

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended June 30, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Transition Period From to

Commission File Number 001-37845

MICROSOFT CORPORATION

WASHINGTON
(STATE OF INCORPORATION)

91-1144442
(I.R.S. ID)

ONE MICROSOFT WAY, REDMOND, WASHINGTON 98052-6399
(425) 882-8080
www.microsoft.com/investor

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common stock, \$0.00000625 par value per share	MSFT	NASDAQ
3.125% Notes due 2028	MSFT	NASDAQ
2.625% Notes due 2033	MSFT	NASDAQ

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☒

Accelerated Filer ☐

Non-accelerated Filer ☐

Smaller Reporting Company ☐

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of December 31, 2022, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$1.8 trillion based on the closing sale price as reported on the NASDAQ National Market System. As of July 24, 2023, there were 7,429,763,722 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on December 7, 2023 are incorporated by reference into Part III.

MICROSOFT CORPORATION
FORM 10-K
For the Fiscal Year Ended June 30, 2023
INDEX

	<u>Page</u>
PART I	
Item 1. <u>Business</u>	4
<u>Information about our Executive Officers</u>	20
Item 1A. <u>Risk Factors</u>	23
Item 1B. <u>Unresolved Staff Comments</u>	37
Item 2. <u>Properties</u>	37
Item 3. <u>Legal Proceedings</u>	37
Item 4. <u>Mine Safety Disclosures</u>	37
PART II	
Item 5. <u>Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities</u>	38
Item 6. <u>[Reserved]</u>	39
Item 7. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	40
Item 7A. <u>Quantitative and Qualitative Disclosures about Market Risk</u>	57
Item 8. <u>Financial Statements and Supplementary Data</u>	58
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	99
Item 9A. <u>Controls and Procedures</u>	99
<u>Report of Management on Internal Control over Financial Reporting</u>	99
<u>Report of Independent Registered Public Accounting Firm</u>	100
Item 9B. <u>Other Information</u>	101
Item 9C. <u>Disclosure Regarding Foreign Jurisdictions that Prevent Inspections</u>	101
PART III	
Item 10. <u>Directors, Executive Officers, and Corporate Governance</u>	101
Item 11. <u>Executive Compensation</u>	101
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	101
Item 13. <u>Certain Relationships and Related Transactions, and Director Independence</u>	101
Item 14. <u>Principal Accountant Fees and Services</u>	101
PART IV	
Item 15. <u>Exhibit and Financial Statement Schedules</u>	102
Item 16. <u>Form 10-K Summary</u>	108
<u>Signatures</u>	109

Note About Forward-Looking Statements

This report includes estimates, projections, statements relating to our business plans, objectives, and expected operating results that are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements may appear throughout this report, including the following sections: “Business” (Part I, Item 1 of this Form 10-K), “Risk Factors” (Part I, Item 1A of this Form 10-K), and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” (Part II, Item 7 of this Form 10-K). These forward-looking statements generally are identified by the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “strategy,” “future,” “opportunity,” “plan,” “may,” “should,” “will,” “would,” “will be,” “will continue,” “will likely result,” and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties that may cause actual results to differ materially. We describe risks and uncertainties that could cause actual results and events to differ materially in “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Quantitative and Qualitative Disclosures about Market Risk” (Part II, Item 7A of this Form 10-K). Readers are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made. We undertake no obligation to update or revise publicly any forward-looking statements, whether because of new information, future events, or otherwise.

PART I

ITEM 1. BUSINESS

GENERAL

Embracing Our Future

Microsoft is a technology company whose mission is to empower every person and every organization on the planet to achieve more. We strive to create local opportunity, growth, and impact in every country around the world. We are creating the platforms and tools, powered by artificial intelligence ("AI"), that deliver better, faster, and more effective solutions to support small and large business competitiveness, improve educational and health outcomes, grow public-sector efficiency, and empower human ingenuity. From infrastructure and data, to business applications and collaboration, we provide unique, differentiated value to customers.

In a world of increasing economic complexity, AI has the power to revolutionize many types of work. Microsoft is now innovating and expanding our portfolio with AI capabilities to help people and organizations overcome today's challenges and emerge stronger. Customers are looking to unlock value from their digital spend and innovate for this next generation of AI, while simplifying security and management. Those leveraging the Microsoft Cloud are best positioned to take advantage of technological advancements and drive innovation. Our investment in AI spans the entire company, from Microsoft Teams and Outlook, to Bing and Xbox, and we are infusing generative AI capability into our consumer and commercial offerings to deliver copilot capability for all services across the Microsoft Cloud.

We're committed to making the promise of AI real – and doing it responsibly. Our work is guided by a core set of principles: fairness, reliability and safety, privacy and security, inclusiveness, transparency, and accountability.

What We Offer

Founded in 1975, we develop and support software, services, devices, and solutions that deliver new value for customers and help people and businesses realize their full potential.

We offer an array of services, including cloud-based solutions that provide customers with software, services, platforms, and content, and we provide solution support and consulting services. We also deliver relevant online advertising to a global audience.

Our products include operating systems, cross-device productivity and collaboration applications, server applications, business solution applications, desktop and server management tools, software development tools, and video games. We also design and sell devices, including PCs, tablets, gaming and entertainment consoles, other intelligent devices, and related accessories.

The Ambitions That Drive Us

To achieve our vision, our research and development efforts focus on three interconnected ambitions:

- Reinvent productivity and business processes.
- Build the intelligent cloud and intelligent edge platform.
- Create more personal computing.

Reinvent Productivity and Business Processes

At Microsoft, we provide technology and resources to help our customers create a secure, productive work environment. Our family of products plays a key role in the ways the world works, learns, and connects.

Our growth depends on securely delivering continuous innovation and advancing our leading productivity and collaboration tools and services, including Office 365, Dynamics 365, and LinkedIn. Microsoft 365 brings together Office 365, Windows, and Enterprise Mobility + Security to help organizations empower their employees with AI-backed tools that unlock creativity, increase collaboration, and fuel innovation, all the while enabling compliance coverage and data protection. Microsoft Teams is a comprehensive platform for work, with meetings, calls, chat, collaboration, and business process automation. Microsoft Viva is an employee experience platform that brings together communications, knowledge, learning, resources, and insights. Microsoft 365 Copilot combines next-generation AI with business data in the Microsoft Graph and Microsoft 365 applications.

Together with the Microsoft Cloud, Dynamics 365, Microsoft Teams, and our AI offerings bring a new era of collaborative applications that optimize business functions, processes, and applications to better serve customers and employees while creating more business value. Microsoft Power Platform is helping domain experts drive productivity gains with low-code/no-code tools, robotic process automation, virtual agents, and business intelligence. In a dynamic labor market, LinkedIn is helping professionals use the platform to connect, learn, grow, and get hired.

Build the Intelligent Cloud and Intelligent Edge Platform

As digital transformation and adoption of AI accelerates and revolutionizes more business workstreams, organizations in every sector across the globe can address challenges that will have a fundamental impact on their success. For enterprises, digital technology empowers employees, optimizes operations, engages customers, and in some cases, changes the very core of products and services. We continue to invest in high performance and sustainable computing to meet the growing demand for fast access to Microsoft services provided by our network of cloud computing infrastructure and datacenters.

Our cloud business benefits from three economies of scale: datacenters that deploy computational resources at significantly lower cost per unit than smaller ones; datacenters that coordinate and aggregate diverse customer, geographic, and application demand patterns, improving the utilization of computing, storage, and network resources; and multi-tenancy locations that lower application maintenance labor costs.

The Microsoft Cloud provides the best integration across the technology stack while offering openness, improving time to value, reducing costs, and increasing agility. Being a global-scale cloud, Azure uniquely offers hybrid consistency, developer productivity, AI capabilities, and trusted security and compliance. We see more emerging use cases and needs for compute and security at the edge and are accelerating our innovation across the spectrum of intelligent edge devices, from Internet of Things ("IoT") sensors to gateway devices and edge hardware to build, manage, and secure edge workloads.

Our AI platform, Azure AI, is helping organizations transform, bringing intelligence and insights to the hands of their employees and customers to solve their most pressing challenges. Organizations large and small are deploying Azure AI solutions to achieve more at scale, more easily, with the proper enterprise-level and responsible AI protections.

We have a long-term partnership with OpenAI, a leading AI research and deployment company. We deploy OpenAI's models across our consumer and enterprise products. As OpenAI's exclusive cloud provider, Azure powers all of OpenAI's workloads. We have also increased our investments in the development and deployment of specialized supercomputing systems to accelerate OpenAI's research.

Our hybrid infrastructure offers integrated, end-to-end security, compliance, identity, and management capabilities to support the real-world needs and evolving regulatory requirements of commercial customers and enterprises. Our industry clouds bring together capabilities across the entire Microsoft Cloud, along with industry-specific customizations. Azure Arc simplifies governance and management by delivering a consistent multi-cloud and on-premises management platform.

Nuance, a leader in conversational AI and ambient intelligence across industries including healthcare, financial services, retail, and telecommunications, joined Microsoft in 2022. Microsoft and Nuance enable organizations to accelerate their business goals with security-focused, cloud-based solutions infused with AI.

We are accelerating our development of mixed reality solutions with new Azure services and devices. Microsoft Mesh enables organizations to create custom, immersive experiences for the workplace to help bring remote and hybrid workers and teams together.

The ability to convert data into AI drives our competitive advantage. The Microsoft Intelligent Data Platform is a leading cloud data platform that fully integrates databases, analytics, and governance. The platform empowers organizations to invest more time creating value rather than integrating and managing their data. Microsoft Fabric is an end-to-end, unified analytics platform that brings together all the data and analytics tools that organizations need.

GitHub Copilot is at the forefront of AI-powered software development, giving developers a new tool to write code easier and faster so they can focus on more creative problem-solving. From GitHub to Visual Studio, we provide a developer tool chain for everyone, no matter the technical experience, across all platforms, whether Azure, Windows, or any other cloud or client platform.

Windows also plays a critical role in fueling our cloud business with Windows 365, a desktop operating system that's also a cloud service. From another internet-connected device, including Android or macOS devices, users can run Windows 365, just like a virtual machine.

Additionally, we are extending our infrastructure beyond the planet, bringing cloud computing to space. Azure Orbital is a fully managed ground station as a service for fast downlinking of data.

Create More Personal Computing

We strive to make computing more personal, enabling users to interact with technology in more intuitive, engaging, and dynamic ways.

Windows 11 offers innovations focused on enhancing productivity, including Windows Copilot with centralized AI assistance and Dev Home to help developers become more productive. Windows 11 security and privacy features include operating system security, application security, and user and identity security.

Through our Search, News, Mapping, and Browser services, Microsoft delivers unique trust, privacy, and safety features. In February 2023, we launched an all new, AI-powered Microsoft Edge browser and Bing search engine with Bing Chat to deliver better search, more complete answers, and the ability to generate content. Microsoft Edge is our fast and secure browser that helps protect users' data. Quick access to AI-powered tools, apps, and more within Microsoft Edge's sidebar enhance browsing capabilities.

We are committed to designing and marketing first-party devices to help drive innovation, create new device categories, and stimulate demand in the Windows ecosystem. The Surface family includes Surface Pro, Surface Laptop, and other Surface products.

Microsoft continues to invest in gaming content, community, and cloud services. We have broadened our approach to how we think about gaming end-to-end, from the way games are created and distributed to how they are played, including subscription services like Xbox Game Pass and new devices from third-party manufacturers so players can engage across PC, console, and mobile. In January 2022, we announced plans to acquire Activision Blizzard, Inc., a leader in game development and an interactive entertainment content publisher.

