available at www.sapintegratedreport.com.

All of the information in this Half-Year Group Report is unaudited. This means that the information has been subject neither to any audit nor to any review by an independent auditor.

Unless otherwise stated, all figures in this Half-Year Report are based on SAP Group results from continuing operations. For the results from discontinued operations, see the Notes to the Consolidated Half-Year Financial Statements, [Note \(D.1\)](#).

Consolidated Half-Year Management Report

Strategy and Business Model

SAP continues to execute on the strategy and business model as described in the [SAP Integrated Report 2022](#) to “enable every organization and every industry to become a network of intelligent, sustainable enterprises.”

Our Product Strategy

SAP's suite of applications allows enterprises to manage their resources, spend, employees, and customer relationships. **SAP cloud ERP** and **SAP Business Technology Platform (SAP BTP)** are keystones of SAP's product portfolio. SAP BTP is the platform for SAP, our customers, and our ecosystem. Moreover, with our **SAP Business AI** portfolio, we are expanding our existing business artificial intelligence (AI) to include generative AI.

The strategic pillars of SAP's product strategy and their corresponding updates for the first half of 2023 are as follows:

Cloud ERP

SAP S/4HANA provides software capabilities mainly for finance, risk management, project management, procurement, manufacturing, supply chain management, asset management, and research and development. It also includes platform capabilities such as database (**SAP HANA**), data management, and lifecycle/solution management, as well as cloud ERP solutions.

On February 8, 2023, SAP announced a partnership with Merck KGaA, Germany, to jointly drive sustainable business-practice innovation. The partnership is expected to further accelerate the migration of Merck KGaA's operations to the cloud with RISE with SAP, a core element of which is **SAP S/4HANA Cloud**.

In March 2023, we announced **GROW with SAP**, a new offering designed to help midmarket customers adopt cloud ERP for more speed, predictability, and continuous innovation. This comprehensive offering is built on **SAP S/4HANA Cloud, public edition** and SAP BTP.

On April 26, 2023, SAP and HP Inc. announced an expansion of its strategic relationship as HP invested in the **RISE with SAP** solution to support its focus on driving digital transformation, portfolio optimization and operational efficiency. The software will provide a platform for combining hardware, software, and services to deliver flexible workforce solutions.

SAP Business Technology Platform

SAP BTP is a unified, business-centric, and open platform that enables customers and partners to build, integrate, and extend applications while gaining insights from business data in a cloud-native way. SAP BTP aims to bring together capabilities across application development, automation, data and analytics (including planning), integration, and AI into one platform.

At the SAP Data Unleashed event held on March 8, 2023, SAP launched **SAP Datasphere** – an evolution of our SAP Data Warehouse Cloud solution that integrates key capabilities from **SAP Data Intelligence Cloud**. SAP Datasphere aims to provide a unified experience for data integration, data cataloging, semantic modeling, data warehousing, data federation, and data visualization.

SAP also announced strategic partnerships with data and AI companies – Databricks, Collibra, Confluent, and DataRobot – to enrich SAP Datasphere and allow organizations to create a unified data architecture that securely combines SAP software data and non-SAP data.

In May 2023, SAP and Google Cloud announced an extensive expansion of their partnership through a comprehensive open-data offering. The offering aims to enable customers to build an end-to-end data cloud that brings data from across the enterprise landscape using the SAP Datasphere solution together with Google's data cloud. SAP has also published reference architectures on how to use Generative AI in combination with SAP BTP.

SAP Business AI

SAP Business AI solutions are built into systems that power the most critical business processes, trained using extensive industry-specific data and deep process knowledge, and created using responsible and ethical AI practices (see also the [Business Conduct](#) section). In addition, SAP provides a generative AI layer to SAP BTP to best facilitate the integration of generative AI functionalities across the portfolio. SAP also aims to enable its partner ecosystem to build generative AI-infused innovations based on SAP BTP as well.

At SAP Sapphire 2023, we announced a lineup of AI and generative AI capabilities that span across our solution portfolio. These are examples of what has been released: intelligent collections in SAP S/4HANA, intelligent slotting in **SAP Extended Warehouse Management**, line item matching in **SAP Central Invoice Management**, and **SAP Intelligent Product Recommendation**.

On May 2, 2023, SAP and IBM announced that IBM Watson technology will be embedded into SAP solutions to provide new AI-driven insights and automation to help accelerate innovation and create more efficient and effective user experiences across the SAP application portfolio.

On May 15, 2023, SAP announced the next step to its partnership with Microsoft – integrating **SAP SuccessFactors** solutions with Microsoft 365 Copilot and Copilot in Viva Learning as well as with Microsoft's Azure OpenAI Service to access language models that analyze and generate natural language.

Sustainable Management Solutions

SAP offers sustainability solutions and services that aim to help customers drive sustainable practices not only inside their organization, but across the entire value chain. At SAP Sapphire 2023, we introduced solutions to enable transactional carbon accounting including the green ledger – a capability that connects carbon accounting data with financial data to better track and measure climate action initiatives. The green ledger will be embedded into SAP S/4HANA Cloud, with additional capabilities planned in new releases and will be available with RISE with SAP and GROW with SAP.

Additional capabilities for transactional carbon accounting include a June 2023 update to **SAP Sustainability Footprint Management**. This solution calculates and manages the full range of corporate, value chain, and product-level greenhouse gas emissions in a single environment.

Industry Solutions

SAP's industry cloud solutions provide the opportunity for SAP and our partners to extend SAP's core with modular solutions addressing industry-specific functions built on SAP BTP.

Human Capital Management

SAP SuccessFactors solutions for human resources aim to empower organizations to create an agile and future-ready workforce in a rapidly changing workplace. The portfolio includes core HR and payroll, talent management, employee experience management, and people and workforce analytics.

Spend Management

Intelligent spend management solutions from SAP aim to provide a more unified view of a customer's spending to reduce costs, mitigate risks, improve collaboration, and make sure every spend decision is aligned with the business strategy. They cover direct and indirect spend, travel and expense, and external workforce management. **SAP Ariba** offerings combine industry-leading cloud-based applications to help companies discover and collaborate with a global network of partners.

Business Network

SAP Business Network is a cloud-based collaboration offering designed to enable companies to collaborate with trading partners for greater supply chain visibility.

In May 2023, we introduced **SAP Business Network for Industry** to address the unique needs of various industries. SAP Business Network for Industry will have an initial focus on consumer products, life sciences, high tech, and industrial manufacturing industries.

Business Process Management

Our business process transformation solutions are designed to help our customers scan their operations to understand and improve their business process landscape. The portfolio includes **SAP Signavio** solutions and **SAP Build Process Automation**.

In February 2023, we announced **SAP Signavio Process Explorer**, a solution designed to accelerate transformation projects by providing customers with access to best practice templates and industry standard processes derived from SAP's five decades of experience. At SAP Sapphire 2023, we announced the availability of the new 'plug and gain' approach which aims to shorten SAP S/4HANA migration project preparation times from months to hours, reduce time to deploy, and simplify ongoing process optimization. We also announced new integrations for **SAP Signavio Process Transformation Suite** with SAP Ariba solutions, the SAP Cloud ALM tool, and SAP Build Process Automation.

Customer Relationship Management and Customer Experience

The **SAP Customer Experience** (SAP CX) portfolio aims to deliver a personalized view across customers and business partners, connecting the front and back office with solutions spanning from point-of-sale to manufacturing, logistics, customer experience, and returns management. SAP Business AI functionality in our SAP CX portfolio aims to help increase conversion rates and overall operational efficiency for sales, commerce, marketing, and services teams.

Partners and Ecosystem

SAP's ecosystem consists of more than 20,000 partners worldwide in more than 140 countries. Partners can choose from a variety of SAP solutions to create their own unique SAP-qualified partner-packaged solution to provide small and midsize enterprises with fixed-scope packaged solutions. SAP expects the share of ecosystem-assisted cloud revenue to exceed 50% in the future.

In May 2023, new partner software certification scenarios through **SAP Integration and Certification Center** (SAP ICC) to support the clean core initiative were announced at SAP Sapphire 2023. A clean core means the core system is not modified or customized and can easily be upgraded in the cloud.

Services and Support

At SAP Sapphire 2023, we announced new editions of our **SAP Preferred Success** plan. These editions are designed to deliver expanded capabilities for specific groups of SAP solutions and provide a personalized partnership for the lifetime of a customer's cloud solution. The new editions include **SAP Preferred Success for SAP Commerce Cloud, expanded edition**; **SAP Preferred Success for HXM solutions from SAP, expanded edition**; and **SAP Preferred Success for SAP Business Technology Platform, expanded edition**.

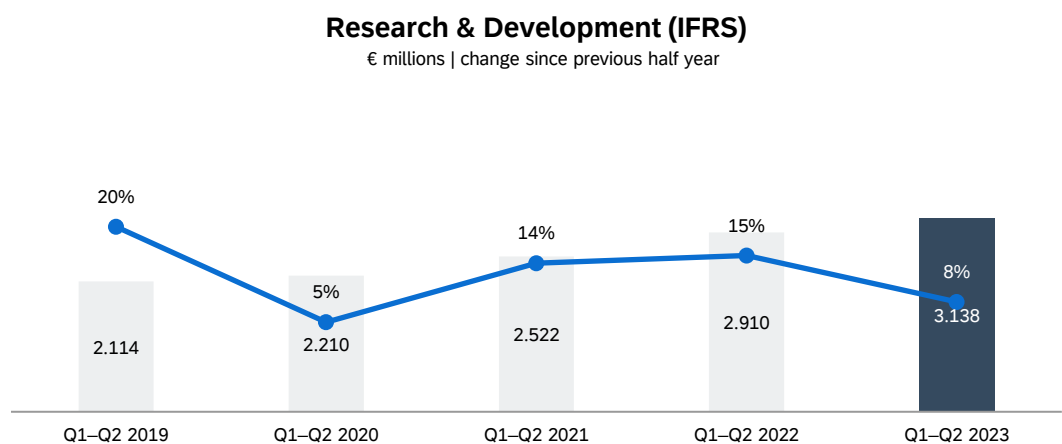
Business Conduct

In accordance with our [Global AI Ethics Policy](#), we continue to integrate AI into our solutions and evolve our software development process. We put this policy into place to help ensure that our AI systems and solutions are developed, deployed, and sold in line with the ethical standards laid out in our guiding principles. The policy also complements existing guiding principles regarding AI and will ensure that the use of AI at SAP is governed by clearly defined rules of ethics.

Our Investments in Innovation

Investment in R&D

SAP's strong commitment to R&D is reflected in our expenditures (see the graphic below).



Due to the updated cost allocation policy described in Note (G.5), R&D figures for 2019 and 2020 have not been adjusted.

Figures for 2019 and 2020 are based on continuing and discontinued operations. Therefore, they are only comparable to a limited extent.

In the first half of 2023, our IFRS R&D ratio, reflecting R&D expenses as a portion of total revenue, remained constant at 21% year over year. Our non-IFRS R&D ratio decreased two percentage points (pp) to 18% (first half of 2022: 20%). At the end of the first half of 2023, our total full-time equivalent (FTE) headcount in development was 36,100 (first half of 2022: 34,185). Measured in FTEs, our R&D headcount was 34% of total headcount (first half of 2022: 33%).

Competitive Intangibles

Some of the resources that are the basis for our current as well as future success, such as our ability to innovate, software we developed ourselves, customer capital, our employees and their knowledge and skills, our ecosystem of partners, and the brands we have built up, do not appear in the Consolidated Statements of Financial Position. This is apparent from a comparison of the market capitalization of SAP SE with the carrying amount of our equity. With a market capitalization of €153.7 billion at the end of the first half of 2023, the market value of our equity (based on all issued shares) is more than three times higher than its carrying amount.

Acquisitions and Divestitures

On June 28, 2023, SAP announced that Silver Lake Management and its co-investors along with the Canada Pension Plan Investment Board (CPPIB) had completed the acquisition of all the issued and outstanding shares of Qualtrics International Inc. ("Qualtrics"), including all shares owned by SAP, at a purchase price of US\$18.15 in cash per share. The process was initiated on January 26 followed by an announcement on March 13 that SAP had agreed to sell all of its shares of Qualtrics. For more information, see the Notes to the Consolidated Half-Year Financial Statements, [Note \(D.1\)](#).

On July 11, Sapphire Ventures announced that it is deepening its commitment to AI by investing more than US\$1 billion in AI-powered enterprise technology startups, including those specializing in generative AI. The commitment builds on Sapphire Ventures' history of investing in and scaling enterprise AI startups, and will focus on all areas of the emerging AI tech stack including foundation models, enablers and middleware, and next-gen AI applications.

On July 18, SAP announced the next step in its commitment to deliver Business AI that is relevant, reliable, and responsible with strategic direct investments in three leading generative AI companies. The investments in Aleph Alpha, Anthropic and Cohere reinforce SAP's open ecosystem approach to AI, leveraging the best technology to embed AI across SAP's portfolio. They build on a series of AI partnerships and enterprise use cases announced in May and complement the above-mentioned commitment from Sapphire Ventures.

Performance Management System

Change in Calculation of Customer Net Promoter Score (NPS)

In the first quarter of 2023, SAP adjusted the methodology used to calculate its Customer NPS. Designed to improve data and better align the sample with SAP's business priorities, the adjusted methodology provides for the following exclusions of answered survey questionnaires: partially completed responses, respondents who self-report that they have no influence in purchasing decisions, and a restriction in the number of eligible responses from Concur customers to ensure a proportional and reasonable reflection based on revenue share.

For more information about the calculation of the Customer NPS, see the [Performance Management System](#) section in our Management Report 2022.

Change in Non-IFRS Expense Measures

In the first quarter of 2023, we changed our non-IFRS expense measures. Going forward, we adjust our IFRS expense measures by excluding expenses for regulatory compliance matters associated with the provision for (potential) penalties and legal costs arising from certain ongoing governmental investigations into our business operations, which are described in our Notes to the Consolidated Financial Statements 2022, [Note \(G.3\)](#) under "[Anti-Bribery Matters](#)" and are limited to the scope of IAS 37.

The adjustment of our non-IFRS definition for our expense measures also impacts our operating profit (non-IFRS), profit before tax (non-IFRS), profit after tax (non-IFRS), and our non-IFRS key ratios such as operating margin, effective tax rate, and earnings per share, basic.

SAP believes that the changed non-IFRS definition for our expense measures is useful for investors, as the non-IFRS measures provide additional information that enables a comparison of year-over-year operating performance by eliminating the effects of regulatory compliance matters. Without being analyzed in conjunction with the corresponding IFRS measures, the non-IFRS measures based on the changed non-IFRS definition, besides other reasons, are not indicative of our present and future performance, as expenses ascribed to the regulatory compliance matters may include penalties and legal costs, all of which would impact the operating cash flows of the business. The exclusion of expenses associated with regulatory compliance matters does not affect Executive Board members' compensation, i.e., those expenses measures are fully considered.

For more information, such as the explanation, the usefulness, and the limitations of non-IFRS measures, see the [Performance Management System](#) section in our Management Report 2022.

Financial Performance: Review and Analysis

Economy and the Market

Global Economic Trends

The global economy started stronger this year than in the fourth quarter of 2022, mainly driven by the services sector, states the European Central Bank (ECB) in its most recent Economic Bulletin¹. This vigor was due to the reopening of the Chinese economy and the resilience of labor markets in the United States. Nevertheless, high inflation, tightening financial conditions, and geopolitical tensions were headwinds to global growth.

In the EMEA region, according to the ECB, the euro area economy stagnated in the first half of 2023 due to a drop in private and public consumption despite lower energy prices, the easing of supply bottlenecks, a strong labor market, and a supportive fiscal policy. However, conditions in different sectors of the economy were uneven: manufacturing weakened, yet services proved resilient.

The Americas region showed tighter financial and credit conditions, but labor markets were resilient particularly in the United States. Overall, real GDP decelerated in the first half of this year, finds the ECB.

As for the APJ region, the consumption-led recovery in demand in China turned out stronger in the first quarter than the ECB had previously expected, as pandemic-related disruptions proved short-lived. However, the recovery faded in the second quarter and did not spill over from services to manufacturing. In Japan, real GDP grew in the first quarter of 2023, reflecting reopening dynamics.

The IT Market

“The digital world is here and with it comes a new wave of enterprise application spending poised to create differentiating value for organizations of all sizes globally,”² says International Data Corporation (IDC), a U.S.-based market research firm. “Organizations [...] need enterprise applications as they invest in their future,” but at the same time, “inflation, recession, and staffing/labor shortages [remain] concerns for customers’ technology strategies and budgets.”²

According to IDC, while “digital transformation continues for 49% of organizations, 51% of organizations consider themselves a digital business. For digital businesses, the investment continues; the emphasis is on using technology to compete and as a competitive advantage; continuously innovating with AI/ML, generative AI, IoT, and so forth; and relying more on an ecosystem of partners.”² In this context, “organizations are still shifting from on-premises systems to hybrid, private, and public cloud.”²

Particularly, “improvements in overall efficiency are closely linked with IT as the means to facilitate improved energy and enterprise efficiency.”³ IDC states that such “technological innovations [...] will be essential to lower costs and reduce carbon footprints.”³ Currently, “approximately 17% of European businesses are in the more advanced stages of implementing technology solutions to track sustainability-related KPIs. However, even these businesses are not fully ready to comply with the requirements of the forthcoming Scope 3 disclosures” based on the European Commission’s Corporate Sustainability Reporting Directive (CSRD).³

¹ European Central Bank, Economic Bulletin, Issue 4/2023, Publication Date: June 29, 2023.

² IDC Market Perspective: June 2023: Enterprise Application Spending Continues for the Foreseeable Future, Doc #US50665223, May 2023.

³ IDC Vendor Profile: Sustainability Index for Software Providers: SAP, Doc #EUR147190121, May 2023.

Impact on SAP

SAP had a strong first half of 2023. Despite ongoing macroeconomic uncertainties and elevated inflation rates, SAP continued to execute on its strategy and showed strong cloud and total revenue performance across all regions. At Sapphire in May, SAP announced an update of its 2025 financial mid-term ambition. The update mainly reflects the divestiture of Qualtrics, the anticipation of continuing rapid cloud revenue growth, and a great degree of resilience in SAP’s support business.

The advances in business AI represent a significant opportunity for SAP. Our SAP Business AI portfolio is expected to provide stronger economic growth, mainly through productivity increases. In addition, at SAP Sapphire in May, the Company showcased multiple AI use cases and partnerships. With that, SAP continues to broaden its ecosystem, increase customer value, and strive for leadership in this important market trend.

Performance Against Our Outlook for 2023

In this section, all discussion of the contributions to target achievement is based either on IFRS or non-IFRS measures. Whether IFRS or non-IFRS measures are discussed is either explicitly stated in the header of the respective subsection, or the numbers are individually identified as either IFRS or non-IFRS measures.

We present, discuss, and explain the reconciliation of IFRS measures to non-IFRS measures in the [Supplementary Financial Information](#) section.

Outlook for 2023 (Non-IFRS)

For our outlook based on non-IFRS numbers, see the [Financial Targets and Prospects](#) section in this consolidated Half-Year Management Report.

Key Figures – SAP Group in the First Half of 2023 (IFRS and Non-IFRS)

€ millions, unless otherwise stated	IFRS			Non-IFRS			
	Q1–Q2 2023	Q1–Q2 2022	Δ in %	Q1–Q2 2023	Q1–Q2 2022	Δ in %	Δ in % (constant currency)
Current Cloud Backlog	NA	NA	NA	11,537	9,543	21	25
Cloud	6,493	5,362	21	6,493	5,362	21	22
Software licenses	591	743	–20	591	743	–20	–19
Software support	5,778	5,900	–2	5,778	5,900	–2	–1
Cloud and software	12,863	12,005	7	12,863	12,005	7	8
Total revenue	14,995	13,980	7	14,995	13,980	7	8
Operating expenses	–12,834	–11,449	12	–11,062	–10,626	4	4
Operating profit	2,161	2,531	–15	3,933	3,354	17	20
Operating margin (in %)	14.4	18.1	–3.7pp	26.2	24.0	2.2pp	2.7pp
Profit after tax	3,890	835	>100	5,047	2,259	>100	NA
Profit (loss) after tax from continuing operations	1,128	1,629	–31	2,502	2,269	10	NA
Effective tax rate (in %)	36.3	29.0	7.3pp	29.4	27.2	2.1pp	NA
Earnings per share, basic (in €)	3.37	0.92	>100	4.41	1.96	>100	NA
Earnings per share, basic (in €) from continuing operations	0.97	1.41	–31	2.15	1.96	10	NA

Operating Performance (IFRS and Non-IFRS)

Cloud and software revenue (IFRS) was €12,863 million (first half of 2022: €12,005 million), an increase of 7%. On a constant currency basis (non-IFRS), the increase was 8%. This increase was mainly driven by cloud revenue growth of 21%. Software licenses revenue (IFRS) decreased 20% (19% at constant currencies, non-IFRS) as more customers selected SAP's cloud offerings such as RISE with SAP. Software support revenue (IFRS) was €5,778 million (first half of 2022: €5,900 million), a decrease of 2% (1% at constant currencies, non-IFRS).

Our operating expenses (IFRS) increased 12% to €12,834 million (first half of 2022: €11,449 million), primarily from share-based payment expenses and restructuring expenses. Operating expenses (non-IFRS) increased 4% to €11,062 million (first half of 2022: €10,626 million) in line with revenue growth.

Share-based payment expenses increased to €1,167 million (first half of 2022: €513 million), mainly due to an increase in the SAP share price of around €30 in the first half of 2023 (first half of 2022: drop

in the SAP share price of around €40). For more information about share-based payment expenses, see the Notes to the Consolidated Half-Year Financial Statements, [Note \(B.3\)](#).

Most of the restructuring expenses, which increased to €257 million (first half of 2022: €119 million), relate to the targeted restructuring program in selected areas of the company that SAP announced and launched in the first quarter to further focus on its strategic growth areas and accelerated cloud transformation. The vast majority of projected expenses has already been recognized in the first half of 2023. For more information about restructuring, see the Notes to the Consolidated Half-Year Financial Statements, [Note \(B.4\)](#).

Compared with the same period in the previous year, our operating profit (IFRS) decreased €370 million to €2,161 million (first half of 2022: €2,531 million), a decrease of 15%.

The described effects also apply to our non-IFRS operating profit and non-IFRS operating margin, except for the restructuring expenses and share-based payments.

Profit After Tax and Earnings per Share (IFRS)

Profit after tax from continuing operations (IFRS) was €1,128 million (first half of 2022: €1,629 million), a decrease of over 31% compared to the same period in 2022. Basic earnings per share (IFRS) was €0.97 (first half of 2022: €1.41), a decrease of 31%. The change in profit after tax from continuing operations (IFRS) and basic earnings per share from continuing operations (IFRS) is mainly due to the above-mentioned increase in shared based compensation expenses and restructuring expenses. Profit after tax from discontinued operations (IFRS) was €2,763 million (first half of 2022: -€794 million). The change is due to the divesture of Qualtrics and the corresponding disposal gain (IFRS) amounting to €3.2 billion in the first half of 2023.

The effective tax rate (IFRS) was 36.3% (first half of 2022: 29.0%). The year-over-year increase mainly resulted from changes in non-deductible expenses and valuation allowances on deferred tax assets.

Profit After Tax and Earnings per Share (Non-IFRS)

Profit after tax from continuing operations (non-IFRS) was €2,502 million (first half of 2022: €2,269 million), an increase of 10%. Basic earnings per share (non-IFRS) was €2.15 (first half of 2022: €1.96), an increase of 10%. The change in profit after tax from continuing operations (non-IFRS) and basic earnings per share from continuing operations (non-IFRS) is mainly due to the above-mentioned increase of cloud revenue and improvements in cloud margin. Profit after tax from discontinued operations (non-IFRS) was €2,544 million (first half of 2022: -€10 million). The change is due to the divesture of Qualtrics and the corresponding disposal gain) amounting to €2.6 billion in the first half of 2023. The effective tax rate (non-IFRS) was 29.4% (first half of 2022: 27.2%). The year-over-year increase mainly resulted from changes in valuation allowances on deferred tax assets.

Segment Information

At the end of the first half of 2023, SAP had five operating segments: the Applications, Technology & Services segment, the Business Network segment, the Emarsys segment, the Sustainability segment, and the Taulia segment. Due to its size, the Applications, Technology & Services segment is a reportable segment whereas the other operating segments are non-reportable.

At the end of the second quarter of 2023, we sold Qualtrics, formerly a reportable segment which derived its revenues mainly from the sale of experience management cloud solutions.

For more information about our segment reporting and the changes in the composition of our segments in the first half of 2023, see the Notes to the Consolidated Half-Year Financial Statements, [Notes \(C.1\)](#) and [\(C.2\)](#).

Applications, Technology & Services

€ millions, unless otherwise stated (non-IFRS)	Q1–Q2 2023		Q1–Q2 2022	Δ in %	Δ in %
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency
Cloud revenue – SaaS ¹	4,546	4,575	3,717	22	23
Cloud revenue – PaaS ²	1,003	1,009	694	45	45
Cloud revenue – IaaS ³	391	394	475	–18	–17
Cloud revenue	5,940	5,978	4,885	22	22
Cloud gross profit – SaaS ¹	3,144	3,176	2,561	23	24
Cloud gross profit – PaaS ²	843	850	562	50	51
Cloud gross profit – IaaS ³	146	149	174	–16	–14
Cloud gross profit	4,134	4,176	3,297	25	27
Segment revenue	14,429	14,544	13,492	7	8
Segment gross margin (in %)	72.8	73.0	73.1	–0.3pp	–0.1pp
Segment profit (loss)	4,465	4,543	3,809	17	19
Segment margin (in %)	30.9	31.2	28.2	2.7pp	3.0pp

¹ Software as a service: SaaS comprises all other offerings which are not shown as PaaS and IaaS.

² Platform as a service: PaaS primarily includes SAP Business Technology Platform and SAP Signavio.

³ Infrastructure as a service: A major portion of IaaS comes from SAP HANA Enterprise Cloud.

The Applications, Technology & Services segment recorded an increase in cloud revenue of 22% in the first half of 2023 (22% at constant currencies), supported by SAP Business Technology Platform as well as SAP S/4HANA, whose cloud revenue mainly occurred in the Applications, Technology & Services segment, and increased 76% to €1,539 million. At the same time, SAP S/4HANA current cloud backlog grew 65% and ended the first half of 2023 at €3,717 million. Cost of cloud for the Applications, Technology & Services segment increased 14% (13% at constant currencies), which overall caused the cloud gross margin to widen 2.1 pp (2.4 pp at constant currencies) to 69.6%. Thereof, PaaS grew 3.1pp (3.3pp at constant currencies), which resulted in a PaaS cloud gross margin of 84.1%. The SaaS cloud gross margin grew 0.3pp (0.5pp at constant currencies) and ended the first half of the year at 69.2%. Software support revenue decreased 2% (1% at constant currencies) compared to the prior year, ending the first half of the year 2023 at €5,777 million. Software licenses revenue decreased 20% (19% at constant currencies) to €591 million. As such, the segment achieved a total software licenses and support revenue of €6,369 million. Total segment revenue nevertheless rose by 7% (8% at constant currencies) and ended the first half of 2023 at €14,429 million.

Overall, the share of more predictable revenue within the Applications, Technology & Services segment increased 1.3pp from 79.9% in the first half of 2022 to 81.2% in 2023.

Cost of revenue increased 8% (8% at constant currencies) compared to the prior year, ending the first half of 2023 at €3,922 million. This development was mainly driven by an increase in cost of cloud.

Segment profit increased 17% (19% at constant currencies) and ended the first half of 2023 at €4,465 million. The segment margin improved 2.7pp (3.0pp at constant currencies) to 30.9%.