Our Future Opportunity

We are focused on helping customers use the breadth and depth of the Microsoft Cloud to get the most value out of their digital spend while leading the new AI wave across our solution areas. We continue to develop complete, intelligent solutions for our customers that empower people to be productive and collaborate, while safeguarding businesses and simplifying IT management. Our goal is to lead the industry in several distinct areas of technology over the long term, which we expect will translate to sustained growth. We are investing significant resources in:

- Transforming the workplace to deliver new modern, modular business applications, drive deeper insights, and improve how people communicate, collaborate, learn, work, and interact with one another.
- Building and running cloud-based services in ways that utilize ubiquitous computing to unleash new experiences and opportunities for businesses and individuals.
- Applying AI and ambient intelligence to drive insights, revolutionize many types of work, and provide substantive productivity gains using natural methods of communication.

- Tackling security from all angles with our integrated, end-to-end solutions spanning security, compliance, identity, and management, across all clouds and platforms.
- Inventing new gaming experiences that bring people together around their shared love for games on any devices and pushing the boundaries of innovation with console and PC gaming.
- Using Windows to fuel our cloud business, grow our share of the PC market, and drive increased engagement with our services like Microsoft 365 Consumer, Microsoft Teams, Microsoft Edge, Bing, Xbox Game Pass, and more.

Our future growth depends on our ability to transcend current product category definitions, business models, and sales motions.

Corporate Social Responsibility

Commitment to Sustainability

Microsoft's approach to addressing climate change starts with the sustainability of our own business. In 2020, we committed to being a carbon negative, water positive, and zero waste company by 2030.

In May 2023, we released our Environmental Sustainability Report which looked back at our progress during fiscal year 2022. We continued to make progress on our goals, with our overall emissions declining by 0.5 percent. While our Scope 1 and Scope 2 emissions continued to decline, Scope 3 emissions increased by 0.5 percent. Scope 3 represented 96 percent of our total emissions, resulting primarily from the operations of our suppliers and the use of our products across our customers.

A few examples of our continued progress include:

- Signed new power purchase agreements, bringing our total portfolio of carbon-free energy to over 13.5 gigawatts.
- Contracted for water replenishment projects that are estimated to provide more than 15.6 million cubic meters in volumetric water benefit over the lifetime of these projects.
- Diverted 12,159 metric tons of solid waste from landfills and incinerators across our direct operational footprint.
- Protected 12,270 acres of land in Belize – more than the 11,206 acres of land that we use around the world.

Microsoft has a role to play in developing and advancing new climate solutions, but we recognize that no solution can be offered by any single company, organization, or government. Our approach helps to support the sustainability needs of our customers and the global community. Our Microsoft Cloud for Sustainability, an environmental sustainability management platform that includes Microsoft Sustainability Manager, enables organizations to record, report, and reduce their Scope 1, 2, and 3 emissions. These digital tools can interoperate with business systems and unify data intelligence for organizations.

Addressing Racial Injustice and Inequity

We are committed to addressing racial injustice and inequity in the United States for Black and African American communities and helping improve lived experiences at Microsoft, in employees' communities, and beyond. Our Racial Equity Initiative focuses on three multi-year pillars, each containing actions and progress we expect to make or exceed by 2025.

- Strengthening our communities: using data, technology, and partnerships to help improve the lives of Black and African American people in the United States, including our employees and their communities.
- Engaging our ecosystem: using our balance sheet and relationships with suppliers and partners to foster societal change and create new opportunities.
- Increasing representation and strengthening inclusion: building on our momentum by adding a \$150 million investment to strengthen inclusion and double the number of Black, African American, Hispanic, and Latinx leaders in the United States by 2025.

In fiscal year 2023, we collaborated with partners and worked within neighborhoods and communities to launch and scale a number of projects and programs, including:

- Working with 103 unique organizations in 165 cities and counties on our Justice Reform Initiative to empower communities and advance racial equity and fairness in the justice system.
- Increasing access to affordable broadband, devices, and digital literacy training across 14 geographies, including 11 cities and three states in the Black Rural south.
- Growing our Nonprofit Tech Acceleration for Black and African American Communities program, which uses data, technology, and partnerships to help more than 2,000 local organizations to modernize and streamline operations.
- Expanding our Technology Education and Learning Support (“TEALS”) program to reach nearly 400 high schools in 21 communities to increase computer science opportunities for Black and African American students.

We exceeded our 2020 goal to double the percentage of our transaction volumes with Black- and African American-owned financial institutions by 2023. We are also increasing investment activity with Black- and African American-owned asset managers, which now represent 45 percent of our external manager group, enabling increased funds into local communities. We also met our goal of creating a \$100 million program focused on mission-driven banks. We enriched our supplier pipeline, achieving our goal to spend \$500 million with double the number of Black- and African American-owned suppliers. We also increased the number of identified partners in the Black Partner Growth Initiative by more than 250 percent, surpassing our initial goal.

We have made meaningful progress on representation and inclusion at Microsoft. As of June 2023, we are 93 percent of the way to our 2025 commitment to double the number of Black and African American people managers in the U.S. (below director level), and 107 percent of the way for Black and African American directors (people managers and individual contributors). We are 28 percent of the way for Hispanic and Latinx people managers (below director level) and 74 percent of the way for Hispanic and Latinx directors.

Investing in Digital Skills

After helping over 80 million jobseekers around the world access digital skilling resources, we introduced a new Skills for Jobs initiative to support a more skills-based labor market, with greater flexibility and accessible learning paths to develop the right skills needed for the most in-demand jobs. Our Skills for Jobs initiative brings together learning resources, certification opportunities, and job-seeker tools from LinkedIn, GitHub, and Microsoft Learn, and is built on data insights drawn from LinkedIn’s Economic Graph.

We also launched a national campaign to help skill and recruit 250,000 people into the cybersecurity workforce by 2025, representing half of the country’s workforce shortage. To that end, we are making curriculum available free of charge to all of the nation’s higher education institutions, providing training for new and existing faculty, and providing scholarships and supplemental resources to 25,000 students. We have expanded the cyber skills initiative to 27 additional countries that show elevated cyberthreat risks coupled with significant gaps in their cybersecurity workforces, partnering with nonprofits and other educational institutions to train the next generation of cybersecurity workers.

Generative AI is creating unparalleled opportunities to empower workers globally, but only if everyone has the skills to use it. To address this, in June 2023 we launched a new AI Skills Initiative to help everyone learn how to harness the power of AI. This includes a new LinkedIn learning pathway offering new coursework on learning the foundations of generative AI. We also launched a new global grant challenge to uncover new ways of training workers on generative AI and are providing greater access to digital learning events and resources for everyone to improve their AI fluency.

HUMAN CAPITAL RESOURCES

Overview

Microsoft aims to recruit, develop, and retain world-changing talent from a diversity of backgrounds. To foster their and our success, we seek to create an environment where people can thrive and do their best work. We strive to maximize the potential of our human capital resources by creating a respectful, rewarding, and inclusive work environment that enables our global employees to create products and services that further our mission.

As of June 30, 2023, we employed approximately 221,000 people on a full-time basis, 120,000 in the U.S. and 101,000 internationally. Of the total employed people, 89,000 were in operations, including manufacturing, distribution, product support, and consulting services; 72,000 were in product research and development; 45,000 were in sales and marketing; and 15,000 were in general and administration. Certain employees are subject to collective bargaining agreements.

Our Culture

Microsoft's culture is grounded in growth mindset. This means everyone is on a continuous journey to learn and grow, operating as one company instead of multiple siloed businesses.

Our employee listening systems enable us to gather feedback directly from our workforce to inform our programs and employee needs globally. Employees participate in our Employee Signals surveys, which cover a variety of topics such as thriving, inclusion, team culture, wellbeing, and learning and development. We also collect Daily Signals employee survey responses, giving us real-time insights into ways we can support our employees. In addition to Employee Signals and Daily Signals surveys, we gain insights through onboarding, exit surveys, internal Viva Engage channels, employee Q&A sessions, and our internal AskHR Service support.

Diversity and inclusion are core to our business model, and we hold ourselves accountable for driving global systemic change in our workforce and creating an inclusive work environment. We support multiple highly active Employee Resource Groups for women, families, racial and ethnic minorities, military, people with disabilities, and employees who identify as LGBTQIA+, where employees can go for support, networking, and community-building. As described in our 2022 Proxy Statement, annual performance and compensation reviews of our senior leadership team include an evaluation of their contributions to employee culture and diversity. To ensure accountability over time, we publicly disclose our progress on a multitude of workforce metrics including:

- Detailed breakdowns of gender, racial, and ethnic minority representation in our employee population, with data by job types, levels, and segments of our business.
- Our EEO-1 report (equal employment opportunity).
- Disability representation.
- Pay equity (see details below).

Total Rewards and Pay Equity

We develop dynamic, sustainable, market-driven, and strategic programs with the goal of providing a highly differentiated portfolio to attract, reward, and retain top talent and enable our employees to thrive. These programs reinforce our culture and values such as collaboration and growth mindset. Managers evaluate and recommend rewards based on, for example, how well we leverage the work of others and contribute to the success of our colleagues. We monitor pay equity and career progress across multiple dimensions. Our total compensation opportunity is highly differentiated and is market competitive.

In order to manage our costs in a dynamic, competitive environment, in fiscal year 2023 we announced that base salaries of salaried employees would remain at fiscal year 2022 levels. Pay increases continue to be available for rewards-eligible hourly and equivalent employees. We will continue our practice of investing in stock for all rewards-eligible employees, salaried and hourly, and investing in bonuses for all eligible employees.

Since 2016, we have reported on pay equity as part of our annual Diversity and Inclusion report. In 2022, we reported that all racial and ethnic minority employees in the U.S. combined earn \$1.008 for every \$1.000 earned by their white counterparts, that women in the U.S. earn \$1.007 for every \$1.000 earned by their counterparts who are men, and that women outside the U.S. earn \$1.002 for every \$1.000 earned by their counterparts outside the U.S. who are men. In this year's report, we again expanded our pay equity data beyond the U.S. to report on 61 additional countries (up from 12 last year), representing 99.8% of our global Microsoft workforce.

In addition, we began reporting on unadjusted median pay in our annual report, comparing total pay amounts for all employees regardless of factors such as job title, level, or tenure. For employees who are eligible for rewards, the analysis showed that total pay for women is 89.6% of total pay for men in the U.S. and 86.2% outside of the U.S., and total pay for racial and ethnic minorities in the U.S. is 89.9% of total pay for white employees. As we continue to increase representation for women and racial and ethnic minorities at more senior levels, and continue to ensure pay equity for all, the gap between the medians will reduce.

Our intended result is a global performance and development approach that fosters our culture, and competitive compensation that ensures equitable pay by role while supporting pay for performance.

Wellbeing and Hybrid Work

Microsoft is committed to supporting our employees' wellbeing while they are at work and in their personal lives. We have invested significantly in wellbeing, and offer a differentiated benefits package which includes many physical, emotional, and financial wellness programs including counseling through the Microsoft CARES Employee Assistance Program, mental wellbeing support, flexible fitness benefits, disability accommodations, savings and investment tools, adoption assistance, and back-up care for children and elders. Finally, our Occupational Health and Safety program helps ensure employees can stay safe while they are working.

We introduced Hybrid Workplace Flexibility Guidance to better support leaders, managers, and employees in hybrid work scenarios. Our ongoing survey data shows that 93% of employees value the flexibility related to work location, work site, and work hours, and 78% are satisfied with the quality of connection with co-workers. There is no one-size-fits-all approach to flexible work at Microsoft. As a company, we will continue to leverage data and research to inform decision making, balancing the needs of business, team, and individual.

Learning and Development

We offer a range of learning opportunities, including personalized opportunities on our internal and external learning portals, in-classroom learning, required learning on compliance and company culture, on-the-job advancement opportunities, and manager coaching. We also provide customized manager learning, new employee orientation, and tools for operating in a flexible hybrid work environment.

All Microsoft employees globally access our single Viva Learning tool for both required and personal choice learning. This includes courses focused on our core principles and compliance matters, such as Business Conduct, Privacy, Security Foundations, and Harassment Prevention. We also deliver skills training for employees based on their profession and role discipline.

We have over 27,000 people managers, all of whom must complete between 20-33 hours of compulsory training on leadership and management and are assigned additional targeted training on an ongoing basis related to people management, compliance, and culture.

OPERATING SEGMENTS

We operate our business and report our financial performance using three segments: Productivity and Business Processes, Intelligent Cloud, and More Personal Computing. Our segments provide management with a comprehensive financial view of our key businesses. The segments enable the alignment of strategies and objectives across the development, sales, marketing, and services organizations, and they provide a framework for timely and rational allocation of resources within businesses.

Additional information on our operating segments and geographic and product information is contained in Note 19 – Segment Information and Geographic Data of the Notes to Financial Statements (Part II, Item 8 of this Form 10-K).

Our reportable segments are described below.

Productivity and Business Processes

Our Productivity and Business Processes segment consists of products and services in our portfolio of productivity, communication, and information services, spanning a variety of devices and platforms. This segment primarily comprises:

- Office Commercial (Office 365 subscriptions, the Office 365 portion of Microsoft 365 Commercial subscriptions, and Office licensed on-premises), comprising Office, Exchange, SharePoint, Microsoft Teams, Office 365 Security and Compliance, Microsoft Viva, and Microsoft 365 Copilot.
- Office Consumer, including Microsoft 365 Consumer subscriptions, Office licensed on-premises, and other Office services.
- LinkedIn, including Talent Solutions, Marketing Solutions, Premium Subscriptions, and Sales Solutions.
- Dynamics business solutions, including Dynamics 365, comprising a set of intelligent, cloud-based applications across ERP, CRM (including Customer Insights), Power Apps, and Power Automate; and on-premises ERP and CRM applications.

Office Commercial

Office Commercial is designed to increase personal, team, and organizational productivity through a range of products and services. Growth depends on our ability to reach new users in new markets such as frontline workers, small and medium businesses, and growth markets, as well as add value to our core product and service offerings to span productivity categories such as communication, collaboration, analytics, security, and compliance. Office Commercial revenue is mainly affected by a combination of continued installed base growth and average revenue per user expansion, as well as the continued shift from Office licensed on-premises to Office 365.

Office Consumer

Office Consumer is designed to increase personal productivity and creativity through a range of products and services. Growth depends on our ability to reach new users, add value to our core product set, and continue to expand our product and service offerings into new markets. Office Consumer revenue is mainly affected by the percentage of customers that buy Office with their new devices and the continued shift from Office licensed on-premises to Microsoft 365 Consumer subscriptions. Office Consumer Services revenue is mainly affected by the demand for communication and storage through Skype, Outlook.com, and OneDrive, which is largely driven by subscriptions, advertising, and the sale of minutes.

LinkedIn

LinkedIn connects the world's professionals to make them more productive and successful and transforms the way companies hire, market, sell, and learn. Our vision is to create economic opportunity for every member of the global workforce through the ongoing development of the world's first Economic Graph, a digital representation of the global economy. In addition to LinkedIn's free services, LinkedIn offers monetized solutions: Talent Solutions, Marketing Solutions, Premium Subscriptions, and Sales Solutions. Talent Solutions provide insights for workforce planning and tools to hire, nurture, and develop talent. Talent Solutions also includes Learning Solutions, which help businesses close critical skills gaps in times where companies are having to do more with existing talent. Marketing Solutions help companies reach, engage, and convert their audiences at scale. Premium Subscriptions enable professionals to manage their professional identity, grow their network, find jobs, and connect with talent through additional services like premium search. Sales Solutions help companies strengthen customer relationships, empower teams with digital selling tools, and acquire new opportunities. LinkedIn has over 950 million members and has offices around the globe. Growth will depend on our ability to increase the number of LinkedIn members and our ability to continue offering services that provide value for our members and increase their engagement. LinkedIn revenue is mainly affected by demand from enterprises and professional organizations for subscriptions to Talent Solutions, Sales Solutions, and Premium Subscriptions offerings, as well as member engagement and the quality of the sponsored content delivered to those members to drive Marketing Solutions.

Dynamics

Dynamics provides cloud-based and on-premises business solutions for financial management, enterprise resource planning ("ERP"), customer relationship management ("CRM"), supply chain management, and other application development platforms for small and medium businesses, large organizations, and divisions of global enterprises. Dynamics revenue is driven by the number of users licensed and applications consumed, expansion of average revenue per user, and the continued shift to Dynamics 365, a unified set of cloud-based intelligent business applications, including Power Apps and Power Automate.

Competition

Competitors to Office include software and global application vendors, such as Apple, Cisco Systems, Meta, Google, Okta, Proofpoint, Slack, Symantec, Zoom, and numerous web-based and mobile application competitors as well as local application developers. Apple distributes versions of its pre-installed application software, such as email and calendar products, through its PCs, tablets, and phones. Cisco Systems is using its position in enterprise communications equipment to grow its unified communications business. Meta offers communication tools to enable productivity and engagement within organizations. Google provides a hosted messaging and productivity suite. Slack provides teamwork and collaboration software. Zoom offers videoconferencing and cloud phone solutions. Okta, Proofpoint, and Symantec provide security solutions across email security, information protection, identity, and governance. Web-based offerings competing with individual applications have also positioned themselves as alternatives to our products and services. We compete by providing powerful, flexible, secure, integrated industry-specific, and easy-to-use productivity and collaboration tools and services that create comprehensive solutions and work well with technologies our customers already have both on-premises or in the cloud.

LinkedIn faces competition from online professional networks, recruiting companies, talent management companies, and larger companies that are focusing on talent management and human resource services; job boards; traditional recruiting firms; and companies that provide learning and development products and services. Marketing Solutions competes with online and offline outlets that generate revenue from advertisers and marketers, and Sales Solutions competes with online and offline outlets for companies with lead generation and customer intelligence and insights.

Dynamics competes with cloud-based and on-premises business solution providers such as Oracle, Salesforce, and SAP.

Intelligent Cloud

Our Intelligent Cloud segment consists of our public, private, and hybrid server products and cloud services that can power modern business and developers. This segment primarily comprises:

- Server products and cloud services, including Azure and other cloud services; SQL Server, Windows Server, Visual Studio, System Center, and related Client Access Licenses (“CALs”); and Nuance and GitHub.
- Enterprise Services, including Enterprise Support Services, Industry Solutions (formerly Microsoft Consulting Services), and Nuance professional services.

Server Products and Cloud Services

Azure is a comprehensive set of cloud services that offer developers, IT professionals, and enterprises freedom to build, deploy, and manage applications on any platform or device. Customers can use Azure through our global network of datacenters for computing, networking, storage, mobile and web application services, AI, IoT, cognitive services, and machine learning. Azure enables customers to devote more resources to development and use of applications that benefit their organizations, rather than managing on-premises hardware and software. Azure revenue is mainly affected by infrastructure-as-a-service and platform-as-a-service consumption-based services, and per user-based services such as Enterprise Mobility + Security.

Azure AI offerings provide a competitive advantage as companies seek ways to optimize and scale their business with machine learning. Azure’s purpose-built, AI-optimized infrastructure allows advanced models, including GPT-4 services designed for developers and data scientists, to do more with less. Customers can integrate large language models and develop the next generation of AI apps and services.

Our server products are designed to make IT professionals, developers, and their systems more productive and efficient. Server software is integrated server infrastructure and middleware designed to support software applications built on the Windows Server operating system. This includes the server platform, database, business intelligence, storage, management and operations, virtualization, service-oriented architecture platform, security, and identity software. We also license standalone and software development lifecycle tools for software architects, developers, testers, and project managers. Server products revenue is mainly affected by purchases through volume licensing programs, licenses sold to original equipment manufacturers (“OEM”), and retail packaged products. CALs provide access rights to certain server products, including SQL Server and Windows Server, and revenue is reported along with the associated server product.

Nuance and GitHub include both cloud and on-premises offerings. Nuance provides healthcare and enterprise AI solutions. GitHub provides a collaboration platform and code hosting service for developers.

Enterprise Services

Enterprise Services, including Enterprise Support Services, Industry Solutions, and Nuance Professional Services, assist customers in developing, deploying, and managing Microsoft server solutions, Microsoft desktop solutions, and Nuance conversational AI and ambient intelligent solutions, along with providing training and certification to developers and IT professionals on various Microsoft products.

Competition

Azure faces diverse competition from companies such as Amazon, Google, IBM, Oracle, VMware, and open source offerings. Azure’s competitive advantage includes enabling a hybrid cloud, allowing deployment of existing datacenters with our public cloud into a single, cohesive infrastructure, and the ability to run at a scale that meets the needs of businesses of all sizes and complexities. Our AI offerings compete with AI products from hyperscalers such as Amazon Bedrock, Amazon CodeWhisperer, and Google AI, as well as products from other emerging competitors, many of which are also current or potential partners, including Meta’s LLaMA2 and other open source solutions. Our Enterprise Mobility + Security offerings also compete with products from a range of competitors including identity vendors, security solution vendors, and numerous other security point solution vendors. We believe our cloud’s global scale, coupled with our broad portfolio of identity and security solutions, allows us to effectively solve complex cybersecurity challenges for our customers and differentiates us from the competition.

Our server products face competition from a wide variety of server operating systems and applications offered by companies with a range of market approaches. Vertically integrated computer manufacturers such as Hewlett-Packard, IBM, and Oracle offer their own versions of the Unix operating system preinstalled on server hardware. Nearly all computer manufacturers offer server hardware for the Linux operating system, and many contribute to Linux operating system development. The competitive position of Linux has also benefited from the large number of compatible applications now produced by many commercial and non-commercial software developers. A number of companies, such as Red Hat, supply versions of Linux.

We compete to provide enterprise-wide computing solutions and point solutions with numerous commercial software vendors that offer solutions and middleware technology platforms, software applications for connectivity (both Internet and intranet), security, hosting, database, and e-business servers. IBM and Oracle lead a group of companies focused on the Java Platform Enterprise Edition that competes with our enterprise-wide computing solutions. Commercial competitors for our server applications for PC-based distributed client-server environments include CA Technologies, IBM, and Oracle. Our web application platform software competes with open source software such as Apache, Linux, MySQL, and PHP. In middleware, we compete against Java vendors.

Our database, business intelligence, and data warehousing solutions offerings compete with products from IBM, Oracle, SAP, Snowflake, and other companies. Our system management solutions compete with server management and server virtualization platform providers, such as BMC, CA Technologies, Hewlett-Packard, IBM, and VMware. Our products for software developers compete against offerings from Adobe, IBM, Oracle, and other companies, and also against open source projects, including Eclipse (sponsored by CA Technologies, IBM, Oracle, and SAP), PHP, and Ruby on Rails.

We believe our server products provide customers with advantages in performance, total costs of ownership, and productivity by delivering superior applications, development tools, compatibility with a broad base of hardware and software applications, security, and manageability.

Our Enterprise Services business competes with a wide range of companies that provide strategy and business planning, application development, and infrastructure services, including multinational consulting firms and small niche businesses focused on specific technologies.

More Personal Computing

Our More Personal Computing segment consists of products and services that put customers at the center of the experience with our technology. This segment primarily comprises:

- Windows, including Windows OEM licensing ("Windows OEM") and other non-volume licensing of the Windows operating system; Windows Commercial, comprising volume licensing of the Windows operating system, Windows cloud services, and other Windows commercial offerings; patent licensing; and Windows IoT.
- Devices, including Surface, HoloLens, and PC accessories.
- Gaming, including Xbox hardware and Xbox content and services, comprising first- and third-party content (including games and in-game content), Xbox Game Pass and other subscriptions, Xbox Cloud Gaming, advertising, third-party disc royalties, and other cloud services.
- Search and news advertising, comprising Bing (including Bing Chat), Microsoft News, Microsoft Edge, and third-party affiliates.