Reconciliation of Cloud Revenues and Gross Profit

€ millions, unless otherwise stated (non-IFRS)	Q1–Q2 2023			Q1–Q2 2022		Δ in %
	Actual Currency	Currency Impact	Constant Currency	Actual Currency	Actual Currency	
Cloud revenue – SaaS ¹	5,099	30	5,130	4,193	22	22
Cloud revenue – PaaS ²	1,003	6	1,009	694	45	45
Cloud revenue – IaaS ³	391	3	394	475	–18	–17
Cloud revenue	6,493	39	6,532	5,362	21	22
Cloud gross profit – SaaS ¹	3,675	34	3,709	3,021	22	23
Cloud gross profit – PaaS ²	843	7	850	562	50	51
Cloud gross profit – IaaS ³	146	3	149	174	–16	–14
Cloud gross profit	4,664	45	4,709	3,758	24	25

¹ Software as a service: SaaS comprises all other offerings which are not shown as PaaS and IaaS.

² Platform as a service: PaaS primarily includes SAP Business Technology Platform and SAP Signavio.

³ Infrastructure as a service: A major portion of IaaS comes from SAP HANA Enterprise Cloud.

⁴ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the non-IFRS numbers of the previous year's respective period. Due to rounding, numbers may not add up precisely.

Finances and Assets (IFRS)

Cash Flow

€ millions	Q1–Q2 2023	Q1–Q2 2022	Δ
Net cash flows from operating activities – continuing operations	3,160	2,766	14%
Capital expenditure	–413	–408	1%
Payments of lease liabilities	–188	–209	–10%
Free cash flow	2,559	2,149	19%
Free cash flow (as a percentage of total revenue)	17	15	2pp
Free cash flow (as a percentage of profit after tax)	227	132	95pp

The higher operating cash flow was mainly attributable to lower share-based payments (€229 million decrease year over year), lower payments for income taxes (€54 million decrease year over year), as well as lower net interest payments (€47 million decrease year over year).

Group Liquidity

€ millions		2023*	2022
Net Debt 12/31/2022 (PY: 12/31/2021)	Free Cash Flow	–2,070	–1,563
Net cash flows from operating activities – continuing operations		3,160	2,766
Capital Expenditure	2,559	–413	–408
Lease Payments		–188	–209
Business Combinations		0	–664
Dividends		–2,395	–2,865
Treasury shares		0	–1,000
Net proceeds from Qualtrics sale		6,323	0
Other		–237	–103
Net Debt 6/30/2023 (PY: 6/30/2022)		4,180	–4,046

* Net debt as at 12/31/2022 includes continuing and discontinued operations, net debt as at 6/30/2023 only includes continuing operations.

Liquidity and Financial Position

€ millions	6/30/2023	12/31/2022	Δ
Financial debt	-10,146	-11,764	+1,618
Cash and cash equivalents	14,142	9,008	+5,134
Current time deposits and debt securities	184	686	-502
Group liquidity	14,326	9,694	+4,632
Net debt	4,180	-2,070	+6,250
Goodwill	28,581	33,077	-4,495
Total assets	69,719	72,159	-2,440
Total equity	42,229	42,848	-619
Equity ratio (total equity as a percentage of total assets)	61	59	+1pp

In the first half of 2023, we repaid €1,600 million in Eurobonds. As at June 30, 2023, we had issued €930 million under our Commercial Paper (CP) program with short-term maturities. The increase in cash and cash equivalents includes a net inflow of 6,265 million from the sale of SAP's stake in Qualtrics.

Employees

People are the heart of our organization. SAP works to attract and keep the best talent by aiming for a highly engaged, diverse, and future-fit workforce equipped with the right skills, all while adapting to new market trends. For a detailed description of our People Strategy, see the Employees section in our [Integrated Report 2022](#).

With our **Pledge to Flex working model**, we have successfully laid the foundation for hybrid work at SAP. We have established a new market standard, offering flexibility for our workforce in accordance with business requirements and local legislation. Looking forward, we will focus on ensuring a mix between working in the office and working remotely. We have launched our **global “I’m In” campaign**. It promotes the value of being in the office on a regular basis as a standard element of effective and productive hybrid work – based on individual role, team set-up, and business requirements. In taking a holistic approach to hybrid work, we offer managers and employees a variety of comprehensive enablement assets complemented by further engagement formats on a local level. This approach allows our employees to thrive, while strengthening our employer attractiveness, productivity, and innovation.

To compete in our dynamic industry, SAP needs to continuously adapt our skills. We do this by managing **skill-based development for our workforce and ecosystem**. SAP is establishing the scalable data foundation necessary for skill-based learning recommendations. This foundation helps us anticipate and react to market changes, by providing a unified, industry-standard skills taxonomy. Uniformity across internal and external scenarios that utilize skills taxonomies allows SAP to harness immense benefits from a shared language. This adds value for partners and customers and enables SAP to become a more adaptive enterprise. We have made great strides in this regard recently in our Sales, Presales, and Development areas. For example, with the help of an internally developed tool, our Sales organization identified over 60 key skills, relevant for 75% of quota carriers. They have demonstrated that quota carriers proficient in key skills related to selling generally have quota attainments 15% higher than those who are not proficient. SAP also offers a vast library of digital learning content across the SAP solution portfolio via the [SAP Learning Web site](#), SAP Learning Hub, openSAP, and instructor-led training, so people can build and maintain their SAP software skills. We reached over 1 million external active learners in 2022 and 700,000 in the first half of 2023.

Diversity in the workplace means celebrating our differences and acknowledging the unique contributions and perspectives we all bring to the Company. We aim to increase diversity in our workforce at all levels of SAP to reflect the spectrum of diversity in society, including visible diversity such as race, ethnicity, gender, and age, as well as invisible diversity such as neurodiversity, gender identity, and socio-economic background. At SAP, we are committed to fostering equality by achieving our ultimate goal of gender parity at all levels of the organization. We are making progress with our goals to increase **women in the workforce**¹ and **women in management**². In the first half of 2023, women comprised 35% of our workforce (first half of 2022: 34.7%; end of 2022: 35%) and hold 29.5% of all management positions at the Company (first half of 2022: 28.9%; end of 2022: 29.4%). We aim to increase the share of women in management to 30% by the end of 2023. To reach our ultimate goal of gender parity, we are building a leadership pipeline through our Women to Watch program piloted in the first half of 2023 with 262 participants. We are also encouraging an inclusive leadership mindset, recognizing and overcoming biases through our intentional inclusion workshops for leaders. Furthermore, women in management was integrated as one of the ESG (environment, social, governance) KPIs in a new sustainability-linked revolving credit facility and the long-term incentive compensation of the SAP Executive Board (effective 2024). For further ESG-related information, see the [Energy and Emissions](#) section.

Looking at our people-related KPIs, the Employee Engagement Index comes in at 80%, a slight increase of 1pp compared to the score of 79% in October 2022, and no change compared to the full-year score published in our Integrated Report 2022. Just like at the end of 2022, our Leadership Trust Net Promoter Score remains at its all-time high of 72. And at 81%, the Business Health Culture Index remains as strong as at the end of 2022. At the end of the first half of 2023, SAP's Employee Retention

Rate was still high at 96.2% (compared to 95.3% at the end of the first half of 2022 and 91.4% at the end of 2022). We define retention as the ratio of the average number of employees minus the number of employees who voluntarily departed, to the average number of employees (in full time equivalents, FTEs). On June 30, 2023, we had 105,328 FTEs worldwide (June 30, 2022: 104,988; December 31, 2022: 106,312). For a breakdown of headcount by function and geography, see the Notes to the Consolidated Half Year Financial Statements, [Note \(B.1\)](#).

¹ We define "women in the workforce" as the share of women in the total workforce.

² We define "women in management" as the share of women in management positions as compared to the total number of managers, expressed by the number of individuals and not FTEs. It includes three categories: 1) Managers managing teams: Refers to managing teams of at least one employee or vacant positions; 2) Managers managing managers: Refers to managing managers who manage teams; 3) Executive Board members.

Energy and Emissions

In the first half of 2023, we maintained our commitment to help rebuild a more resilient, restorative, and inclusive economy within the planetary boundaries – both as an enabler and exemplar. We strive towards achieving a world of zero waste, zero emissions, and zero inequality.

To help our customers on this journey, we offer an expanded portfolio of sustainable business solutions. For more information, see the [Our Product Strategy](#) section in this consolidated Half-Year Management Report.

In Q1 2023, we achieved SAP's carbon neutrality target, meaning that our net carbon emissions reached 0 kilotons (kt) of CO₂e equivalents (CO₂e) after decreasing to 85 kt at year end 2022. In Q2 2023, the emissions remained at 0 kt. This downward trend reflects our strategic three-fold approach of "avoid-reduce-compensate" where we aim to compensate only for those emissions which cannot yet be avoided. SAP's amount of compensated emissions per FTE dropped from about 2 tons of CO₂e (2018) to less than 1 ton of CO₂e (2022).

Having reached our carbon neutrality target, we are now focused on our next goal: **becoming net zero along our entire value chain by 2030 in line with a 1.5°C future**. In this regard, we aim to apply the demanding Corporate Net-Zero Standard set by the Science-Based Targets initiative (SBTi).

In March 2023, we incorporated environmental, social, and governance (ESG) components into a new revolving credit facility for the first time. In line with our sustainable corporate strategy, we integrated 'net zero' alongside 'women in management' as components of our new sustainability-linked revolving credit facility of €3 billion. At the Annual General Meeting of Shareholders in May 2023, the shareholders approved the inclusion of the same two new ESG KPIs alongside financial metrics in the long-term incentive compensation of the SAP Executive Board starting 2024.

SAP's ESG efforts – along with its measures, initiatives, and targets – have been recognized by renowned sustainability ratings and ranking organizations:

- In IDC's report "Sustainability Index for Software Providers", SAP was placed in the top 3 of 23 assessed software vendors.
- SAP upholds its prime status (B rating) and remains in the first decile rank of the Institutional Shareholder Services (ISS) ESG rating based on the July 2023 update.
- SAP's continuous sustainability leadership is reflected in its "A–" rating in CDP's climate change assessment. In March 2023, SAP was again recognized as a CDP Supplier Engagement Leader.
- We ranked 41st in Corporate Knights' 2023 Global 100 Most Sustainable Corporations in the World.

Organization and Changes in Management

On March 31, 2023, SAP announced that the Supervisory Board had extended the contracts of Executive Board members Julia White, Chief Marketing & Solutions Officer, and Scott Russell, who leads SAP's Customer Success organization, for three years until 2027.

Furthermore, Sabine Bendiek, Chief People & Operating Officer and Labor Relations Director, informed the Supervisory Board that she will not renew her contract which expires on December 31, 2023.

Risk Management and Risks

We have comprehensive risk-management structures in place that are intended to enable us to recognize and analyze risks early on, take the appropriate action, and mitigate any risks that materialize as presented in the [Risk Management and Risks](#) chapter in our Integrated Report 2022 and our Annual Report on Form 20-F for 2022.

For changes in our Litigation, Claims, and Legal Contingencies since our last Integrated Report, see the Notes to the Consolidated Half-Year Financial Statements, [Note \(G.1\)](#).

Based on our aggregation approach and taking into consideration the mitigations implemented for all our risk factors and risks, as at June 30, 2023, we see no material change relative to our 2022 risk assessment or 2022 risk-bearing capacity. We do not believe that any of the risks we identified in our Integrated Report 2022 and Annual Report on Form 20-F for 2022, and as outlined herein, jeopardize our ability to continue as a going concern.

Expected Developments and Opportunities

Future Trends in the Global Economy

The global growth and inflation outlook in the European Central Bank's (ECB) current projections¹ remains broadly unchanged, but with a small upward revision due to a recovery in demand in China. However, this outlook remains highly uncertain, with broader geopolitical tensions and renewed financial market tensions as downside risks and the strong labor market and increasing confidence as upside risks.

The ECB expects inflation to remain high in the EMEA region at 5.4% in 2023 but to decrease thereafter because of lower commodity prices. The ECB has also lowered its economic growth projections for the euro area until 2025. However, it still expects economic growth to strengthen in the coming quarters as energy prices moderate, foreign demand strengthens, supply bottlenecks are resolved, and uncertainty continues to recede.

As for the Americas region, the resilience of labor markets in the United States is underpinning consumer demand. The ECB projects U.S. economic activity to be driven mainly by the services sector, whereas manufacturing output could remain relatively subdued. In summary, the ECB expects real GDP in the United States to recover tepidly in the second half of 2023.

In the APJ region, projects the ECB, recovery in China will presumably continue but could lose momentum if the rapid recovery of consumer spending after the reopening of the economy does not expand to manufacturing. In Japan, economic activity is likely to expand at a moderate pace, supported by pent-up demand and ongoing policy support.

Economic Trends

GDP Growth Year Over Year

%	2022	2023p	2024p
World	3.4	2.8	3.0
Advanced Economies	2.7	1.3	1.4
Emerging Markets and Developing Economies	4.0	3.9	4.2
Regions (according to IMF taxonomy)			
Euro Area	3.5	0.8	1.4
Germany	1.8	-0.1	1.1
Emerging and Developing Europe	0.8	1.2	2.5
Middle East and Central Asia	5.3	2.9	3.5
Sub-Saharan Africa	3.9	3.6	4.2
United States	2.1	1.6	1.1
Canada	3.4	1.5	1.5
Latin America and the Caribbean	4.0	1.6	2.2
Japan	1.1	1.3	1.0
Emerging and Developing Asia	4.4	5.3	5.1
China	3.0	5.2	4.5

p = projection

Source: International Monetary Fund (IMF), World Economic Outlook April 2023, A Rocky Recovery (<https://www.imf.org/-/media/Files/Publications/WEO/2023/April/English/text.ashx>), p. 29.