Windows

The Windows operating system is designed to deliver a more personal computing experience for users by enabling consistency of experience, applications, and information across their devices. Windows OEM revenue is impacted significantly by the number of Windows operating system licenses purchased by OEMs, which they pre-install on the devices they sell. In addition to computing device market volume, Windows OEM revenue is impacted by:

- The mix of computing devices based on form factor and screen size.
- Differences in device market demand between developed markets and growth markets.
- Attachment of Windows to devices shipped.

- Customer mix between consumer, small and medium businesses, and large enterprises.
- Changes in inventory levels in the OEM channel.
- Pricing changes and promotions, pricing variation that occurs when the mix of devices manufactured shifts from local and regional system builders to large multinational OEMs, and different pricing of Windows versions licensed.
- Constraints in the supply chain of device components.
- Piracy.

Windows Commercial revenue, which includes volume licensing of the Windows operating system and Windows cloud services such as Microsoft Defender for Endpoint, is affected mainly by the demand from commercial customers for volume licensing and Software Assurance ("SA"), as well as advanced security offerings. Windows Commercial revenue often reflects the number of information workers in a licensed enterprise and is relatively independent of the number of PCs sold in a given year.

Patent licensing includes our programs to license patents we own for use across a broad array of technology areas, including mobile devices and cloud offerings.

Windows IoT extends the power of Windows and the cloud to intelligent systems by delivering specialized operating systems, tools, and services for use in embedded devices.

Devices

We design and sell devices, including Surface, HoloLens, and PC accessories. Our devices are designed to enable people and organizations to connect to the people and content that matter most using Windows and integrated Microsoft products and services. Surface is designed to help organizations, students, and consumers be more productive. Growth in Devices is dependent on total PC shipments, the ability to attract new customers, our product roadmap, and expanding into new categories.

Gaming

Our gaming platform is designed to provide a variety of entertainment through a unique combination of content, community, and cloud services. Our exclusive game content is created through Xbox Game Studios, a collection of first-party studios creating iconic and differentiated gaming experiences. We continue to invest in new gaming studios and content to expand our intellectual property roadmap and leverage new content creators. These unique gaming experiences are the cornerstone of Xbox Game Pass, a subscription service and gaming community with access to a curated library of over 400 first- and third-party console and PC titles.

The gamer remains at the heart of the Xbox ecosystem. We are identifying new opportunities to attract gamers across a variety of different end points through our first- and third-party content and business diversification across subscriptions, ads, and digital stores. We've seen new devices from third-party manufacturers along with key PC and mobile end points that help us empower gamers to play in a way that is most convenient to them. We are focused on growing the platform and expanding to new ecosystems to engage as many gamers as possible.

Xbox enables people to connect and share online gaming experiences that are accessible on Xbox consoles, Windows-enabled devices, and other devices. Xbox is designed to benefit users by providing access to a network of certified applications and services and to benefit our developer and partner ecosystems by providing access to a large customer base. Xbox revenue is mainly affected by subscriptions and sales of first- and third-party content, as well as advertising. Growth of our Gaming business is determined by the overall active user base through Xbox enabled content, availability of games, providing exclusive game content that gamers seek, the computational power and reliability of the devices used to access our content and services, and the ability to create new experiences through first-party content creators.

Search and News Advertising

Our Search and news advertising business is designed to deliver relevant search, native, and display advertising to a global audience. Our Microsoft Edge browser and Bing Chat capabilities are key tools to enable user acquisition and engagement, while our technology platform enables accelerated delivery of digital advertising solutions. In addition to first-party tools, we have several partnerships with companies, such as Yahoo, through which we provide and monetize search offerings. Growth depends on our ability to attract new users, understand intent, and match intent with relevant content on advertising offerings.

Competition

Windows faces competition from various software products and from alternative platforms and devices, mainly from Apple and Google. We believe Windows competes effectively by giving customers choice, value, flexibility, security, an easy-to-use interface, and compatibility with a broad range of hardware and software applications, including those that enable productivity.

Devices face competition from various computer, tablet, and hardware manufacturers who offer a unique combination of high-quality industrial design and innovative technologies across various price points. These manufacturers, many of which are also current or potential partners and customers, include Apple and our Windows OEMs.

Xbox and our cloud gaming services face competition from various online gaming ecosystems and game streaming services, including those operated by Amazon, Apple, Meta, and Tencent. We also compete with other providers of entertainment services such as video streaming platforms. Our gaming platform competes with console platforms from Nintendo and Sony, both of which have a large, established base of customers. We believe our gaming platform is effectively positioned against, and uniquely differentiated from, competitive products and services based on significant innovation in hardware architecture, user interface, developer tools, online gaming and entertainment services, and continued strong exclusive content from our own first-party game franchises as well as other digital content offerings.

Our Search and news advertising business competes with Google and a wide array of websites, social platforms like Meta, and portals that provide content and online offerings to end users.

OPERATIONS

We have regional operations service centers that support our operations, including customer contract and order processing, billing, credit and collections, information processing, and vendor management and logistics. The center in Ireland supports the African, Asia-Pacific, European, and Middle East regions; and the centers in Arlington, Virginia, Atlanta, Georgia, Charlotte, North Carolina, Fargo, North Dakota, Fort Lauderdale, Florida, Redmond, Washington, Reno, Nevada, and Puerto Rico support the American regions.

In addition to our operations centers, we also operate datacenters throughout each of these regions. We continue to identify and evaluate opportunities to expand our datacenter locations and increase our server capacity to meet the evolving needs of our customers, particularly given the growing demand for AI services. Our datacenters depend on the availability of permitted and buildable land, predictable energy, networking supplies, and servers, including graphics processing units ("GPUs") and other components.

Our devices are primarily manufactured by third-party contract manufacturers. For the majority of our products, we have the ability to use other manufacturers if a current vendor becomes unavailable or unable to meet our requirements. However, some of our products contain certain components for which there are very few qualified suppliers. Extended disruptions at these suppliers could impact our ability to manufacture devices on time to meet consumer demand.

RESEARCH AND DEVELOPMENT

Product and Service Development, and Intellectual Property

We develop most of our products and services internally through the following engineering groups.

- *Cloud and AI* – focuses on making IT professionals, developers, partners, independent software vendors, and their systems more productive and efficient through development of Azure AI platform and cloud infrastructure, server, database, CRM, ERP, software development tools and services (including GitHub), AI cognitive services, and other business process applications and services for enterprises.
- *Strategic Missions and Technologies* – focuses on incubating technical products and support solutions with transformative potential for the future of cloud computing and continued company growth across quantum computing, Azure Space & Missions Engineering, telecommunications, and Microsoft Federal Sales and Delivery.
- *Experiences and Devices* – focuses on delivering high value end-user experiences across our products, services, and devices, including Microsoft 365, Windows, Microsoft Teams, Search (including Microsoft Edge and Bing Chat) and other advertising-based services, and the Surface line of devices.
- *Microsoft Security* – focuses on delivering a comprehensive portfolio of services that protect our customers' digital infrastructure through cloud platform and application security, data protection and governance, identity and network access, and device management.
- *Technology and Research* – focuses on fundamental research, product and business incubations, and forward-looking AI innovations that span infrastructure, services, and applications.
- *LinkedIn* – focuses on our services that transform the way professionals grow their network and find jobs and the way businesses hire, market, sell, and learn.
- *Gaming* – focuses on developing hardware, content, and services across a large range of platforms to help grow our user base through game experiences and social interaction.

Internal development allows us to maintain competitive advantages that come from product differentiation and closer technical control over our products and services. It also gives us the freedom to decide which modifications and enhancements are most important and when they should be implemented. We strive to obtain information as early as possible about changing usage patterns and hardware advances that may affect software and hardware design. Before releasing new software platforms, and as we make significant modifications to existing platforms, we provide application vendors with a range of resources and guidelines for development, training, and testing. Generally, we also create product documentation internally.

We protect our intellectual property investments in a variety of ways. We work actively in the U.S. and internationally to ensure the enforcement of copyright, trademark, trade secret, and other protections that apply to our software and hardware products, services, business plans, and branding. We are a leader among technology companies in pursuing patents and currently have a portfolio of over 70,000 U.S. and international patents issued and over 19,000 pending worldwide. While we employ much of our internally-developed intellectual property in our products and services, we also engage in outbound licensing of specific patented technologies that are incorporated into licensees' products. From time to time, we enter into broader cross-license agreements with other technology companies covering entire groups of patents. We may also purchase or license technology that we incorporate into our products and services. At times, we make select intellectual property broadly available at no or low cost to achieve a strategic objective, such as promoting industry standards, advancing interoperability, supporting societal and/or environmental efforts, or attracting and enabling our external development community. Our increasing engagement with open source software will also cause us to license our intellectual property rights broadly in certain situations.

While it may be necessary in the future to seek or renew licenses relating to various aspects of our products and services, we believe, based upon past experience and industry practice, such licenses generally can be obtained on commercially reasonable terms. We believe our continuing research and product development are not materially dependent on any single license or other agreement with a third party relating to the development of our products.

Investing in the Future

Our success is based on our ability to create new and compelling products, services, and experiences for our users, to initiate and embrace disruptive technology trends, to enter new geographic and product markets, and to drive broad adoption of our products and services. We invest in a range of emerging technology trends and breakthroughs that we believe offer significant opportunities to deliver value to our customers and growth for the company. Based on our assessment of key technology trends, we maintain our long-term commitment to research and development across a wide spectrum of technologies, tools, and platforms spanning digital work and life experiences, cloud computing, AI, devices, and operating systems.

While our main product research and development facilities are located in Redmond, Washington, we also operate research and development facilities in other parts of the U.S. and around the world. This global approach helps us remain competitive in local markets and enables us to continue to attract top talent from across the world.

We plan to continue to make significant investments in a broad range of product research and development activities, and as appropriate we will coordinate our research and development across operating segments and leverage the results across the company.

In addition to our main research and development operations, we also operate Microsoft Research. Microsoft Research is one of the world's largest corporate research organizations, often working in close collaboration with top universities around the world, and is focused on advancing the state-of-the-art in computer science and a broad range of other disciplines. Our investment in fundamental research provides us a unique perspective on future trends and contributes to our innovation.

DISTRIBUTION, SALES, AND MARKETING

We market and distribute our products and services through the following channels: OEMs, direct, and distributors and resellers. Our sales organization performs a variety of functions, including working directly with commercial enterprises and public-sector organizations worldwide to identify and meet their technology and digital transformation requirements; managing OEM relationships; and supporting system integrators, independent software vendors, and other partners who engage directly with our customers to perform sales, consulting, and fulfillment functions for our products and services.

OEMs

We distribute our products and services through OEMs that pre-install our software on new devices and servers they sell. The largest component of the OEM business is the Windows operating system pre-installed on devices. OEMs also sell devices pre-installed with other Microsoft products and services, including applications such as Office and the capability to subscribe to Office 365.

There are two broad categories of OEMs. The largest category of OEMs are direct OEMs as our relationship with them is managed through a direct agreement between Microsoft and the OEM. We have distribution agreements covering one or more of our products with virtually all the multinational OEMs, including Dell, Hewlett-Packard, Lenovo, and with many regional and local OEMs. The second broad category of OEMs are system builders consisting of lower-volume PC manufacturers, which source Microsoft software for pre-installation and local redistribution primarily through the Microsoft distributor channel rather than through a direct agreement or relationship with Microsoft.

Direct

Many organizations that license our products and services transact directly with us through Enterprise Agreements and Enterprise Services contracts, with sales support from system integrators, independent software vendors, web agencies, and partners that advise organizations on licensing our products and services ("Enterprise Agreement Software Advisors" or "ESA"). Microsoft offers direct sales programs targeted to reach small, medium, and corporate customers, in addition to those offered through the reseller channel. A large network of partner advisors support many of these sales.

We also sell commercial and consumer products and services directly to customers, such as cloud services, search, and gaming, through our digital marketplaces and online stores. Additionally, our Microsoft Experience Centers are designed to facilitate deeper engagement with our partners and customers across industries.

Distributors and Resellers

Organizations also license our products and services indirectly, primarily through licensing solution partners ("LSP"), distributors, value-added resellers ("VAR"), and retailers. Although each type of reselling partner may reach organizations of all sizes, LSPs are primarily engaged with large organizations, distributors resell primarily to VARs, and VARs typically reach small and medium organizations. ESAs are also typically authorized as LSPs and operate as resellers for our other volume licensing programs. Microsoft Cloud Solution Provider is our main partner program for reselling cloud services.

We distribute our retail packaged products primarily through independent non-exclusive distributors, authorized replicators, resellers, and retail outlets. Individual consumers obtain these products primarily through retail outlets. We distribute our devices through third-party retailers. We have a network of field sales representatives and field support personnel that solicit orders from distributors and resellers and provide product training and sales support.

Our Dynamics business solutions are also licensed to enterprises through a global network of channel partners providing vertical solutions and specialized services.

LICENSING OPTIONS

We offer options for organizations that want to purchase our cloud services, on-premises software, and SA. We license software to organizations under volume licensing agreements to allow the customer to acquire multiple licenses of products and services instead of having to acquire separate licenses through retail channels. We use different programs designed to provide flexibility for organizations of various sizes. While these programs may differ in various parts of the world, generally they include those discussed below.

SA conveys rights to new software and upgrades for perpetual licenses released over the contract period. It also provides support, tools, training, and other licensing benefits to help customers deploy and use software efficiently. SA is included with certain volume licensing agreements and is an optional purchase with others.

Volume Licensing Programs

Enterprise Agreement

Enterprise Agreements offer large organizations a manageable volume licensing program that gives them the flexibility to buy cloud services and software licenses under one agreement. Enterprise Agreements are designed for medium or large organizations that want to license cloud services and on-premises software organization-wide over a three-year period. Organizations can elect to purchase perpetual licenses or subscribe to licenses. SA is included.

Microsoft Customer Agreement

A Microsoft Customer Agreement is a simplified purchase agreement presented, accepted, and stored through a digital experience. A Microsoft Customer Agreement is a non-expiring agreement that is designed to support all customers over time, whether purchasing through a partner or directly from Microsoft.

Microsoft Online Subscription Agreement

A Microsoft Online Subscription Agreement is designed for small and medium organizations that want to subscribe to, activate, provision, and maintain cloud services seamlessly and directly via the web. The agreement allows customers to acquire monthly or annual subscriptions for cloud-based services.

Microsoft Products and Services Agreement

Microsoft Products and Services Agreements are designed for medium and large organizations that want to license cloud services and on-premises software as needed, with no organization-wide commitment, under a single, non-expiring agreement. Organizations purchase perpetual licenses or subscribe to licenses. SA is optional for customers that purchase perpetual licenses.

Open Value

Open Value agreements are a simple, cost-effective way to acquire the latest Microsoft technology. These agreements are designed for small and medium organizations that want to license cloud services and on-premises software over a three-year period. Under Open Value agreements, organizations can elect to purchase perpetual licenses or subscribe to licenses and SA is included.

Select Plus

A Select Plus agreement is designed for government and academic organizations to acquire on-premises licenses at any affiliate or department level, while realizing advantages as one organization. Organizations purchase perpetual licenses and SA is optional.

Partner Programs

The Microsoft Cloud Solution Provider Program offers customers an easy way to license the cloud services they need in combination with the value-added services offered by their systems integrator, managed services provider, or cloud reseller partner. Partners in this program can easily package their own products and services to directly provision, manage, and support their customer subscriptions.

The Microsoft Services Provider License Agreement allows hosting service providers and independent software vendors who want to license eligible Microsoft software products to provide software services and hosted applications to their end customers. Partners license software over a three-year period and are billed monthly based on consumption.

The Independent Software Vendor Royalty Program enables partners to integrate Microsoft products into other applications and then license the unified business solution to their end users.

CUSTOMERS

Our customers include individual consumers, small and medium organizations, large global enterprises, public-sector institutions, Internet service providers, application developers, and OEMs. Our practice is to ship our products promptly upon receipt of purchase orders from customers; consequently, backlog is not significant.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Our executive officers as of July 27, 2023 were as follows:

Name	Age	Position with the Company
Satya Nadella	55	Chairman and Chief Executive Officer
Judson B. Althoff	50	Executive Vice President and Chief Commercial Officer
Christopher C. Capossela	53	Executive Vice President and Chief Marketing Officer
Kathleen T. Hogan	57	Executive Vice President and Chief Human Resources Officer
Amy E. Hood	51	Executive Vice President and Chief Financial Officer
Bradford L. Smith	64	Vice Chair and President
Christopher D. Young	51	Executive Vice President, Business Development, Strategy, and Ventures

Mr. Nadella was appointed Chairman of the Board in June 2021 and Chief Executive Officer in February 2014. He served as Executive Vice President, Cloud and Enterprise from July 2013 until that time. From 2011 to 2013, Mr. Nadella served as President, Server and Tools. From 2009 to 2011, he was Senior Vice President, Online Services Division. From 2008 to 2009, he was Senior Vice President, Search, Portal, and Advertising. Since joining Microsoft in 1992, Mr. Nadella's roles also included Vice President of the Business Division. Mr. Nadella also serves on the Board of Directors of Starbucks Corporation.

Mr. Althoff was appointed Executive Vice President and Chief Commercial Officer in July 2021. He served as Executive Vice President, Worldwide Commercial Business from July 2017 until that time. Prior to that, Mr. Althoff served as the President of Microsoft North America. Mr. Althoff joined Microsoft in March 2013 as President of Microsoft North America.

Mr. Capossela was appointed Executive Vice President, Marketing and Consumer Business, and Chief Marketing Officer in July 2016. He had served as Executive Vice President, Chief Marketing Officer since March 2014. Since joining Microsoft in 1991, Mr. Capossela has held a variety of marketing leadership roles in the Consumer Channels Group, and in the Microsoft Office Division where he was responsible for marketing productivity solutions including Microsoft Office, Office 365, SharePoint, Exchange, Skype for Business, Project, and Visio.

Ms. Hogan was appointed Executive Vice President, Human Resources in November 2014. Prior to that Ms. Hogan was Corporate Vice President of Microsoft Services. She also served as Corporate Vice President of Customer Service and Support. Ms. Hogan joined Microsoft in 2003. Ms. Hogan also serves on the Board of Directors of Alaska Air Group, Inc.

Ms. Hood was appointed Executive Vice President and Chief Financial Officer in July 2013, subsequent to her appointment as Chief Financial Officer in May 2013. From 2010 to 2013, Ms. Hood was Chief Financial Officer of the Microsoft Business Division. Since joining Microsoft in 2002, Ms. Hood has also held finance-related positions in the Server and Tools Business and the corporate finance organization. Ms. Hood also serves on the Board of Directors of 3M Corporation.

Mr. Smith was appointed Vice Chair and President in September 2021. Prior to that, he served as President and Chief Legal Officer since September 2015. He served as Executive Vice President, General Counsel, and Secretary from 2011 to 2015, and served as Senior Vice President, General Counsel, and Secretary from 2001 to 2011. Mr. Smith was also named Chief Compliance Officer in 2002. Since joining Microsoft in 1993, he was Deputy General Counsel for Worldwide Sales and previously was responsible for managing the European Law and Corporate Affairs Group, based in Paris. Mr. Smith also serves on the Board of Directors of Netflix, Inc.

Mr. Young has served as Executive Vice President, Business Development, Strategy, and Ventures since joining Microsoft in November 2020. Prior to Microsoft, he served as the Chief Executive Officer of McAfee, LLC from 2017 to 2020, and served as a Senior Vice President and General Manager of Intel Security Group from 2014 until 2017, when he led the initiative to spin out McAfee into a standalone company. Mr. Young also serves on the Board of Directors of American Express Company.

AVAILABLE INFORMATION

Our Internet address is www.microsoft.com. At our Investor Relations website, www.microsoft.com/investor, we make available free of charge a variety of information for investors. Our goal is to maintain the Investor Relations website as a portal through which investors can easily find or navigate to pertinent information about us, including:

- Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file that material with or furnish it to the Securities and Exchange Commission ("SEC") at www.sec.gov.
- Information on our business strategies, financial results, and metrics for investors.
- Announcements of investor conferences, speeches, and events at which our executives talk about our product, service, and competitive strategies. Archives of these events are also available.
- Press releases on quarterly earnings, product and service announcements, legal developments, and international news.
- Corporate governance information including our articles of incorporation, bylaws, governance guidelines, committee charters, codes of conduct and ethics, global corporate social responsibility initiatives, and other governance-related policies.
- Other news and announcements that we may post from time to time that investors might find useful or interesting.
- Opportunities to sign up for email alerts to have information pushed in real time.

We publish a variety of reports and resources related to our Corporate Social Responsibility programs and progress on our Reports Hub website, www.microsoft.com/corporate-responsibility/reports-hub, including reports on sustainability, responsible sourcing, accessibility, digital trust, and public policy engagement.

The information found on these websites is not part of, or incorporated by reference into, this or any other report we file with, or furnish to, the SEC. In addition to these channels, we use social media to communicate to the public. It is possible that the information we post on social media could be deemed to be material to investors. We encourage investors, the media, and others interested in Microsoft to review the information we post on the social media channels listed on our Investor Relations website.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common stock.

STRATEGIC AND COMPETITIVE RISKS

We face intense competition across all markets for our products and services, which may lead to lower revenue or operating margins.

Competition in the technology sector

Our competitors range in size from diversified global companies with significant research and development resources to small, specialized firms whose narrower product lines may let them be more effective in deploying technical, marketing, and financial resources. Barriers to entry in many of our businesses are low and many of the areas in which we compete evolve rapidly with changing and disruptive technologies, shifting user needs, and frequent introductions of new products and services. Our ability to remain competitive depends on our success in making innovative products, devices, and services that appeal to businesses and consumers.

Competition among platform-based ecosystems

An important element of our business model has been to create platform-based ecosystems on which many participants can build diverse solutions. A well-established ecosystem creates beneficial network effects among users, application developers, and the platform provider that can accelerate growth. Establishing significant scale in the marketplace is necessary to achieve and maintain attractive margins. We face significant competition from firms that provide competing platforms.

- A competing vertically-integrated model, in which a single firm controls the software and hardware elements of a product and related services, has succeeded with some consumer products such as personal computers, tablets, phones, gaming consoles, wearables, and other endpoint devices. Competitors pursuing this model also earn revenue from services integrated with the hardware and software platform, including applications and content sold through their integrated marketplaces. They may also be able to claim security and performance benefits from their vertically integrated offer. We also offer some vertically-integrated hardware and software products and services. To the extent we shift a portion of our business to a vertically integrated model we increase our cost of revenue and reduce our operating margins.
- We derive substantial revenue from licenses of Windows operating systems on PCs. We face significant competition from competing platforms developed for new devices and form factors such as smartphones and tablet computers. These devices compete on multiple bases including price and the perceived utility of the device and its platform. Users are increasingly turning to these devices to perform functions that in the past were performed by personal computers. Even if many users view these devices as complementary to a personal computer, the prevalence of these devices may make it more difficult to attract application developers to our PC operating system platforms. Competing with operating systems licensed at low or no cost may decrease our PC operating system margins. Popular products or services offered on competing platforms could increase their competitive strength. In addition, some of our devices compete with products made by our original equipment manufacturer ("OEM") partners, which may affect their commitment to our platform.
- Competing platforms have content and application marketplaces with scale and significant installed bases. The variety and utility of content and applications available on a platform are important to device purchasing decisions. Users may incur costs to move data and buy new content and applications when switching platforms. To compete, we must successfully enlist developers to write applications for our platform and ensure that these applications have high quality, security, customer appeal, and value. Efforts to compete with competitors' content and application marketplaces may increase our cost of revenue and lower our operating margins. Competitors' rules governing their content and applications marketplaces may restrict our ability to distribute products and services through them in accordance with our technical and business model objectives.