The IT Market: Outlook for 2023 and Beyond

"In the digital world, organizations need to continue their investment in enterprise applications,"² says International Data Corporation (IDC), a U.S.-based market research firm. It does not find this "a surprise considering organizations are hyperfocused on the macroeconomic headwinds of inflation, labor shortages, and the recession."²

For IDC, "it is clear the digital world is increasing investments for SaaS software [...], as on average, 31% of organizations are planning on replacing their current systems within 12 months, 11% in 12–24 months, and 5% in 24–36 months."² However, "the deployment model is critical to buyers. Some will only move to a hybrid environment, while others are moving quickly to private or public cloud."²

In particular, "technological innovations that generate improvements in overall energy efficiencies will be essential to lower costs and reduce carbon footprints."³ Therefore, "demand for ESG data consolidation platforms will rise because the future enterprise will increasingly need digitalized and/or automated business processes, which will lead to a need for data integration platforms. ESG data must be consolidated in a centralized manner and be available for different types of data/KPI monitoring [...]. Organizations that master ESG performance metrics monitoring in a holistic manner and integrate ESG insights into steering their strategy execution will gain a competitive advantage by moving beyond mere regulatory compliance to driving business benefits,"³ reports IDC. Particularly "in Europe, pressure is increasing to provide visibility into ESG KPIs and publicly disclose nonfinancial indicators. The European Commission's forthcoming Corporate Sustainability Reporting Directive (CSRD) requires a large amount of specific new qualitative and quantitative information to be disclosed."³

¹ European Central Bank, Economic Bulletin, Issue 4/2023, Publication Date: June 29, 2023.

² IDC Market Perspective: June 2023: Enterprise Application Spending Continues for the Foreseeable Future, Doc #US50665223, May 2023.

³ IDC Vendor Profile: Sustainability Index for Software Providers: SAP, Doc #EUR147190121, May 2023.

Impact on SAP

Looking ahead, SAP's cloud transformation is expected to drive further opportunities for our customers. Macroeconomic challenges such as inflation or supply chain disruptions as well as increasing global regulatory requirements are prompting many customers to reinvent how their businesses run to become more resilient and agile. Therefore, SAP is executing on its cloud-led strategy, which is driving accelerating cloud growth through both new business and cloud adoption by existing customers. Our broad solution portfolio, including our modular cloud ERP suite, SAP Business Technology Platform, our industry cloud, SAP Business Network, and our enhanced sustainability portfolio, helps create value not only for our customers but for our entire ecosystem. This strategy resonates with customers even in an increasingly challenging environment. As such, SAP is well positioned to capitalize on an expanding addressable market.

Financial Targets and Prospects (Non-IFRS)

Revenue and Operating Profit Targets and Prospects

In April 2023, SAP revisited its 2023 outlook, confirmed its performance expectations underlying its January 2023 outlook for continuing operations, and reflected the anticipated divestiture of Qualtrics. Based hereon, SAP updated its revenue and operating profit outlook in July 2023 and now expects:

- €14.0 billion to €14.2 billion in cloud revenue at constant currencies (2022: €11.43 billion), up 23% to 24% at constant currencies. The previous range as communicated in April 2023 was €14.0 billion to €14.4 billion at constant currencies, the initial range (including Qualtrics) was €15.3 billion to €15.7 billion at constant currencies.
- €27.0 billion to €27.4 billion in cloud and software revenue at constant currencies (2022: €25.39 billion), up 6% to 8% at constant currencies. The previous range as communicated in April 2023 was €26.9 billion to €27.4 billion at constant currencies, the initial range (including Qualtrics) was €28.2 billion to €28.7 billion at constant currencies.
- €8.65 billion to €8.95 billion in non-IFRS operating profit at constant currencies (2022: €7.99 billion), up 8% to 12% at constant currencies. The previous range as communicated in April 2023 was €8.6 billion to €8.9 billion at constant currencies, the initial range (including Qualtrics) was €8.8 billion to €9.1 billion at constant currencies.

SAP continues to expect:

- A share of more predictable revenue of approximately 82% (2022: 79%). It is defined as the total of cloud revenue and software support revenue divided by total revenue. The initial guidance (including Qualtrics) was approximately 83%.
- A full-year effective tax rate (IFRS) of 28.0% to 32.0% (2022: 32.0%) and an effective tax rate (non-IFRS) of 26.0% to 28.0% (2022: 29.6%).

Additionally, SAP continues to expect:

- Current Cloud Backlog: A year-end growth rate similar to 2022, but at a larger scale
- SAP S/4HANA cloud revenue: continued high growth in 2023
- Cloud gross margin: a steady increase in the years 2023 through 2025 to allow SAP to achieve its 2025 cloud gross profit ambition

We continuously strive for profit expansion in all of our operating segments.

While SAP's full-year 2023 business outlook is at constant currencies, actual-currency reported figures are expected to be impacted by currency exchange rate fluctuations as the Company progresses through the year. For the third-quarter and full-year 2023 expected currency impacts, see the table below:

Expected Currency Impact for the rest of the year based on June 2023 Level

In percentage points	Q3	FY
Cloud	-7pp to -5pp	-4pp to -2pp
Cloud and software	-6pp to -4pp	-3.5pp to -1.5pp
Operating profit	-6.5pp to -4.5pp	-4.5pp to -2.5pp

The following table shows the estimates of the items that represent the differences between our IFRS financial measures and our non-IFRS financial measures:

Non-IFRS Measures

€ millions	Estimated Amounts for Full Year 2023	Q1-Q2 2023	Q1-Q2 2022
Acquisition-related charges	300–380	177	191
Share-based payment expenses	1,850–2,250	1,167	513
Restructuring	250–300	257	119
Regulatory compliance matters	170	170	-

Medium-Term Prospects

SAP updated its medium-term ambitions on May 16, 2023.

For 2025, SAP now expects:

- Cloud revenue of more than €21.5 billion
- Total revenue of more than €37.5 billion
- Non-IFRS cloud gross profit of approximately €16.3 billion
- Non-IFRS operating profit of approximately €11.5 billion
- A share of more predictable revenue of approximately 86%
- Free cash flow of approximately €7.5 billion

Building Blocks of the Ambition 2025 Update

	Original Ambition 2025 (incl. Qualtrics)	Estimated Impact of Qualtrics Divestiture	Update for Continuing Operations	Updated Ambition 2025 (excl. Qualtrics)	CAGR 2022–2025e* (continuing operations)
Cloud revenue	>€22.0bn	-€2.0bn	+€1.5bn	>€21.5bn	>23%
Total revenue	>€36.0bn	-€2.3bn	+€3.8bn	>€37.5bn	>8%
Cloud gross profit (non-IFRS)	~€17.6bn	-€1.8bn	+€0.5bn	~€16.3bn	~27%
Operating profit (non-IFRS)	>€11.5bn	-€0.5bn	+€0.5bn	~€11.5bn	~13%

*expected

The update demonstrates SAP's strong cloud momentum and reflects the divestiture of Qualtrics. The €3.8 billion increase in our 2025 total revenue ambition is driven by an expected stronger cloud revenue growth, a higher degree of resilience in our support business, and a more favorable 2025 currency environment as compared to the original ambition published in October 2020.

Furthermore, SAP expects:

- Cloud revenue growth to continue to benefit from conversions of support revenue to cloud revenue at average conversion factors of two to three times
- PaaS revenue to grow at higher rates than SaaS revenue for the foreseeable future
- Total revenue growth to accelerate beyond 2023 towards double-digit growth

Goals for Liquidity, Finance, and Investments

SAP believes that its liquid assets combined with its undrawn credit facilities are sufficient to meet its operating financing needs in the second half of 2023 as well, and, together with expected cash flows from operations, will support debt repayments and its currently planned capital expenditure requirements over the near and medium term.

In 2023 and compared to 2022, SAP expects an increase in free cash flow of approximately €4.9 billion due to improvements in profitability and working capital, which are expected to be partially offset by higher tax payments and payouts for restructuring. Compared to what SAP disclosed in its Integrated Report 2022, SAP adjusted its expectations for FCF to approximately €4.9 billion in 2023 (formerly approximately €5.0 billion) and approximately €7.5 billion in 2025 (formerly approximately €8.0 billion).

In addition to the repayment of €1.6 billion in Eurobonds in the first half of 2023, SAP intends to repay portions or the full amounts of the two fully drawn bilateral bank loans of €1.45 billion in the third quarter of 2023.

SAP expects the ratio of net debt as at December 31, 2023, divided by the total of operating profit (IFRS) plus depreciation and amortization, to be negative due to the positive impact of the sales proceeds of Qualtrics. As such, SAP plans to start the new share repurchase program with a volume of up to €5.0 billion in the second half of 2023 and complete it in full by the end of 2025.

SAP's planned investment expenditures for 2023 and 2024, other than from business combinations, consist primarily of the purchase of IT infrastructure (such as data centers) and the construction of new buildings. Primarily driven by lower investment expenditures for IT, SAP now expects planned investment expenditures of slightly below €900 million for 2023, compared to the approximately €950 million disclosed in the Integrated Report 2022. For 2024, SAP expects capital expenditures to stay at a similar level as in 2023.

Non-Financial Goals 2023 and Ambitions for 2025

In addition to our financial goals, we focus on three non-financial targets: customer loyalty, employee engagement, and carbon emissions.

In 2023, SAP continues to expect:

- A Customer Net Promoter Score of 8 to 12. The guidance is based on an adjusted methodology for 2023 to better reflect the business priorities of the company. The baseline for 2022, calculated using the new methodology, is 7.
- An Employee Engagement Index to be in a range of 76% to 80%
- Net carbon emissions of 0 kt, meaning the Company will be carbon neutral in its own operations

For 2025 non-financial performance, SAP now expects to:

- Steadily increase the Employee Engagement Index

In addition, it continues to expect to:

- Steadily increase the Customer Net Promoter Score
- Maintain net carbon emissions in our own operations of 0 kt. In addition, SAP is committed to achieving net-zero along our value chain by 2030.

Premises on Which Our Outlook and Prospects Are Based

In preparing our outlook and prospects, we have taken into account all events known to us at the time we prepared this report that could influence SAP's business going forward.

Opportunities

We have comprehensive opportunity-management structures in place that are intended to enable us to recognize and analyze opportunities early and to take the appropriate action. The opportunities remain largely unchanged compared to what we disclosed in our [Integrated Report 2022](#).

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Consolidated Income Statement of SAP Group (IFRS) – Half Year

€ millions, unless otherwise stated	Q1–Q2 2023	Q1–Q2 2022	Δ in %
Cloud	6,493	5,362	21
Software licenses	591	743	–20
Software support	5,778	5,900	–2
Software licenses and support	6,369	6,643	–4
Cloud and software	12,863	12,005	7
Services	2,132	1,974	8
Total revenue	14,995	13,980	7
	(A.1), (C.2)		
Cost of cloud	–1,897	–1,650	15
Cost of software licenses and support	–687	–686	0
Cost of cloud and software	–2,584	–2,336	11
Cost of services	–1,718	–1,516	13
Total cost of revenue	–4,301	–3,852	12
Gross profit	10,693	10,127	6
Research and development	–3,138	–2,910	8
Sales and marketing	–4,457	–3,842	16
General and administration	–670	–610	10
Restructuring	–257	–119	>100
Other operating income/expense, net	–10	–115	–91
Total operating expenses	–12,834	–11,449	12
Operating profit (loss)	2,161	2,531	–15
Other non-operating income/expense, net	–103	–63	64
Finance income	369	520	–29
Finance costs	–656	–692	–5
Financial income, net	–287	–173	66
	(C.3)		
Profit (loss) before tax from continuing operations	1,771	2,295	–23
	(C.2)		
Income tax expense	–643	–666	–3
Profit (loss) after tax from continuing operations	1,128	1,629	–31
Attributable to owners of parent	1,135	1,657	–31
Attributable to non-controlling interests	–7	–28	–74
Profit (loss) after tax from discontinued operations	2,763	–794	<–100
	(D.1)		
Profit (loss) after tax²	3,890	835	>100
Attributable to owners of parent ²	3,933	1,074	>100
Attributable to non-controlling interests ²	–43	–239	–82
Earnings per share, basic (in €)¹ from continuing operations	0.97	1.41	–31
Earnings per share, basic (in €)^{1, 2}	3.37	0.92	>100
Earnings per share, diluted (in €)¹ from continuing operations	0.97	1.41	–32
Earnings per share, diluted (in €)^{1, 2}	3.34	0.91	>100

¹ For the six months ended June 30, 2023 and 2022, the weighted average number of shares was 1,168 million (diluted: 1,176 million) and 1,174 million (diluted: 1,174 million), respectively (treasury stock excluded).

² From continuing and discontinued operations

Due to rounding, numbers may not add up precisely.

Consolidated Statements of Comprehensive Income of SAP Group (IFRS) – Half Year

€ millions	Q1–Q2 2023	Q1–Q2 2022
Profit after tax	3,890	835
Items that will not be reclassified to profit or loss		
Remeasurements on defined benefit pension plans, before tax	0	1
Income taxes relating to remeasurements on defined benefit pension plans	0	–2
Remeasurements on defined benefit pension plans, net of tax	0	–2
Other comprehensive income for items that will not be reclassified to profit or loss, net of tax	0	–2
Items that will be reclassified subsequently to profit or loss		
Gains (losses) on exchange differences on translation, before tax	–755	3,513
Reclassification adjustments on exchange differences on translation, before tax	–129	0
Exchange differences, before tax	–884	3,513
Income taxes relating to exchange differences on translation	8	–7
Exchange differences, net of tax	–876	3,505
Gains (losses) on cash flow hedges/cost of hedging, before tax	45	–11
Reclassification adjustments on cash flow hedges/cost of hedging, before tax	–32	46
Cash flow hedges/cost of hedging, before tax	13	35
Income taxes relating to cash flow hedges/cost of hedging	–4	–9
Cash flow hedges/cost of hedging, net of tax	10	26
Other comprehensive income for items that will be reclassified to profit or loss, net of tax	–866	3,531
Other comprehensive income, net of tax	–866	3,530
Total comprehensive income¹	3,024	4,365
Attributable to owners of parent ¹	3,233	4,347
Attributable to non-controlling interests ¹	–208	18

¹ From continuing and discontinued operations
Due to rounding, numbers may not add up precisely.

Consolidated Statement of Financial Position of SAP Group (IFRS)

as at 6/30/2023 and 12/31/2022

€ millions		2023	2022 ¹
Cash and cash equivalents		14,142	9,008
Other financial assets		480	853
Trade and other receivables		5,594	6,236
Other non-financial assets	(A.2)	2,371	2,139
Tax assets		403	287
Total current assets		22,990	18,522
Goodwill	(D.2)	28,581	33,077
Intangible assets		2,259	3,835
Property, plant, and equipment	(D.3)	4,361	4,934
Other financial assets		5,513	5,626
Trade and other receivables		121	169
Other non-financial assets	(A.2)	3,397	3,580
Tax assets		315	323
Deferred tax assets		2,182	2,095
Total non-current assets		46,730	53,638
Total assets		69,719	72,159
€ millions		2023	2022 ¹
Trade and other payables		1,584	2,147
Tax liabilities		582	283
Financial liabilities	(E.2)	3,068	4,808
Other non-financial liabilities		3,859	4,818
Provisions	(B.4)	339	90
Contract liabilities		6,743	5,309
Total current liabilities		16,176	17,453
Trade and other payables		57	79
Tax liabilities		901	893
Financial liabilities	(E.2)	9,169	9,547
Other non-financial liabilities		677	705
Provisions		336	359
Deferred tax liabilities		146	241
Contract liabilities		28	33
Total non-current liabilities		11,314	11,858
Total liabilities		27,490	29,311
Issued capital		1,229	1,229
Share premium		1,552	3,081
Retained earnings		40,225	36,418
Other components of equity		3,100	3,801
Treasury shares		-4,159	-4,341
Equity attributable to owners of parent		41,946	40,186
Non-controlling interests		283	2,662
Total equity	(E.1)	42,229	42,848
Total equity and liabilities		69,719	72,159

¹ According to IFRS 5, Consolidated Statements of Financial Position as of 12/31/2022 for our continuing operations is unchanged from what previously has been reported. Due to rounding, numbers may not add up precisely.

Consolidated Statements of Changes in Equity of SAP Group (IFRS)

€ millions	Equity Attributable to Owners of Parent						Non-Controlling Interests	Total Equity
	Issued Capital	Share Premium	Retained Earnings	Other Components of Equity	Treasury Shares	Total		
12/31/2021	1,229	1,918	37,022	1,757	-3,072	38,853	2,670	41,523
Profit after tax			1,074			1,074	-239	835
Other comprehensive income			-2	3,275		3,273	257	3,530
Comprehensive income			1,073	3,275		4,347	18	4,365
Share-based payments		629				629	181	810
Dividends			-2,865			-2,865	-18	-2,883
Purchase of treasury shares					-1,000	-1,000		-1,000
Transactions with non-controlling interests			-83			-83	85	1
Other changes			-37			-37	7	-29
6/30/2022	1,229	2,547	35,109	5,031	-4,072	39,844	2,943	42,787
12/31/2022	1,229	3,081	36,418	3,801	-4,341	40,186	2,662	42,848
Profit after tax			3,933			3,933	-43	3,890
Other comprehensive income			0	-701		-701	-165	-866
Comprehensive income			3,933	-701		3,233	-208	3,024
Share-based payments		777				777	111	888
Dividends			-2,395			-2,395	-21	-2,416
Reissuance of treasury shares under share-based payments					182	182		182
Transactions with non-controlling interests		-2,306	2,306			0	-2,261	-2,261
Other changes		0	-37			-37	0	-37
6/30/2023	1,229	1,552	40,225	3,100	-4,159	41,946	283	42,229

Due to rounding, numbers may not add up precisely.

Consolidated Statement of Cash Flows of SAP Group (IFRS)

€ millions	Q1–Q2 2023	Q1–Q2 2022 ¹
Profit (loss) after tax	3,890	835
Adjustments to reconcile profit (loss) after tax to net cash flows from operating activities:		
(Profit) loss after tax from discontinued operations	-2,763	794
Depreciation and amortization	714	774
Share-based payment expense	1,167	513
Income tax expense	643	666
Financial income, net	287	173
Decrease/increase in allowances on trade receivables	5	104
Other adjustments for non-cash items	76	11
Decrease/increase in trade and other receivables	396	865
Decrease/increase in other assets	-600	-600
Increase/decrease in trade payables, provisions, and other liabilities	-896	-1,240
Increase/decrease in contract liabilities	2,109	2,073
Share-based payments	-697	-927
Interest paid	-244	-138
Interest received	197	44
Income taxes paid, net of refunds	-1,127	-1,181
Net cash flows from operating activities – continuing operations	3,160	2,766
Net cash flows from operating activities – discontinued operations	80	-14
Net cash flows from operating activities	3,240	2,752
Business combinations, net of cash and cash equivalents acquired	0	-664
Cash flows from derivative financial instruments related to the sale of subsidiaries or businesses	-91	0
Purchase of intangible assets or property, plant, and equipment	-413	-408
Proceeds from sales of intangible assets or property, plant, and equipment	43	46
Purchase of equity or debt instruments of other entities	-220	-2,256
Proceeds from sales of equity or debt instruments of other entities	722	4,005
Net cash flows from investing activities – continuing operations	41	723
Net cash flows from investing activities – discontinued operations	6,323	-15
Net cash flows from investing activities	6,364	708
Dividends paid	-2,395	-2,865
Dividends paid on non-controlling interests	-18	-3
Purchase of treasury shares	0	-1,000
Proceeds from borrowings	0	38
Repayments of borrowings	-1,724	-944
Payments of lease liabilities	-188	-209
Transactions with non-controlling interests	43	0
Net cash flows from financing activities – continuing operations	-4,283	-4,982
Net cash flows from financing activities – discontinued operations	24	-209
Net cash flows from financing activities	-4,259	-5,191
Effect of foreign currency rates on cash and cash equivalents	-212	305
Net decrease/increase in cash and cash equivalents	5,134	-1,427
Cash and cash equivalents at the beginning of the period	9,008	8,898
Cash and cash equivalents at the end of the period	14,142	7,472

¹ We no longer show cash flows linked to the supply chain financing (SCF) transactions from Taulia in investing/financing cash flow separately and therefore adjusted the comparative figures accordingly.

Due to rounding, numbers may not add up precisely.

Notes to the Consolidated Half-Year Financial Statements

(IN.1) Basis for Preparation

General Information About Consolidated Half-Year Financial Statements

The registered seat of SAP SE is in Walldorf, Germany (Commercial Register of the Lower Court of Mannheim HRB 719915). The condensed Consolidated Half-Year Financial Statements of SAP SE and its subsidiaries (collectively, “we,” “us,” “our,” “SAP,” “Group,” and “Company”) have been prepared in accordance with the International Financial Reporting Standards (IFRS) and in particular in compliance with International Accounting Standard (IAS) 34. In this context, IFRS includes all standards issued by the International Accounting Standards Board (IASB) and related interpretations issued by the IFRS Interpretations Committee (IFRS IC). The variances between the applicable IFRS standards as issued by the IASB and the standards as used by the European Union are not relevant to these financial statements.





Certain information and disclosures normally included in the notes to annual financial statements prepared in accordance with IFRS have been condensed or omitted. We believe that the disclosures made are adequate and that the information gives a true and fair view.

Our business activities are influenced by certain seasonal effects. Historically, our overall revenue tends to be highest in the fourth quarter. Interim results are therefore not necessarily indicative of results for a full year.

Amounts reported in previous years have been reclassified if appropriate to conform to the presentation in this half-year report.


These unaudited condensed Consolidated Half-Year Financial Statements should be read in conjunction with SAP’s audited Consolidated IFRS Financial Statements for the Year Ended December 31, 2022, included in our Integrated Report 2022 and our Annual Report on Form 20-F for 2022.

Due to rounding, numbers presented throughout these Consolidated Half-Year Financial Statements may not add up precisely to the totals we provide and percentages may not precisely reflect the absolute figures.

Amounts disclosed in our Consolidated Half-Year Financial Statements that are taken directly from our  Consolidated Income Statements or our  Consolidated Statements of Financial Position are marked by the symbols  and , respectively.

Accounting Policies, Management Judgments, and Sources of Estimation Uncertainty

How We Present Our Accounting Policies, Judgments, and Estimates

To ease the understanding of our financial statements, we present the accounting policies, judgments, and estimates on a given subject together with other disclosures related to the same subject in the Note that deals with this subject, and highlighted this disclosure with a light gray box and the symbol . We describe, however, only material changes of our accounting policies, judgments, and estimates in relation to our Consolidated Financial Statements for 2022.

🕒 New Accounting Standards Not Yet Adopted

The IASB has issued amendments to standards such as IAS 1 (Classification of Liabilities as Current or Non-current), that are relevant for SAP but not yet effective. We are currently in the process of finalizing the assessment of the impact on SAP, but do not expect material effects on our financial position or results of operations.

Section A – Customers

This section discusses disclosures related to contracts with our customers. These consist of revenue breakdowns and information about our trade receivables. For more information, see our Consolidated Financial Statements for 2022, [Section A – Customers](#).

(A.1) Revenue

Geographic Information

The amounts for revenue by region in the following tables are based on the location of customers.

Cloud Revenue by Region

€ millions	Q1–Q2 2023	Q1–Q2 2022
EMEA	2,458	1,966
Americas	3,194	2,695
APJ	841	701
SAP Group	6,493	5,362

Cloud and Software Revenue by Region

€ millions	Q1–Q2 2023	Q1–Q2 2022
EMEA	5,660	5,285
Americas	5,283	4,866
APJ	1,919	1,853
SAP Group	12,863	12,005

Total Revenue by Region

€ millions	Q1–Q2 2023	Q1–Q2 2022
Germany	2,283	2,114
Rest of EMEA	4,338	4,049
EMEA	6,621	6,163
United States	4,974	4,566
Rest of Americas	1,233	1,136
Americas	6,207	5,702
Japan	616	602
Rest of APJ	1,550	1,513
APJ	2,166	2,115
SAP Group	14,995	13,980

For information about the breakdown of revenue by segment and segment revenue by region, see [Note \(C.1\)](#). For more information about our revenue accounting policies, see our Consolidated Financial Statements for 2022, [Note \(A.1\)](#).

(A.2) Trade and Other Receivables

€ millions	6/30/2023		
	Current	Non-Current	Total
Trade receivables, net	5,243	0	5,243
Other receivables	351	121	472
Total	5,594	121	5,715

€ millions	12/31/2022		
	Current	Non-Current	Total
Trade receivables, net	5,782	0	5,782
Other receivables	454	169	623
Total	6,236	169	6,405

Section B – Employees

This section provides financial insights into our employee benefit arrangements. It should be read in conjunction with the compensation disclosures for key management personnel in [Note \(G.5\)](#) in our Consolidated Financial Statements for 2022, as well as SAP's [Compensation Report](#). For more information, see our Consolidated Financial Statements for 2022, [Section B – Employees](#).

(B.1) Employee Headcount

On June 30, 2023, the breakdown of our full-time equivalent employee numbers by function and by region was as shown in the table below.

Number of Employees (in Full-Time Equivalents)

Full-time equivalents	6/30/2023				6/30/2022			
	EMEA	Americas	APJ	Total	EMEA	Americas	APJ	Total
Cloud and software ¹	4,010	4,083	4,000	12,093	4,497	3,979	4,403	12,879
Services	7,993	5,000	5,476	18,469	8,193	5,061	5,811	19,065
Research and development ¹	17,910	5,872	12,318	36,100	17,075	5,730	11,379	34,185
Sales and marketing	11,778	10,121	5,303	27,202	11,454	10,649	5,347	27,450
General and administration	3,475	1,765	1,281	6,521	3,337	1,867	1,208	6,411
Infrastructure	2,800	1,284	859	4,943	2,774	1,350	874	4,997
SAP Group (6/30)	47,966	28,125	29,237	105,328	47,331	28,636	29,022	104,988
Thereof acquisitions	0	0	0	0	173	189	8	370
SAP Group (six months' end average)	47,917	28,127	29,337	105,380	46,834	28,650	28,991	104,475

¹ Due to the updated cost allocation policy described in Note (G.5), headcount numbers for the comparative period were adjusted accordingly

(B.2) Employee Benefits Expenses

€ millions	Q1–Q2 2023	Q1–Q2 2022
Salaries	5,915	5,572
Social security expenses	975	910
Share-based payment expenses	1,167	513
Pension expenses	235	236
Employee-related restructuring expenses	250	61
Termination benefits	22	23
Employee benefits expenses	8,565	7,315

(B.3) Share-Based Payments

The allocations of expenses for share-based payments to the various expense items are as follows:

Share-Based Payments

€ millions	Q1–Q2 2023	Q1–Q2 2022
Cost of cloud	47	19
Cost of software licenses and support	20	21
Cost of services	198	96
Research and development	371	162
Sales and marketing	435	171
General and administration	96	43
Share-based payment expenses	1,167	513
Thereof cash-settled share-based payments	473	–9
Thereof equity-settled share-based payments	694	522

Share-based payment expenses related to the Qualtrics plan are included in the results from discontinued operations (see [Note \(D.1\)](#)).

Move SAP Plan and Grow SAP Plan

In the first half of 2023, we granted 13.9 million (first half of 2022: 16.8 million) share units. This includes 12.4 million (first half of 2022: 14.3 million) share units which we intend to settle in shares. The dilutive effect of outstanding equity-settled share units is reflected in the calculation of earnings per share, diluted. Of the share units we intend to settle in cash, 0.8 million share units were granted in June 2023 under the Grow SAP plan (June 2022: 1.1 million).

Own SAP Plan

Under the Own SAP plan, employees can purchase, on a monthly basis, SAP shares without any required holding period. The number of shares purchased by our employees under this plan was 3.5 million in the first half of 2023 (first half of 2022: 4.6 million).

For more information about our share-based payments and a detailed description of our share-based payment plans, see the Notes to the Consolidated Financial Statements for 2022, [Note \(B.3\)](#).

(B.4) Restructuring

€ millions	Q1–Q2 2023	Q1–Q2 2022
Employee-related restructuring expenses	250	61
Onerous contract-related restructuring expenses and restructuring related impairment losses	8	58
Restructuring expenses	257	119

Most of the restructuring expenses recognized in the first half of 2023 relate to the targeted restructuring program in selected areas of the company that SAP announced and launched in the first quarter to further focus on its strategic growth areas and accelerated cloud transformation. Restructuring expenses primarily include employee-related benefits such as severance payments. The restructuring costs presented in 2022 mainly include expenses related to the wind-down of business in Russia and Belarus.