Business model competition

Companies compete with us based on a growing variety of business models.

- Even as we transition more of our business to infrastructure-, platform-, and software-as-a-service business model, the license-based proprietary software model generates a substantial portion of our software revenue. We bear the costs of converting original ideas into software products through investments in research and development, offsetting these costs with the revenue received from licensing our products. Many of our competitors also develop and sell software to businesses and consumers under this model.
- We are investing in artificial intelligence (“AI”) across the entire company and infusing generative AI capabilities into our consumer and commercial offerings. We expect AI technology and services to be a highly competitive and rapidly evolving market. We will bear significant development and operational costs to build and support the AI capabilities, products, and services necessary to meet the needs of our customers. To compete effectively we must also be responsive to technological change, potential regulatory developments, and public scrutiny.
- Other competitors develop and offer free applications, online services, and content, and make money by selling third-party advertising. Advertising revenue funds development of products and services these competitors provide to users at no or little cost, competing directly with our revenue-generating products.
- Some companies compete with us by modifying and then distributing open source software at little or no cost to end users, using open source AI models, and earning revenue on advertising or integrated products and services. These firms do not bear the full costs of research and development for the open source products. Some open source products mimic the features and functionality of our products.

The competitive pressures described above may cause decreased sales volumes, price reductions, and/or increased operating costs, such as for research and development, marketing, and sales incentives. This may lead to lower revenue, gross margins, and operating income.

Our increasing focus on cloud-based services presents execution and competitive risks. A growing part of our business involves cloud-based services available across the spectrum of computing devices. Our strategic vision is to compete and grow by building best-in-class platforms and productivity services that utilize ubiquitous computing and ambient intelligence to drive insights and productivity gains. At the same time, our competitors are rapidly developing and deploying cloud-based services for consumers and business customers. Pricing and delivery models are evolving. Devices and form factors influence how users access services in the cloud and sometimes the user’s choice of which cloud-based services to use. Certain industries and customers have specific requirements for cloud services and may present enhanced risks. We are devoting significant resources to develop and deploy our cloud-based strategies. The Windows ecosystem must continue to evolve with this changing environment. We embrace cultural and organizational changes to drive accountability and eliminate obstacles to innovation. Our intelligent cloud and intelligent edge offerings are connected to the growth of the Internet of Things (“IoT”), a network of distributed and interconnected devices employing sensors, data, and computing capabilities, including AI. Our success in driving ubiquitous computing and ambient intelligence will depend on the level of adoption of our offerings such as Azure, Azure AI, and Azure IoT Edge. We may not establish market share sufficient to achieve scale necessary to meet our business objectives.

Besides software development costs, we are incurring costs to build and maintain infrastructure to support cloud computing services. These costs will reduce the operating margins we have previously achieved. Whether we succeed in cloud-based services depends on our execution in several areas, including:

- Continuing to bring to market compelling cloud-based experiences that generate increasing traffic and market share.
- Maintaining the utility, compatibility, and performance of our cloud-based services on the growing array of computing devices, including PCs, smartphones, tablets, gaming consoles, and other devices, as well as sensors and other IoT endpoints.
- Continuing to enhance the attractiveness of our cloud platforms to third-party developers.
- Ensuring our cloud-based services meet the reliability expectations of our customers and maintain the security of their data as well as help them meet their own compliance needs.
- Making our suite of cloud-based services platform-agnostic, available on a wide range of devices and ecosystems, including those of our competitors.

It is uncertain whether our strategies will attract the users or generate the revenue required to succeed. If we are not effective in executing organizational and technical changes to increase efficiency and accelerate innovation, or if we fail to generate sufficient usage of our new products and services, we may not grow revenue in line with the infrastructure and development investments described above. This may negatively impact gross margins and operating income.

Some users may engage in fraudulent or abusive activities through our cloud-based services. These include unauthorized use of accounts through stolen credentials, use of stolen credit cards or other payment vehicles, failure to pay for services accessed, or other activities that violate our terms of service such as cryptocurrency mining or launching cyberattacks. If our efforts to detect such violations or our actions to control these types of fraud and abuse are not effective, we may experience adverse impacts to our revenue or incur reputational damage.

RISKS RELATING TO THE EVOLUTION OF OUR BUSINESS

We make significant investments in products and services that may not achieve expected returns. We will continue to make significant investments in research, development, and marketing for existing products, services, and technologies, including the Windows operating system, Microsoft 365, Bing, SQL Server, Windows Server, Azure, Office 365, Xbox, LinkedIn, and other products and services. In addition, we are focused on developing new AI platform services and incorporating AI into existing products and services. We also invest in the development and acquisition of a variety of hardware for productivity, communication, and entertainment, including PCs, tablets, gaming devices, and HoloLens. Investments in new technology are speculative. Commercial success depends on many factors, including innovativeness, developer support, and effective distribution and marketing. If customers do not perceive our latest offerings as providing significant new functionality or other value, they may reduce their purchases of new software and hardware products or upgrades, unfavorably affecting revenue. We may not achieve significant revenue from new product, service, and distribution channel investments for several years, if at all. New products and services may not be profitable, and even if they are profitable, operating margins for some new products and businesses will not be as high as the margins we have experienced historically. We may not get engagement in certain features, like Microsoft Edge, Bing, and Bing Chat, that drive post-sale monetization opportunities. Our data handling practices across our products and services will continue to be under scrutiny. Perceptions of mismanagement, driven by regulatory activity or negative public reaction to our practices or product experiences, could negatively impact product and feature adoption, product design, and product quality.

Developing new technologies is complex. It can require long development and testing periods. Significant delays in new releases or significant problems in creating new products or services could adversely affect our revenue.

Acquisitions, joint ventures, and strategic alliances may have an adverse effect on our business. We expect to continue making acquisitions and entering into joint ventures and strategic alliances as part of our long-term business strategy. For example, in March 2021 we completed our acquisition of ZeniMax Media Inc. for \$8.1 billion, and in March 2022 we completed our acquisition of Nuance Communications, Inc. for \$18.8 billion. In January 2022 we announced a definitive agreement to acquire Activision Blizzard, Inc. for \$68.7 billion. In January 2023 we announced the third phase of our OpenAI strategic partnership. Acquisitions and other transactions and arrangements involve significant challenges and risks, including that they do not advance our business strategy, that we get an unsatisfactory return on our investment, that they raise new compliance-related obligations and challenges, that we have difficulty integrating and retaining new employees, business systems, and technology, that they distract management from our other businesses, or that announced transactions may not be completed. If an arrangement fails to adequately anticipate changing circumstances and interests of a party, it may result in early termination or renegotiation of the arrangement. The success of these transactions and arrangements will depend in part on our ability to leverage them to enhance our existing products and services or develop compelling new ones, as well as acquired companies' ability to meet our policies and processes in areas such as data governance, privacy, and cybersecurity. It may take longer than expected to realize the full benefits from these transactions and arrangements such as increased revenue or enhanced efficiencies, or the benefits may ultimately be smaller than we expected. These events could adversely affect our consolidated financial statements.

If our goodwill or amortizable intangible assets become impaired, we may be required to record a significant charge to earnings. We acquire other companies and intangible assets and may not realize all the economic benefit from those acquisitions, which could cause an impairment of goodwill or intangibles. We review our amortizable intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. We test goodwill for impairment at least annually. Factors that may be a change in circumstances, indicating that the carrying value of our goodwill or amortizable intangible assets may not be recoverable, include a decline in our stock price and market capitalization, reduced future cash flow estimates, and slower growth rates in industry segments in which we participate. We have in the past recorded, and may in the future be required to record, a significant charge in our consolidated financial statements during the period in which any impairment of our goodwill or amortizable intangible assets is determined, negatively affecting our results of operations.

CYBERSECURITY, DATA PRIVACY, AND PLATFORM ABUSE RISKS

Cyberattacks and security vulnerabilities could lead to reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security of our information technology

Threats to IT security can take a variety of forms. Individual and groups of hackers and sophisticated organizations, including state-sponsored organizations or nation-states, continuously undertake attacks that pose threats to our customers and our IT. These actors may use a wide variety of methods, which may include developing and deploying malicious software or exploiting vulnerabilities or intentionally designed processes in hardware, software, or other infrastructure in order to attack our products and services or gain access to our networks and datacenters, using social engineering techniques to induce our employees, users, partners, or customers to disclose passwords or other sensitive information or take other actions to gain access to our data or our users' or customers' data, or acting in a coordinated manner to launch distributed denial of service or other coordinated attacks. Nation-state and state-sponsored actors can deploy significant resources to plan and carry out attacks. Nation-state attacks against us, our customers, or our partners may intensify during periods of intense diplomatic or armed conflict, such as the ongoing conflict in Ukraine. Inadequate account security or organizational security practices may also result in unauthorized access to confidential data. For example, system administrators may fail to timely remove employee account access when no longer appropriate. Employees or third parties may intentionally compromise our or our users' security or systems or reveal confidential information. Malicious actors may employ the IT supply chain to introduce malware through software updates or compromised supplier accounts or hardware.

Cyberthreats are constantly evolving and becoming increasingly sophisticated and complex, increasing the difficulty of detecting and successfully defending against them. We may have no current capability to detect certain vulnerabilities or new attack methods, which may allow them to persist in the environment over long periods of time. Cyberthreats can have cascading impacts that unfold with increasing speed across our internal networks and systems and those of our partners and customers. Breaches of our facilities, network, or data security could disrupt the security of our systems and business applications, impair our ability to provide services to our customers and protect the privacy of their data, result in product development delays, compromise confidential or technical business information harming our reputation or competitive position, result in theft or misuse of our intellectual property or other assets, subject us to ransomware attacks, require us to allocate more resources to improve technologies or remediate the impacts of attacks, or otherwise adversely affect our business. We are also subject to supply chain cyberattacks where malware can be introduced to a software provider's customers, including us, through software updates.

In addition, our internal IT environment continues to evolve. Often, we are early adopters of new devices and technologies. We embrace new ways of sharing data and communicating internally and with partners and customers using methods such as social networking and other consumer-oriented technologies. Increasing use of generative AI models in our internal systems may create new attack methods for adversaries. Our business policies and internal security controls may not keep pace with these changes as new threats emerge, or emerging cybersecurity regulations in jurisdictions worldwide.

Security of our products, services, devices, and customers' data

The security of our products and services is important in our customers' decisions to purchase or use our products or services across cloud and on-premises environments. Security threats are a significant challenge to companies like us whose business is providing technology products and services to others. Threats to our own IT infrastructure can also affect our customers. Customers using our cloud-based services rely on the security of our infrastructure, including hardware and other elements provided by third parties, to ensure the reliability of our services and the protection of their data. Adversaries tend to focus their efforts on the most popular operating systems, programs, and services, including many of ours, and we expect that to continue. In addition, adversaries can attack our customers' on-premises or cloud environments, sometimes exploiting previously unknown ("zero day") vulnerabilities, such as occurred in early calendar year 2021 with several of our Exchange Server on-premises products. Vulnerabilities in these or any product can persist even after we have issued security patches if customers have not installed the most recent updates, or if the attackers exploited the vulnerabilities before patching to install additional malware to further compromise customers' systems. Adversaries will continue to attack customers using our cloud services as customers embrace digital transformation. Adversaries that acquire user account information can use that information to compromise our users' accounts, including where accounts share the same attributes such as passwords. Inadequate account security practices may also result in unauthorized access, and user activity may result in ransomware or other malicious software impacting a customer's use of our products or services. We are increasingly incorporating open source software into our products. There may be vulnerabilities in open source software that may make our products susceptible to cyberattacks. Additionally, we are actively adding new generative AI features to our services. Because generative AI is a new field, understanding of security risks and protection methods continues to develop; features that rely on generative AI may be susceptible to unanticipated security threats from sophisticated adversaries.

Our customers operate complex IT systems with third-party hardware and software from multiple vendors that may include systems acquired over many years. They expect our products and services to support all these systems and products, including those that no longer incorporate the strongest current security advances or standards. As a result, we may not be able to discontinue support in our services for a product, service, standard, or feature solely because a more secure alternative is available. Failure to utilize the most current security advances and standards can increase our customers' vulnerability to attack. Further, customers of widely varied size and technical sophistication use our technology, and consequently may still have limited capabilities and resources to help them adopt and implement state of the art cybersecurity practices and technologies. In addition, we must account for this wide variation of technical sophistication when defining default settings for our products and services, including security default settings, as these settings may limit or otherwise impact other aspects of IT operations and some customers may have limited capability to review and reset these defaults.

Cyberattacks may adversely impact our customers even if our production services are not directly compromised. We are committed to notifying our customers whose systems have been impacted as we become aware and have actionable information for customers to help protect themselves. We are also committed to providing guidance and support on detection, tracking, and remediation. We may not be able to detect the existence or extent of these attacks for all of our customers or have information on how to detect or track an attack, especially where an attack involves on-premises software such as Exchange Server where we may have no or limited visibility into our customers' computing environments.

Development and deployment of defensive measures

To defend against security threats to our internal IT systems, our cloud-based services, and our customers' systems, we must continuously engineer more secure products and services, enhance security, threat detection, and reliability features, improve the deployment of software updates to address security vulnerabilities in our own products as well as those provided by others, develop mitigation technologies that help to secure customers from attacks even when software updates are not deployed, maintain the digital security infrastructure that protects the integrity of our network, products, and services, and provide security tools such as firewalls, anti-virus software, and advanced security and information about the need to deploy security measures and the impact of doing so. Customers in certain industries such as financial services, health care, and government may have enhanced or specialized requirements to which we must engineer our products and services.

The cost of measures to protect products and customer-facing services could reduce our operating margins. If we fail to do these things well, actual or perceived security vulnerabilities in our products and services, data corruption issues, or reduced performance could harm our reputation and lead customers to reduce or delay future purchases of products or subscriptions to services, or to use competing products or services. Customers may also spend more on protecting their existing computer systems from attack, which could delay adoption of additional products or services. Customers, and third parties granted access to their systems, may fail to update their systems, continue to run software or operating systems we no longer support, or may fail timely to install or enable security patches, or may otherwise fail to adopt adequate security practices. Any of these could adversely affect our reputation and revenue. Actual or perceived vulnerabilities may lead to claims against us. Our license agreements typically contain provisions that eliminate or limit our exposure to liability, but there is no assurance these provisions will withstand legal challenges. At times, to achieve commercial objectives, we may enter into agreements with larger liability exposure to customers.

Our products operate in conjunction with and are dependent on products and components across a broad ecosystem of third parties. If there is a security vulnerability in one of these components, and if there is a security exploit targeting it, we could face increased costs, liability claims, reduced revenue, or harm to our reputation or competitive position.

Disclosure and misuse of personal data could result in liability and harm our reputation. As we continue to grow the number, breadth, and scale of our cloud-based offerings, we store and process increasingly large amounts of personal data of our customers and users. The continued occurrence of high-profile data breaches provides evidence of an external environment increasingly hostile to information security. Despite our efforts to improve the security controls across our business groups and geographies, it is possible our security controls over personal data, our training of employees and third parties on data security, and other practices we follow may not prevent the improper disclosure or misuse of customer or user data we or our vendors store and manage. In addition, third parties who have limited access to our customer or user data may use this data in unauthorized ways. Improper disclosure or misuse could harm our reputation, lead to legal exposure to customers or users, or subject us to liability under laws that protect personal data, resulting in increased costs or loss of revenue. Our software products and services also enable our customers and users to store and process personal data on-premises or, increasingly, in a cloud-based environment we host. Government authorities can sometimes require us to produce customer or user data in response to valid legal orders. In the U.S. and elsewhere, we advocate for transparency concerning these requests and appropriate limitations on government authority to compel disclosure. Despite our efforts to protect customer and user data, perceptions that the collection, use, and retention of personal information is not satisfactorily protected could inhibit sales of our products or services and could limit adoption of our cloud-based solutions by consumers, businesses, and government entities. Additional security measures we may take to address customer or user concerns, or constraints on our flexibility to determine where and how to operate datacenters in response to customer or user expectations or governmental rules or actions, may cause higher operating expenses or hinder growth of our products and services.

We may not be able to protect information in our products and services from use by others. LinkedIn and other Microsoft products and services contain valuable information and content protected by contractual restrictions or technical measures. In certain cases, we have made commitments to our members and users to limit access to or use of this information. Changes in the law or interpretations of the law may weaken our ability to prevent third parties from scraping or gathering information or content through use of bots or other measures and using it for their own benefit, thus diminishing the value of our products and services.

Abuse of our platforms may harm our reputation or user engagement.

Advertising, professional, marketplace, and gaming platform abuses

For platform products and services that provide content or host ads that come from or can be influenced by third parties, including GitHub, LinkedIn, Microsoft Advertising, Microsoft News, Microsoft Store, Bing, and Xbox, our reputation or user engagement may be negatively affected by activity that is hostile or inappropriate. This activity may come from users impersonating other people or organizations including through the use of AI technologies, dissemination of information that may be viewed as misleading or intended to manipulate the opinions of our users, or the use of our products or services that violates our terms of service or otherwise for objectionable or illegal ends. Preventing or responding to these actions may require us to make substantial investments in people and technology and these investments may not be successful, adversely affecting our business and consolidated financial statements.

Other digital safety abuses

Our hosted consumer services as well as our enterprise services may be used to generate or disseminate harmful or illegal content in violation of our terms or applicable law. We may not proactively discover such content due to scale, the limitations of existing technologies, and conflicting legal frameworks. When discovered by users and others, such content may negatively affect our reputation, our brands, and user engagement. Regulations and other initiatives to make platforms responsible for preventing or eliminating harmful content online have been enacted, and we expect this to continue. We may be subject to enhanced regulatory oversight, civil or criminal liability, or reputational damage if we fail to comply with content moderation regulations, adversely affecting our business and consolidated financial statements.

The development of the IoT presents security, privacy, and execution risks. To support the growth of the intelligent cloud and the intelligent edge, we are developing products, services, and technologies to power the IoT. The IoT's great potential also carries substantial risks. IoT products and services may contain defects in design, manufacture, or operation that make them insecure or ineffective for their intended purposes. An IoT solution has multiple layers of hardware, sensors, processors, software, and firmware, several of which we may not develop or control. Each layer, including the weakest layer, can impact the security of the whole system. Many IoT devices have limited interfaces and ability to be updated or patched. IoT solutions may collect large amounts of data, and our handling of IoT data may not satisfy customers or regulatory requirements. IoT scenarios may increasingly affect personal health and safety. If IoT solutions that include our technologies do not work as intended, violate the law, or harm individuals or businesses, we may be subject to legal claims or enforcement actions. These risks, if realized, may increase our costs, damage our reputation or brands, or negatively impact our revenues or margins.

Issues in the development and use of AI may result in reputational or competitive harm or liability. We are building AI into many of our offerings, including our productivity services, and we are also making AI available for our customers to use in solutions that they build. This AI may be developed by Microsoft or others, including our strategic partner, OpenAI. We expect these elements of our business to grow. We envision a future in which AI operating in our devices, applications, and the cloud helps our customers be more productive in their work and personal lives. As with many innovations, AI presents risks and challenges that could affect its adoption, and therefore our business. AI algorithms or training methodologies may be flawed. Datasets may be overbroad, insufficient, or contain biased information. Content generated by AI systems may be offensive, illegal, or otherwise harmful. Ineffective or inadequate AI development or deployment practices by Microsoft or others could result in incidents that impair the acceptance of AI solutions or cause harm to individuals, customers, or society, or result in our products and services not working as intended. Human review of certain outputs may be required. As a result of these and other challenges associated with innovative technologies, our implementation of AI systems could subject us to competitive harm, regulatory action, legal liability, including under new proposed legislation regulating AI in jurisdictions such as the European Union ("EU"), new applications of existing data protection, privacy, intellectual property, and other laws, and brand or reputational harm. Some AI scenarios present ethical issues or may have broad impacts on society. If we enable or offer AI solutions that have unintended consequences, unintended usage or customization by our customers and partners, or are controversial because of their impact on human rights, privacy, employment, or other social, economic, or political issues, we may experience brand or reputational harm, adversely affecting our business and consolidated financial statements.

OPERATIONAL RISKS

We may have excessive outages, data losses, and disruptions of our online services if we fail to maintain an adequate operations infrastructure. Our increasing user traffic, growth in services, and the complexity of our products and services demand more computing power. We spend substantial amounts to build, purchase, or lease datacenters and equipment and to upgrade our technology and network infrastructure to handle more traffic on our websites and in our datacenters. Our datacenters depend on the availability of permitted and buildable land, predictable energy, networking supplies, and servers, including graphics processing units (“GPUs”) and other components. The cost or availability of these dependencies could be adversely affected by a variety of factors, including the transition to a clean energy economy, local and regional environmental regulations, and geopolitical disruptions. These demands continue to increase as we introduce new products and services and support the growth and the augmentation of existing services such as Bing, Azure, Microsoft Account services, Microsoft 365, Microsoft Teams, Dynamics 365, OneDrive, SharePoint Online, Skype, Xbox, and Outlook.com through the incorporation of AI features and/or functionality. We are rapidly growing our business of providing a platform and back-end hosting for services provided by third parties to their end users. Maintaining, securing, and expanding this infrastructure is expensive and complex, and requires development of principles for datacenter builds in geographies with higher safety and reliability risks. It requires that we maintain an Internet connectivity infrastructure and storage and compute capacity that is robust and reliable within competitive and regulatory constraints that continue to evolve. Inefficiencies or operational failures, including temporary or permanent loss of customer data, insufficient Internet connectivity, insufficient or unavailable power supply, or inadequate storage and compute capacity, could diminish the quality of our products, services, and user experience resulting in contractual liability, claims by customers and other third parties, regulatory actions, damage to our reputation, and loss of current and potential users, subscribers, and advertisers, each of which may adversely impact our consolidated financial statements.

We may experience quality or supply problems. Our hardware products such as Xbox consoles, Surface devices, and other devices we design and market are highly complex and can have defects in design, manufacture, or associated software. We could incur significant expenses, lost revenue, and reputational harm as a result of recalls, safety alerts, or product liability claims if we fail to prevent, detect, or address such issues through design, testing, or warranty repairs.

Our software products and services also may experience quality or reliability problems. The highly sophisticated software we develop may contain bugs and other defects that interfere with their intended operation. Our customers increasingly rely on us for critical business functions and multiple workloads. Many of our products and services are interdependent with one another. Each of these circumstances potentially magnifies the impact of quality or reliability issues. Any defects we do not detect and fix in pre-release testing could cause reduced sales and revenue, damage to our reputation, repair or remediation costs, delays in the release of new products or versions, or legal liability. Although our license agreements typically contain provisions that eliminate or limit our exposure to liability, there is no assurance these provisions will withstand legal challenge.

There are limited suppliers for certain device and datacenter components. Our competitors use some of the same suppliers and their demand for hardware components can affect the capacity available to us. If components are delayed or become unavailable, whether because of supplier capacity constraint, industry shortages, legal or regulatory changes that restrict supply sources, or other reasons, we may not obtain timely replacement supplies, resulting in reduced sales or inadequate datacenter capacity to support the delivery and continued development of our products and services. Component shortages, excess or obsolete inventory, or price reductions resulting in inventory adjustments may increase our cost of revenue. Xbox consoles, Surface devices, datacenter servers, and other hardware are assembled in Asia and other geographies that may be subject to disruptions in the supply chain, resulting in shortages that would affect our revenue and operating margins.