If not presented separately, these restructuring expenses would break down in our income statements as follows:

Restructuring Expenses by Functional Area

€ millions	Q1–Q2 2023	Q1–Q2 2022
Cost of cloud	6	–12
Cost of software licenses and support	11	4
Cost of services	34	61
Research and development	40	7
Sales and marketing	150	57
General and administration	16	3
Restructuring expenses	257	119

Section C – Financial Results

This section provides insight into the financial results of SAP's reportable segments and of SAP overall, as far as not already covered by previous sections. This includes segment results and income taxes. For more information, see our Consolidated Financial Statements for 2022, [Section C – Financial Results](#).

(C.1) Results of Segments

General Information

SAP has five operating segments that are regularly reviewed by our Executive Board, which is responsible for assessing the performance of our Company and for making resource allocation decisions as our Chief Operating Decision Maker (CODM). The operating segments are largely organized and managed separately according to their product and service offerings, notably whether the products and services relate to our network offerings (Business Network), our customer experience portfolio of Emarsys, our portfolio of sustainability-related solutions (Sustainability), our working capital management solutions (Taulia), or cover other areas of our business including support and services activities (Applications, Technology & Services). For more information about our segments, see the Notes to the Consolidated Financial Statements for 2022, [Note \(C.1\)](#).

In the first quarter of 2023, the non-reportable SAP Signavio segment was dissolved and integrated into the Applications, Technology & Services segment. The segment information for comparative prior periods was restated to conform with the new segment composition.

At the end of the second quarter of 2023, we sold Qualtrics, formerly a reportable segment which derived its revenues mainly from the sale of experience management cloud solutions. For more information related to the sale of Qualtrics, see [Note \(D.1\)](#).

Applications, Technology & Services

€ millions, unless otherwise stated (non-IFRS)	Q1–Q2 2023		Q1–Q2 2022
	Actual Currency	Constant Currency	Actual Currency
Cloud	5,940	5,978	4,885
Software licenses	591	601	743
Software support	5,777	5,831	5,900
Software licenses and support	6,369	6,432	6,643
Cloud and software	12,309	12,410	11,529
Services	2,124	2,139	1,967
Total segment revenue	14,429	14,544	13,492
Cost of cloud	–1,806	–1,802	–1,589
Cost of software licenses and support	–624	–624	–661
Cost of cloud and software	–2,430	–2,426	–2,249
Cost of services	–1,492	–1,503	–1,380
Total cost of revenue	–3,922	–3,929	–3,629
Cloud gross profit	4,134	4,176	3,297
Segment gross profit	10,507	10,615	9,863
Other segment expenses	–6,042	–6,072	–6,054
Segment profit (loss)	4,465	4,543	3,809

Segment Revenue by Region

€ millions	EMEA					Americas			APJ		Total Segment Revenue	
	Q1–Q2 2023		Q1–Q2 2022	Q1–Q2 2023		Q1–Q2 2022	Q1–Q2 2023		Q1–Q2 2022	Q1–Q2 2023		Q1–Q2 2022
	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency	Actual Currency	Actual Currency	Constant Currency	Actual Currency
Applications, Technology & Services	6,448	6,492	6,017	5,874	5,837	5,415	2,107	2,216	2,060	14,429	14,544	13,492

(C.2) Reconciliation of Segment Measures to Income Statement

€ millions	Q1–Q2 2023		Q1–Q2 2022
	Actual Currency	Constant Currency	Actual Currency
Applications, Technology & Services	14,429	14,544	13,492
Total segment revenue for the reportable segment	14,429	14,544	13,492
Other revenue	566	568	487
Adjustment for currency impact	0	117	0
■ Total revenue	14,995	15,229	13,980
Applications, Technology & Services	4,465	4,543	3,809
Total segment profit for the reportable segment	4,465	4,543	3,809
Other revenue	566	568	487
Other expenses	–1,098	–1,081	–943
Adjustment for currency impact	0	–97	0
Adjustment for			
Acquisition-related charges	–177	–177	–191
Share-based payment expenses	–1,167	–1,167	–513
■ Restructuring	–257	–257	–119
Adjustment for regulatory compliance matter expenses	–170	–170	0
■ Operating profit	2,161	2,161	2,531
■ Other non-operating income/expense, net	–103	–103	–63
■ Financial income, net	–287	–287	–173
■ Profit before tax¹	1,771	1,771	2,295

¹ From continuing operations

(C.3) Financial Income, Net

In the first half of 2023, finance income mainly consisted of income from gains from disposals and fair value adjustments of equity securities totaling €186 million (first half of 2022: €463 million), and interest income from loans and receivables, other financial assets (cash, cash equivalents, and current investments) as well as from derivatives amounting to €190 million (first half of 2022: €65 million).

In the first half of 2023, finance costs were primarily impacted by losses from disposals and fair value adjustments of equity securities amounting to €226 million (first half of 2022: €543 million), and interest expense on financial liabilities including lease liabilities as well as negative effects from derivatives amounting to €370 million (first half of 2022: €97 million). The increase in interest expenses in the first half of 2023 compared to the first half of 2022 is due to:

- Our interest rate swaps through which we are exposed to variable interest rates, and

- A forward contract to hedge the USD purchase price from the Qualtrics sale against EUR-USD fluctuations. This forward contract matured on June 28, 2023, and we realized a loss of € 106 million in finance cost.

For more information about our financial income, net, see the Notes to the Consolidated Financial Statements for 2022, [Note \(C.4\)](#).

(C.4) Income Taxes

We are subject to ongoing tax audits by domestic and foreign tax authorities. Currently, we are in dispute mainly with the German and only a few foreign tax authorities. The German dispute is in respect of certain secured capital investments, while the few foreign disputes are in respect of the deductibility of intercompany royalty payments and intercompany services. In all cases, we expect that a favorable outcome can only be achieved through litigation. For all of these matters, we have not recorded a provision as we believe that the tax authorities' claims have no merit and that no adjustment is warranted. If, contrary to our view, the tax authorities were to prevail in their arguments before the court, we would expect to have an additional expense of approximately €1,837 million (2022: €1,571 million) in total (including related interest expenses and penalties of €1,013 million (2022: €857 million)). The contingent liabilities increased in 2023 mainly due to tax effects (including interest) for the current year as well as foreign currency exchange rate fluctuations.

Section D – Invested Capital

This section highlights the non-current assets including investments that form the basis of our operating activities. Additions in invested capital include separate asset acquisitions or business combinations. For more information, see our Consolidated Financial Statements for 2022, [Section D – Invested Capital](#).

(D.1) Business Combinations and Divestitures

Qualtrics Disposal

On March 13, resulting from a process that was initiated on January 26, SAP announced it had agreed to sell all of its 423 million shares of Qualtrics International Inc. as part of the acquisition of Qualtrics by funds affiliated with Silver Lake as well as the Canada Pension Plan Investment Board. The sale closed on June 28, 2023, following satisfaction of customary closing conditions and regulatory approvals. At a purchase price of US\$18.15 in cash per share, SAP's stake was acquired for approximately US\$7.7 billion. At the time Qualtrics was classified as a discontinued operation (following IFRS 5), there was no indication of an impairment (as the fair value less cost of disposal (calculated based on share prices) significantly exceeded the carrying amount).

SAP will remain a close go-to-market and technology partner for Qualtrics.

SAP's financial results present Qualtrics as a discontinued operation (given the qualitative and quantitative significance for SAP), in accordance with IFRS 5 (the comparative figures have been adjusted accordingly). The Qualtrics disposal group was previously included in the Qualtrics reportable segment.

The pre-tax disposal gain included into discontinued operations (€3.7 billion) was calculated by adjusting the purchase price less cost of disposal (€7.0 billion) for net assets leaving the SAP Group (-€5.8 billion, mostly goodwill (-€4.0 billion) and other intangible assets (-€1.3 billion)) and the corresponding non-controlling interests (€2.4 billion) and amounts of other comprehensive income (€0.1 billion). SAP incurred taxes amounting to €0.5 billion in connection with the transaction.

The cash inflow resulting from the purchase price (€7.1 billion) was offset by cash and cash equivalents of €0.7 billion leaving the SAP Group.

SAP continues to provide rental guarantees for certain offices used by Qualtrics. Qualtrics is obligated to indemnify SAP with respect to the guarantees.

Additional financial information relating to Qualtrics is presented in the following tables (revenues and expenses are presented after consolidation of transactions between Qualtrics and SAP's continuing operations):

€ billion, unless otherwise stated	Q1–Q2 2023	Q1–Q2 2022
Consolidated Income Statements		
Cloud revenue	0.6	0.5
Total revenue	0.7	0.6
Cost of cloud	-0.1	-0.1
Total cost of revenue	-0.2	-0.2
Total operating expenses (including total cost of revenue)	-1.2	-1.4
Disposal gain before tax	3.7	0.0
Operating profit	3.2	-0.8

€ billion, unless otherwise stated	Q1–Q2 2023	Q1–Q2 2022
Profit (loss) before tax	3.3	–0.8
Income tax expense ¹	–0.5	0.0
Profit (loss) after tax	2.8	–0.8
Attributable to owners of parent	2.8	–0.6
Earnings per share, basic (IFRS, in €) ²	2.40	–0.50
Earnings per share, diluted (IFRS, in €) ²	2.38	–0.50
Consolidated Statements of Cash Flow		
Net operating cash flow	0.1	–0.0
Net investing cash flow	6.3	–0.0
Net financing cash flow	0.0	–0.2

¹ For 2023, €0.5 billion relates to the gain on sale of discontinued operations.

² For the six months ended June 30, 2023 and 2022, the weighted average number of shares was 1,168 million (diluted: 1,176 million) and 1,174 million (diluted: 1,174 million), respectively (treasury stock excluded). Due to rounding, numbers may not add up precisely.

(D.2) Goodwill

For goodwill, we have – through a qualitative and quantitative analysis – been continuously monitoring the existence of triggering events that would require an impairment test in the first half of 2023. The review of internal and external factors led us to conclude that no triggering events occurred since our annual goodwill impairment test in 2022. No impairment tests were performed in the first half of 2023.

Due to the integration of the SAP Signavio segment into the Applications, Technology & Services segment at the beginning of 2023, the goodwill in the SAP Signavio segment was moved to this segment. Given the close proximity to the 2022 annual goodwill impairment test, no formal impairment test was performed on the reallocation date of the SAP Signavio segment. For more information, see [Note \(C.1\)](#).

(D.3) Property, Plant, and Equipment

Property, Plant, and Equipment (Summary)

€ millions	6/30/2023	12/31/2022
Property, plant, and equipment excluding leases	2,880	3,133
Right-of-use assets	1,481	1,801
€ Total	4,361	4,934
Additions		
	Q1–Q2 2023	Q1–Q4 2022
Property, plant, and equipment excluding leases	288	700
Right-of-use assets	88	429
€ Total	376	1,129

(D.4) Purchase Obligations

SAP purchased – under an existing deal that expires on December 31, 2028 – additional cloud infrastructure services amounting to approximately €0.4 billion from a hyperscaler. For more information about our purchase obligations, see the Notes to the Consolidated Financial Statements for 2022, [Note \(D.8\)](#).

Section E – Capital Structure, Financing and Liquidity

This section provides information related to how SAP manages its capital structure. Our capital management is based on a high equity ratio, modest financial leverage, a well-balanced maturity profile, and deep debt capacity. For more information, see our Consolidated Financial Statements for 2022, [Section E – Capital Structure, Financing, and Liquidity](#).

(E.1) Total Equity

Number of Shares

millions	Issued Capital	Treasury Shares
12/31/2021	1,228.5	–48.9
Purchase	0	–10.0
6/30/2022	1,228.5	–58.9
12/31/2022	1,228.5	–61.4
Reissuance under share-based payments	0	2.6
6/30/2023	1,228.5	–58.8

In the first half of 2022, we bought back 10.0 million shares to support the transition of SAP's share-based compensation programs to equity settlement. In the first half of 2023, we reissued 2.6 million treasury shares to service share-based payment awards under our Move SAP Plan.

Other Components of Equity

€ millions	Exchange Differences	Cash Flow Hedges	Total
12/31/2021	1,779	–22	1,757
Other comprehensive income	3,249	26	3,275
6/30/2022	5,028	4	5,031
12/31/2022	3,784	16	3,801
Other comprehensive income	–711	10	–701
6/30/2023	3,074	26	3,100

(E.2) Liquidity

€ millions	6/30/2023				
	Nominal Volume		Carrying Amount		
	Current	Non-Current	Current	Non-Current	Total
Bonds	0	7,376	0	6,580	6,580
Private placement transactions	0	389	0	395	395
Commercial Paper	930	0	926	0	926
Bank loans	1,450	0	1,450	0	1,450
Financial debt	2,380	7,765	2,376	6,975	9,352
Lease liabilities	NA	NA	322	1,424	1,745
Other financial liabilities	NA	NA	370	770	1,140
Financial liabilities			3,068	9,169	12,237
Financial debt as % of Financial liabilities			77	76	76

€ millions	12/31/2022				
	Nominal Volume		Carrying Amount		
	Current	Non-Current	Current	Non-Current	Total
Bonds	1,600	7,381	1,600	6,556	8,155
Private placement transactions	0	397	0	405	405
Commercial Paper	930	0	928	0	928
Bank loans	1,456	0	1,456	0	1,456
Financial debt	3,986	7,778	3,983	6,960	10,943
Lease liabilities	NA	NA	349	1,791	2,140
Other financial liabilities	NA	NA	475	795	1,270
Financial liabilities			4,808	9,547	14,354
Financial debt as % of Financial liabilities			83	73	76

Section F – Management of Financial Risk Factors

This section discusses financial risk factors and risk management. In our half-year report, this includes the transfers between levels of the fair value hierarchy. For more information, particularly about our risk management related to foreign currency exchange rate risk, interest rate risk, equity price risk, credit risk, liquidity risk, and other financial risk factors, see our Consolidated Financial Statements for 2022, [Section F – Management of Financial Risk Factors](#).

(F.1) Financial Risk Factors, Financial Risk Management, and Fair Value Disclosures on Financial Instruments

A detailed overview of our other financial instruments, financial risk factors, the management of financial risks, and the determination of fair value as well as the classification of our other financial instruments into the fair value hierarchy of IFRS 13 are presented in [Notes \(F.1\)](#) and [\(F.2\)](#) in the Consolidated Financial Statements for 2022.

We do not disclose the fair value of our financial instruments as at June 30, 2023, for the following reasons:

- For a large number of our financial instruments, their carrying amounts are a reasonable approximation of their fair values, and
- For those financial instruments where the carrying amount differs from fair value, there was no material change in the relation between carrying amount and fair value since December 31, 2022.

Section G – Other Disclosures

This section provides additional disclosures on miscellaneous topics, including information pertaining to other litigation, claims, and legal contingencies, and related party transactions. For more information, see our Consolidated Financial Statements for 2022, [Section G – Other Disclosures](#).

(G.1) Other Litigation, Claims, and Legal Contingencies

We are subject to a variety of claims and lawsuits that arise from time to time in the ordinary course of our business, including proceedings and claims that relate to companies we have acquired. We will continue to vigorously defend against all claims and lawsuits against us. We currently believe that resolving the claims and lawsuits pending as at June 30, 2023, will neither individually nor in the aggregate have a material adverse effect on our business.

Among the claims and lawsuits are the following classes (for more information about these classes, see the Notes to the Consolidated Financial Statements for 2022, [Note \(G.3\)](#)).

Intellectual Property-Related Litigation and Claims

For individual cases of intellectual property-related litigation and claims disclosed in our Integrated Report 2022, there were no significant developments in the first half of 2023.

The provisions recorded for intellectual property-related litigation and claims continue to be not material. There are also no material contingent liabilities from intellectual property-related litigation and claims for which no provision has been recognized.

Tax-Related Litigation

There have been no significant changes in contingent liabilities from non-income tax-related litigation for which no provision has been recognized compared to our Consolidated Financial Statements for 2022, [Note \(G.3\)](#).

For more information about income tax-related litigation, see [Note \(C.4\)](#).

Anti-Bribery Matters

SAP received communications alleging conduct that may violate anti-bribery laws in the United States (including the U.S. Foreign Corrupt Practices Act (FCPA)) and other countries. Most of the investigations are ongoing and neither the final outcome of the investigations nor the date when substantiated definitive findings will be available is predictable at this point in time. There could be an unfavorable outcome in one or more of the ongoing investigations. Management's current best estimate of possible outcome and financial effect is determined by reasonable judgement based on multiple factors.

As a consequence, as at June 30, 2023, provisions for potential regulatory compliance matters totaling €170 million (December 31, 2022: €0 million) have been recognized in our Consolidated Half-Year Financial Statements.

For more information, see the Notes to the Consolidated Financial Statements for 2022, [Note \(G.3\)](#).

(G.2) Related Party Transactions

Certain Executive Board and Supervisory Board members of SAP SE currently hold or have held positions of significant responsibility with other entities (for more information, see the Notes to the Consolidated Financial Statements for 2022, [Note \(G.4\)](#)). We have relationships with certain of these entities in the ordinary course of business.

On May 11, 2023, the Annual General Meeting of Shareholders elected Punit Renjen to the Supervisory Board, as a successor to Gesche Joost who resigned with effect from that date. As of his election date, Punit Renjen became a related party. He has been designated as the successor to Supervisory Board chairperson Hasso Plattner whose term of office will expire with the Annual General Meeting of Shareholders in 2024.

€ millions	Executive Board Members		Supervisory Board Members		Companies Controlled by Supervisory Board Members		Associated Entities	
	Q1–Q2 2023	Q1–Q2 2022	Q1–Q2 2023	Q1–Q2 2022	Q1–Q2 2023	Q1–Q2 2022	Q1–Q2 2023	Q1–Q2 2022
Products and services provided	NA	NA	0	0	0	1	9	1
Products and services received	NA	NA	1 ¹	1 ¹	2	2	49	37
Sponsoring and other financial support provided	NA	NA	NA	NA	2	3	NA	NA
Outstanding balances on 6/30 (Vendors)	NA	NA	0	1	0	0	–2	–3
Outstanding balances on 6/30 (Customers)	NA	NA	0	0	0	0	1	4
Commitments on 6/30	NA	NA	0	0	48 ²	3	NA	NA

¹ Including services from employee representatives on the Supervisory Board in their capacity as employees of SAP

² The longest of these commitments is five years.

For more information about related party transactions, see the Notes to the Consolidated Financial Statements for 2022, [Note \(G.6\)](#).

(G.3) Events After the Reporting Period

Other than that, no events have occurred since June 30, 2023, that have a material impact on the Company's Consolidated Half-Year Financial Statements.

(G.4) Scope of Consolidation

Entities Consolidated in the Financial Statements

	Total
12/31/2022	288
Additions	0
Disposals	–52
6/30/2023	236

The disposals in the first half of 2023 relate mainly to the sale of SAP's stake in Qualtrics.

For more information about our business combinations and the effect on our Consolidated Financial Statements, see [Note \(D.1\)](#) and our [Integrated Report 2022](#).

(G.5) Updated Cost Allocation Policy

Starting January 1, 2023, all activities related to changes in the code of SAP's cloud and on-premise solutions are treated as development-related activities. Some of those activities, specifically code corrections, were previously considered as support-related activities. SAP believes this update aligns SAP's accounting policy with market standards and increases comparability to its peers.

In the first half of 2023, the update of our cost allocation policy led to an increase in our cloud gross profit by approximately €50 million, an increase in our software license and support gross profit by approximately €130 million, and an increase in our R&D expenses by approximately €180 million.

For the full year 2023, the updated cost allocation policy is expected to decrease our cost of cloud by approximately €100 million and cost of support by approximately €300 million, while in consequence increase our R&D expense by approximately €400 million.

Had SAP applied this accounting policy in 2022, its cost of cloud, cost of software licenses and support, and R&D expense would have been as follows:

€ millions	IFRS					Non-IFRS				
	Q1 2022	Q2 2022	Q3 2022	Q4 2022	FY 2022	Q1 2022	Q2 2022	Q3 2022	Q4 2022	FY 2022
Cost of cloud	-817	-833	-902	-947	-3,499	-798	-806	-873	-915	-3,391
Cost of software	-347	-339	-341	-358	-1,384	-334	-316	-319	-334	-1,302
Research and development	-1,396	-1,514	-1,571	-1,598	-6,080	-1,351	-1,393	-1,437	-1,449	-5,629

Due to rounding, numbers may not add up precisely.

Release of the Consolidated Half-Year Financial Statements

The Executive Board of SAP SE approved these consolidated half-year financial statements on July 19, 2023, for submission to the Audit and Compliance Committee of the Supervisory Board and for subsequent issuance.

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles for half-year financial reporting, the Consolidated Half-Year Financial Statements give a true and fair view of the assets, liabilities, financial position, and profit or loss of the SAP Group, and the Consolidated Half-Year Management Report of the SAP Group includes a fair review of the development and performance of the business and the position of the SAP Group, together with a description of the material opportunities and risks associated with the expected development of the SAP Group for the remaining months of the financial year.

Walldorf, July 19, 2023

SAP SE

Walldorf, Baden

The Executive Board

Christian Klein

Dominik Asam

Sabine Bendiek

Dr. Juergen Mueller

Scott Russell

Thomas Saueressig

Julia White

Supplementary Financial Information

Financial and Non-Financial Key Facts (IFRS and Non-IFRS)

€ millions, unless otherwise stated	Q1 2022	Q2 2022	Q3 2022	Q4 2022	TY 2022	Q1 2023	Q2 2023
Revenues							
Cloud	2,565	2,796	2,986	3,078	11,426	3,178	3,316
% change – yoy	29	32	36	29	31	24	19
% change constant currency – yoy	23	23	23	21	23	22	22
SAP S/4HANA Cloud	404	472	546	660	2,081	716	823
% change – yoy	78	84	98	101	91	77	74
% change constant currency – yoy	71	72	81	90	79	75	79
Software licenses	317	426	406	907	2,056	276	316
% change – yoy	–34	–34	–38	–38	–37	–13	–26
% change constant currency – yoy	–36	–38	–42	–39	–39	–13	–24
Software support	2,923	2,977	3,016	2,993	11,909	2,905	2,873
% change – yoy	4	5	5	3	4	–1	–3
% change constant currency – yoy	1	0	–2	–1	0	–1	–1
Software licenses and support	3,240	3,403	3,422	3,900	13,965	3,180	3,189
% change – yoy	–1	–2	–3	–11	–5	–2	–6
% change constant currency – yoy	–4	–7	–9	–14	–9	–2	–4
Cloud and software	5,806	6,199	6,408	6,978	25,391	6,358	6,505
% change – yoy	10	11	12	3	9	10	5
% change constant currency – yoy	6	4	3	–1	3	8	8
Total revenue	6,773	7,207	7,476	8,064	29,520	7,441	7,554
% change – yoy	10	11	13	5	10	10	5
% change constant currency – yoy	6	5	4	0	4	9	8
Share of more predictable revenue (in %)	81	80	80	75	79	82	82
Profits							
Operating profit (loss) (IFRS)	1,471	1,060	1,557	2,002	6,090	803	1,358
Operating profit (loss) (non-IFRS)	1,676	1,678	2,075	2,560	7,989	1,875	2,058
% change	–3	–12	–1	3	–3	12	23
% change constant currency	–6	–15	–8	1	–7	12	28
Profit (loss) after tax (IFRS)	1,016	613	839	600	3,068	403	724
Profit (loss) after tax (non-IFRS)	1,171	1,098	1,240	1,008	4,517	1,254	1,249
% change	–29	–50	–42	–56	–45	7	14
Margins							
Cloud gross margin (IFRS, in %)	68.2	70.2	69.8	69.2	69.4	70.5	71.1
Cloud gross margin (non-IFRS, in %)	68.9	71.2	70.8	70.3	70.3	71.4	72.2
Software license and support gross margin (IFRS, in %)	89.3	90.1	90.0	90.8	90.1	88.6	90.1
Software license and support gross margin (non-IFRS, in %)	89.7	90.7	90.7	91.4	90.7	89.2	90.5
Cloud and software gross margin (IFRS, in %)	80.0	81.1	80.6	81.3	80.8	79.5	80.3
Cloud and software gross margin (non-IFRS, in %)	80.5	81.9	81.4	82.1	81.5	80.3	81.2
Gross margin (IFRS, in %)	72.2	72.7	72.8	73.4	72.8	71.0	71.6
Gross margin (non-IFRS, in %)	73.1	74.3	74.4	75.1	74.3	72.9	73.8
Operating margin (IFRS, in %)	21.7	14.7	20.8	24.8	20.6	10.8	18.0
Operating margin (non-IFRS, in %)	24.8	23.3	27.8	31.7	27.1	25.2	27.2
ATS segment – Segment gross margin (in %)	72.5	73.7	73.3	74.5	73.5	72.3	73.3
ATS segment – Segment margin in %	28.9	27.6	31.4	35.0	30.9	29.6	32.3
Key Profit Ratios							
Effective tax rate (IFRS, in %)	25.5	34.2	28.3	42.8	32.0	40.5	33.8
Effective tax rate (non-IFRS, in %)	25.4	29.1	26.6	37.2	29.6	28.3	30.4

€ millions, unless otherwise stated	Q1 2022	Q2 2022	Q3 2022	Q4 2022	TY 2022	Q1 2023	Q2 2023
Earnings per share, basic (IFRS, in €) from continuing operations	0.87	0.54	0.75	0.63	2.80	0.35	0.62
Earnings per share, basic (non-IFRS, in €) from continuing operations	1.00	0.95	1.10	0.98	4.03	1.08	1.07
Earnings per share, basic (IFRS, in €) ⁴	0.63	0.29	0.57	0.46	1.95	0.41	2.96
Earnings per share, basic (non-IFRS, in €) ⁴	1.00	0.96	1.12	1.00	4.08	1.27	3.14
Order Entry and current cloud backlog							
Current cloud backlog	8,937	9,543	10,334	11,024	11,024	11,148	11,537
% change – yoy	25	32	36	27	27	25	21
% change constant currency – yoy	21	23	24	24	24	25	25
SAP S/4HANA Current cloud backlog	1,925	2,258	2,662	3,171	3,171	3,418	3,717
% change – yoy	86	100	108	86	86	78	65
% change constant currency – yoy	79	87	90	82	82	79	70
Share of cloud orders greater than €5 million based on total cloud order entry volume (in %) ³	43	49	42	55	50	45	46
Share of cloud orders smaller than €1 million based on total cloud order entry volume (in %) ³	29	25	26	18	23	26	25
Share of on-premise orders greater than €5 million based on total software order entry volume (in %)	40	33	28	29	31	26	22
Share of on-premise orders smaller than €1 million based on total software order entry volume (in %)	33	40	49	37	40	50	50
Liquidity and Cash Flow							
Net cash flows from operating activities	2,465	301	887	2,022	5,675	2,311	848
Capital expenditure	-212	-196	-277	-193	-877	-257	-156
Payments of lease liabilities	-93	-116	-97	-103	-410	-99	-89
Free cash flow	2,159	-10	513	1,726	4,388	1,955	604
% of total revenue	32	0	7	21	15	26	8
% of profit after tax (IFRS)	213	-2	61	288	143	485	83
Group liquidity	11,267	8,236	8,554	9,694	9,694	9,700	14,326
Financial debt (-)	-12,171	-12,282	-12,282	-11,764	-11,764	-10,751	-10,146
Net debt (-)	-904	-4,046	-3,728	-2,070	-2,070	-1,050	4,180
Financial Position⁵							
Cash and cash equivalents	8,927	7,472	7,316	9,008	9,008	8,766	14,142
Goodwill	32,140	33,879	35,664	33,077	33,077	28,563	28,581
Total assets	73,754	72,605	74,840	72,159	72,159	73,533	69,719
Contract liabilities (current)	7,630	6,883	5,487	5,309	5,309	7,547	6,743
Equity ratio (total equity in % of total assets)	58	59	62	59	59	58	61
Non-Financials							
Number of employees (quarter end) ¹	104,670	104,988	106,912	106,312	106,312	105,132	105,328
Employee retention (in %, rolling 12 months)	92.5	92.0	92.2	92.8	92.8	93.8	95.1
Women in management (in %, quarter end)	28.6	28.9	29.2	29.3	29.3	29.4	29.5
Net carbon emissions ² (in kilotons)	20	20	20	20	85	0	0

¹ In full-time equivalents

² In CO₂ equivalents. SAP's carbon emission numbers are rounded to the nearest 5 kt. Therefore, the rounded full-year totals may not precisely equal the sum of the rounded quarterly numbers.

³ To conform to refined calculation logic, prior quarters have been adjusted.

⁴ From continuing and discontinued operations.

⁵ According to IFRS 5, comparison quarters 2022 for our continuing operations is unchanged from what previously has been reported.

Due to rounding, numbers may not add up precisely.

Reconciliation of Non-IFRS Numbers to IFRS Numbers

Reconciliation of Non-IFRS Revenue

€ millions, unless otherwise stated	Q1–Q2 2023			Q1–Q2 2022			Δ in % Non-IFRS Constant Currency ¹
	IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	IFRS		
Revenue Numbers							
Cloud	6,493	39	6,532	5,362	21		22
Software licenses	591	10	601	743	–20		–19
Software support	5,778	54	5,832	5,900	–2		–1
Software licenses and support	6,369	64	6,433	6,643	–4		–3
Cloud and software	12,863	103	12,965	12,005	7		8
Services	2,132	15	2,147	1,974	8		9
Total revenue	14,995	117	15,112	13,980	7		8

¹ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the IFRS numbers of the previous year's respective period.

Due to rounding, numbers may not add up precisely.

Reconciliation of Non-IFRS Operating Expenses

€ millions, unless otherwise stated	Q1–Q2 2023					Q1–Q2 2022					Δ in % Non-IFRS Constant Currency ¹
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Constant Currency	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	
Operating Expense Numbers											
Cost of cloud	–1,897	68	–1,829			–1,650	46	–1,604	15	14	
Cost of software licenses and support	–687	42	–645			–686	36	–650	0	–1	
Cost of cloud and software	–2,584	110	–2,474			–2,336	82	–2,254	11	10	
Cost of services	–1,718	199	–1,519			–1,516	97	–1,420	13	7	
Total cost of revenue	–4,301	309	–3,992			–3,852	179	–3,674	12	9	
Gross profit	10,693	309	11,002			10,127	179	10,306	6	7	
Research and development	–3,138	374	–2,764			–2,910	167	–2,743	8	1	
Sales and marketing	–4,457	734	–3,723			–3,842	310	–3,532	16	5	
General and administration	–670	97	–573			–610	49	–561	10	2	
Restructuring	–257	257	0			–119	119	0	>100	NA	
Other operating income/expense, net	–10	0	–10			–115	0	–115	–91	–91	
Total operating expenses	–12,834	1,772	–11,062	–20	–11,083	–11,449	823	–10,626	12	4	4

¹ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the non-IFRS numbers of the previous year's respective period.

Due to rounding, numbers may not add up precisely.

Reconciliation of Non-IFRS Profit Figures, Income Tax, and Key Ratios

€ millions, unless otherwise stated	Q1–Q2 2023					Q1–Q2 2022			Δ in %		
	IFRS	Adj.	Non-IFRS	Currency Impact	Non-IFRS Consta	IFRS	Adj.	Non-IFRS	IFRS	Non-IFRS	Non-IFRS Consta
Profit Numbers											
Operating profit (loss)	2,161	1,772	3,933	97	4,029	2,531	823	3,354	-15	17	20
Profit (loss) before tax from continuing operations	1,771	1,772	3,543			2,295	823	3,119	-23	14	
Income tax expense	-643	-397	-1,040			-666	-183	-850	-3	22	
Profit (loss) after tax from continuing operations	1,128	1,375	2,502			1,629	640	2,269	-31	10	
Attributable to owners of parent	1,135	1,373	2,508			1,657	638	2,295	-31	9	
Attributable to non-controlling interests	-7	2	-5			-28	2	-26	-74	-80	
Profit (loss) after tax³	3,890	1,156	5,047			835	1,424	2,259	>100	>100	
Attributable to owners of parent ³	3,933	1,220	5,153			1,074	1,232	2,306	>100	>100	
Attributable to non-controlling interests ³	-43	-64	-107			-239	192	-47	-82	>100	
Key Ratios											
Operating margin (in %)	14.4		26.2		26.7	18.1		24.0	-	2.2pp	2.7pp
Effective tax rate (in %)²	36.3		29.4			29.0		27.2	7.3pp	2.1pp	
Earnings per share, basic (in €) from continuing operations	0.97		2.15			1.41		1.96	-31	10	
Earnings per share, basic (in €)³	3.37		4.41			0.92		1.96	>100	>100	

¹ Constant currency period-over-period changes are calculated by comparing the current year's non-IFRS constant currency numbers with the non-IFRS numbers of the previous year's respective period.

² The difference between our effective tax rate (IFRS) and effective tax rate (non-IFRS) in the first half of 2023 mainly resulted from tax effects of share-based payment expenses and restructuring expenses. The difference between our effective tax rate (IFRS) and effective tax rate (non-IFRS) in the first half of 2022 mainly resulted from tax effects of share-based payment expenses and acquisition-related charges.

³ From continuing and discontinued operations

Due to rounding, numbers may not add up precisely.

Non-IFRS Adjustments Actuals and Estimates

€ millions	Estimated Amounts for Full Year 2023	Q1–Q2 2023	Q1–Q2 2022
Operating profit (loss) (IFRS)		2,161	2,531
Adjustment for acquisition-related charges	300–380	177	191
Adjustment for share-based payment expenses	1,850–2,250	1,167	513
Adjustment for restructuring	250–300	257	119
Adjustment for regulatory compliance matter expenses	170	170	-
Operating expense adjustments		1,772	823
Operating profit (loss) (non-IFRS)		3,933	3,354

Non-IFRS-Adjustments by Functional Areas

€ millions	Q1–Q2 2023						Q1–Q2 2022					
	IFRS	Acqui- sition- related	SBP ¹	Restruc- turing	RCM ²	Non- IFRS	IFRS	Acqui- sition- related	SBP ¹	Restruc- turing	RCM ²	Non- IFRS
Cost of cloud	-1,897	21	47	0	0	-1,829	-1,650	27	19	0	-	-1,604
Cost of software licenses and support	-687	22	20	0	0	-645	-686	15	21	0	-	-650
Cost of services	-1,718	0	198	0	0	-1,519	-1,516	0	96	0	-	-1,420
Research and development	-3,138	4	371	0	0	-2,764	-2,910	5	162	0	-	-2,743
Sales and marketing	-4,457	129	435	0	170	-3,723	-3,842	139	171	0	-	-3,532
General and administration	-670	1	96	0	0	-573	-610	6	43	0	-	-561
Restructuring	-257	0	0	257	0	0	-119	0	0	119	-	0
Other operating income/expense, net	-10	0	0	0	0	-10	-115	0	0	0	-	-115
Total operating expenses	-12,834	177	1,167	257	170	-11,062	-11,449	191	513	119	-	-10,626

¹ Share-based payments

² Regulatory Compliance Matters

Due to rounding, numbers may not add up precisely.

Reconciliation of Non-IFRS Profit After Tax for Discontinued Operations

€ billion, unless otherwise stated	Q1–Q2 2023	Q1–Q2 2022
Profit (loss) after tax (IFRS) from discontinued operations	2.8	-0.8
Adjustment for acquisition related charges	-0.8	0.1
Adjustment for share-based payment expenses	0.4	0.7
Adjustment for restructuring expenses	0.0	0.0
Adjustment for tax impact of non-IFRS adjustments	0.2	-0.0
Profit (loss) after tax (non-IFRS) from discontinued operations	2.5	-0.0
Attributable to owners of parent	2.6	0.0

Due to rounding, numbers may not add up precisely.

Revenue by Region (IFRS and Non-IFRS)

€ millions	Q1–Q2 2023			Q1–Q2 2022		Δ in %	
	Actual Currency	Currency Impact	Constant Currency	Actual Currency	Actual Currency	Constant Currency ¹	
Cloud Revenue by Region							
EMEA	2,458	16	2,474	1,966	25	26	
Americas	3,194	–19	3,176	2,695	19	18	
APJ	841	42	883	701	20	26	
Cloud revenue	6,493	39	6,532	5,362	21	22	
Cloud and Software Revenue by Region							
EMEA	5,660	39	5,699	5,285	7	8	
Americas	5,283	–33	5,250	4,866	9	8	
APJ	1,919	97	2,016	1,853	4	9	
Cloud and software revenue	12,863	103	12,965	12,005	7	8	
Total Revenue by Region							
Germany	2,283	–1	2,282	2,114	8	8	
Rest of EMEA	4,338	45	4,383	4,049	7	8	
Total EMEA	6,621	44	6,666	6,163	7	8	
United States	4,974	–47	4,927	4,566	9	8	
Rest of Americas	1,233	9	1,242	1,136	9	9	
Total Americas	6,207	–38	6,169	5,702	9	8	
Japan	616	52	668	602	2	11	
Rest of APJ	1,550	59	1,609	1,513	2	6	
Total APJ	2,166	111	2,277	2,115	2	8	
Total revenue	14,995	117	15,112	13,980	7	8	

¹ Constant-currency period-over-period changes are calculated by comparing the current year's non-IFRS constant-currency numbers with the non-IFRS number of the previous year's respective period.

Due to rounding, numbers may not add up precisely.

General Information

Forward-Looking Statements

This half-year report contains forward-looking statements and information based on the beliefs of, and assumptions made by, our management using information currently available to them. Any statements contained in this report that are not historical facts are forward-looking statements as defined in the U.S. Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements on our current expectations, assumptions, and projections about future conditions and events. As a result, our forward-looking statements and information are subject to uncertainties and risks, many of which are beyond our control. If one or more of these uncertainties or risks materializes, or if management's underlying assumptions prove incorrect, our actual results could differ materially from those described in or inferred from our forward-looking statements and information. We describe these risks and uncertainties in the *Risk Management and Risks* section, respectively in the there-mentioned sources.

The words "aim," "anticipate," "assume," "believe," "continue," "could," "counting on," "is confident," "development," "estimate," "expect," "forecast," "future trends," "guidance," "intend," "may," "might," "outlook," "plan," "project," "predict," "seek," "should," "strategy," "want," "will," "would," and similar expressions as they relate to us are intended to identify such forward-looking statements. Such statements include, for example, those made in the *Performance Against Our Outlook 2023* section, the *Risk Management and Risks* section (including but not limited to statements in this section pertaining to the Russia/Ukraine crisis or cyber incidents), the *Expected Developments and Opportunities* section, and other forward-looking information appearing in other parts of this half-year financial report. To fully consider the factors that could affect our future financial results, both our Integrated Report 2022 and our Annual Report on Form 20-F for 2022, should be considered, as well as all of our other filings with the Securities and Exchange Commission (SEC). In addition, any delays in our structured exit from Russia and Belarus, or further adverse developments in Russia's war against Ukraine, or cybersecurity or related incidents (for example, initiated by malware) impacting SAP could cause our actual results and performance to differ materially from any projections expressed in or implied by our forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as at the date specified or the date of this report. We undertake no obligation to publicly update or revise any forward-looking statements as a result of new information that we receive about conditions that existed upon issuance of this report, future events, or otherwise unless we are required to do so by law.

This report includes statistical data about the IT industry and global economic trends that comes from information published by sources including IDC, the ECB, and the IMF. This type of data represents only the estimates of IDC, ECB, IMF, and other sources of industry data. SAP does not adopt or endorse any of the statistical information provided by sources such as IDC, ECB, IMF, or other similar sources that is contained in this report. The data from these sources is subject to risks and uncertainties, and subject to change based on various factors, including those described above, in the *Risk Management and Risks* section, and elsewhere in this report. These and other factors could cause our results to differ materially from those expressed in the estimates made by third parties and SAP. We caution readers not to place undue reliance on this data.

All of the information in this report relates to the situation as at June 30, 2023, or the half year ended on that date unless otherwise stated.

Non-IFRS Financial Information

This half-year report contains non-IFRS measures as well as financial data prepared in accordance with IFRS. We present and discuss the reconciliation of these non-IFRS measures to the respective IFRS measures in the *Supplementary Financial Information* section. For more information about non-IFRS measures, see our Web site <http://www.sap.com/investors/sap-non-ifrs-measures>.

Additional Information

Financial Calendar

October 19, 2023

Third-quarter 2023 earnings release, conference call for financial analysts and investors

January 24, 2024

Fourth-quarter and full-year 2023 preliminary earnings release, conference call for financial analysts and investors

May 15, 2024

Annual General Meeting of Shareholders, Mannheim, Germany

Investor Services

Additional information about this half-year report is available online at www.sap.com/investors, including the official quarterly statement, a presentation about the quarterly results, and a recording of the conference call for financial analysts.

The "Financial Reports" tab contains the following publications:

- SAP Integrated Report (IFRS, PDF, www.sapintegratedreport.com)
- SAP Annual Report on Form 20-F (IFRS, PDF)
- SAP SE Statutory Financial Statements and Review of Operations (HGB, German only, PDF)
- Half-Year Report (IFRS, PDF)
- Quarterly Statements (IFRS, PDF)

www.sap.com/investors is also the place to look for in-depth information about stock, debt, and corporate governance; financial and event news; and various services designed to help investors find the information they need fast (see "Investor Services"). These include our free SAP INVESTOR magazine for shareholders, an e-mail and text message news service, and a Twitter feed.

For sustainability reasons and faster distribution, SAP decided to refrain from printing reports.

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