LEGAL, REGULATORY, AND LITIGATION RISKS

Government litigation and regulatory activity relating to competition rules may limit how we design and market our products. Government agencies closely scrutinize us under U.S. and foreign competition laws. Governments are actively enforcing competition laws and regulations, and this includes scrutiny in potentially large markets such as the EU, the U.S., and China. Some jurisdictions also allow competitors or consumers to assert claims of anti-competitive conduct. U.S. federal and state antitrust authorities have previously brought enforcement actions and continue to scrutinize our business.

For example, the European Commission (“the Commission”) closely scrutinizes the design of high-volume Microsoft products and the terms on which we make certain technologies used in these products, such as file formats, programming interfaces, and protocols, available to other companies. Flagship product releases such as Windows can receive significant scrutiny under EU or other competition laws.

Our portfolio of first-party devices continues to grow; at the same time our OEM partners offer a large variety of devices for our platforms. As a result, increasingly we both cooperate and compete with our OEM partners, creating a risk that we fail to do so in compliance with competition rules. Regulatory scrutiny in this area may increase. Certain foreign governments, particularly in China and other countries in Asia, have advanced arguments under their competition laws that exert downward pressure on royalties for our intellectual property.

Competition law regulatory actions and court decisions may result in fines or hinder our ability to provide the benefits of our software to consumers and businesses, reducing the attractiveness of our products and the revenue that comes from them. New competition law actions could be initiated, potentially using previous actions as precedent. The outcome of such actions, or steps taken to avoid them, could adversely affect us in a variety of ways, including causing us to withdraw products from or modify products for certain markets, decreasing the value of our assets, adversely affecting our ability to monetize our products, or inhibiting our ability to consummate acquisition or impose conditions on acquisitions that may reduce their value.

Laws and regulations relating to anti-corruption and trade could result in increased costs, fines, criminal penalties, or reputational damage.

The Foreign Corrupt Practices Act (“FCPA”) and other anti-corruption laws and regulations (“Anti-Corruption Laws”) prohibit corrupt payments by our employees, vendors, or agents, and the accounting provisions of the FCPA require us to maintain accurate books and records and adequate internal controls. From time to time, we receive inquiries from authorities in the U.S. and elsewhere which may be based on reports from employees and others about our business activities outside the U.S. and our compliance with Anti-Corruption Laws. Periodically, we receive such reports directly and investigate them, and also cooperate with investigations by U.S. and foreign law enforcement authorities. An example of increasing international regulatory complexity is the EU Whistleblower Directive, initiated in 2021, which may present compliance challenges to the extent it is implemented in different forms by EU member states. Most countries in which we operate also have competition laws that prohibit competitors from colluding or otherwise attempting to reduce competition between themselves. While we devote substantial resources to our U.S. and international compliance programs and have implemented policies, training, and internal controls designed to reduce the risk of corrupt payments and collusive activity, our employees, vendors, or agents may violate our policies. Our failure to comply with Anti-Corruption Laws or competition laws could result in significant fines and penalties, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business, and damage to our reputation.

Increasing trade laws, policies, sanctions, and other regulatory requirements also affect our operations in and outside the U.S. relating to trade and investment. Economic sanctions in the U.S., the EU, and other countries prohibit most business with restricted entities or countries. U.S. export controls restrict Microsoft from offering many of its products and services to, or making investments in, certain entities in specified countries. U.S. import controls restrict us from integrating certain information and communication technologies into our supply chain and allow for government review of transactions involving information and communications technology from countries determined to be foreign adversaries. Supply chain regulations may impact the availability of goods or result in additional regulatory scrutiny. Periods of intense diplomatic or armed conflict, such as the ongoing conflict in Ukraine, may result in (1) new and rapidly evolving sanctions and trade restrictions, which may impair trade with sanctioned individuals and countries, and (2) negative impacts to regional trade ecosystems among our customers, partners, and us. Non-compliance with sanctions as well as general ecosystem disruptions could result in reputational harm, operational delays, monetary fines, loss of revenues, increased costs, loss of export privileges, or criminal sanctions.

Laws and regulations relating to the handling of personal data may impede the adoption of our services or result in increased costs, legal claims, fines against us, or reputational damage. The growth of our Internet- and cloud-based services internationally relies increasingly on the movement of data across national boundaries. Legal requirements relating to the collection, storage, handling, and transfer of personal data continue to evolve. For example, while the EU-U.S. Data Privacy Framework ("DPF") has been recognized as adequate under EU law to allow transfers of personal data from the EU to certified companies in the U.S., the DPF is subject to further legal challenge which could cause the legal requirements for data transfers from the EU to be uncertain. EU data protection authorities have and may again block the use of certain U.S.-based services that involve the transfer of data to the U.S. In the EU and other markets, potential new rules and restrictions on the flow of data across borders could increase the cost and complexity of delivering our products and services.

In addition, the EU General Data Protection Regulation ("GDPR"), which applies to all of our activities conducted from an establishment in the EU or related to products and services offered in the EU, imposes a range of compliance obligations regarding the handling of personal data. More recently, the EU has been developing new requirements related to the use of data, including in the Digital Markets Act, the Digital Services Act, and the Data Act, that add additional rules and restriction on the use of data in our products and services. Engineering efforts to build and maintain capabilities to facilitate compliance with these laws involve substantial expense and the diversion of engineering resources from other projects. We might experience reduced demand for our offerings if we are unable to engineer products that meet our legal duties or help our customers meet their obligations under these and other data regulations, or if our implementation to comply makes our offerings less attractive. Compliance with these obligations depends in part on how particular regulators interpret and apply them. If we fail to comply, or if regulators assert we have failed to comply (including in response to complaints made by customers), it may lead to regulatory enforcement actions, which can result in significant monetary penalties, private lawsuits, reputational damage, blockage of international data transfers, and loss of customers. The highest fines assessed under GDPR have recently been increasing, especially against large technology companies. Jurisdictions around the world, such as China, India, and states in the U.S. have adopted, or are considering adopting or expanding, laws and regulations imposing obligations regarding the collection, handling, and transfer of personal data.

Our investment in gaining insights from data is becoming central to the value of the services, including AI services, we deliver to customers, to operational efficiency and key opportunities in monetization, and to customer perceptions of quality. Our ability to use data in this way may be constrained by regulatory developments that impede realizing the expected return from this investment. Ongoing legal analyses, reviews, and inquiries by regulators of Microsoft practices, or relevant practices of other organizations, may result in burdensome or inconsistent requirements, including data sovereignty and localization requirements, affecting the location, movement, collection, and use of our customer and internal employee data as well as the management of that data. Compliance with applicable laws and regulations regarding personal data may require changes in services, business practices, or internal systems that result in increased costs, lower revenue, reduced efficiency, or greater difficulty in competing with foreign-based firms. Compliance with data regulations might limit our ability to innovate or offer certain features and functionality in some jurisdictions where we operate. Failure to comply with existing or new rules may result in significant penalties or orders to stop the alleged noncompliant activity, as well as negative publicity and diversion of management time and effort.

Existing and increasing legal and regulatory requirements could adversely affect our results of operations. We are subject to a wide range of laws, regulations, and legal requirements in the U.S. and globally, including those that may apply to our products and online services offerings, and those that impose requirements related to user privacy, telecommunications, data storage and protection, advertising, and online content. Laws in several jurisdictions, including EU Member State laws under the European Electronic Communications Code, increasingly define certain of our services as regulated telecommunications services. This trend may continue and will result in these offerings being subjected to additional data protection, security, law enforcement surveillance, and other obligations. Regulators and private litigants may assert that our collection, use, and management of customer data and other information is inconsistent with their laws and regulations, including laws that apply to the tracking of users via technology such as cookies. New environmental, social, and governance laws and regulations are expanding mandatory disclosure, reporting, and diligence requirements. Legislative or regulatory action relating to cybersecurity requirements may increase the costs to develop, implement, or secure our products and services. Compliance with evolving digital accessibility laws and standards will require engineering and is important to our efforts to empower all people and organizations to achieve more. Legislative and regulatory action is emerging in the areas of AI and content moderation, which could increase costs or restrict opportunity. For example, in the EU, an AI Act is being considered, and may entail increased costs or decreased opportunities for the operation of our AI services in the European market.

How these laws and regulations apply to our business is often unclear, subject to change over time, and sometimes may be inconsistent from jurisdiction to jurisdiction. In addition, governments' approach to enforcement, and our products and services, are continuing to evolve. Compliance with existing, expanding, or new laws and regulations may involve significant costs or require changes in products or business practices that could adversely affect our results of operations. Noncompliance could result in the imposition of penalties or orders we cease the alleged noncompliant activity. In addition, there is increasing pressure from advocacy groups, regulators, competitors, customers, and other stakeholders across many of these areas. If our products do not meet customer expectations or legal requirements, we could lose sales opportunities or face regulatory or legal actions.

We have claims and lawsuits against us that may result in adverse outcomes. We are subject to a variety of claims and lawsuits. These claims may arise from a wide variety of business practices and initiatives, including major new product releases such as Windows, AI services, significant business transactions, warranty or product claims, employment practices, and regulation. Adverse outcomes in some or all of these claims may result in significant monetary damages or injunctive relief that could adversely affect our ability to conduct our business. The litigation and other claims are subject to inherent uncertainties and management's view of these matters may change in the future. A material adverse impact in our consolidated financial statements could occur for the period in which the effect of an unfavorable outcome becomes probable and reasonably estimable.

Our business with government customers may present additional uncertainties. We derive substantial revenue from government contracts. Government contracts generally can present risks and challenges not present in private commercial agreements. For instance, we may be subject to government audits and investigations relating to these contracts, we could be suspended or debarred as a governmental contractor, we could incur civil and criminal fines and penalties, and under certain circumstances contracts may be rescinded. Some agreements may allow a government to terminate without cause and provide for higher liability limits for certain losses. Some contracts may be subject to periodic funding approval, reductions, cancellations, or delays which could adversely impact public-sector demand for our products and services. These events could negatively impact our results of operations, financial condition, and reputation.

We may have additional tax liabilities. We are subject to income taxes in the U.S. and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. For example, compliance with the 2017 United States Tax Cuts and Jobs Act ("TCJA") and possible future legislative changes may require the collection of information not regularly produced within the company, the use of estimates in our consolidated financial statements, and the exercise of significant judgment in accounting for its provisions. As regulations and guidance evolve with respect to the TCJA or possible future legislative changes, and as we gather more information and perform more analysis, our results may differ from previous estimates and may materially affect our consolidated financial statements.

We are regularly under audit by tax authorities in different jurisdictions. Although we believe that our provision for income taxes and our tax estimates are reasonable, tax authorities may disagree with certain positions we have taken. In addition, economic and political pressures to increase tax revenue in various jurisdictions may make resolving tax disputes favorably more difficult. We are currently under Internal Revenue Service audit for prior tax years, with the primary unresolved issues relating to transfer pricing. The final resolution of those audits, and other audits or litigation, may differ from the amounts recorded in our consolidated financial statements and may materially affect our consolidated financial statements in the period or periods in which that determination is made.

We earn a significant amount of our operating income outside the U.S. A change in the mix of earnings and losses in countries with differing statutory tax rates, changes in our business or structure, or the expiration of or disputes about certain tax agreements in a particular country may result in higher effective tax rates for the company. In addition, changes in U.S. federal and state or international tax laws applicable to corporate multinationals, other fundamental law changes currently being considered by many countries, including in the U.S., and changes in taxing jurisdictions' administrative interpretations, decisions, policies, and positions may materially adversely impact our consolidated financial statements.

INTELLECTUAL PROPERTY RISKS

We face risks related to the protection and utilization of our intellectual property that may result in our business and operating results may be harmed. Protecting our intellectual property rights and combating unlicensed copying and use of our software and other intellectual property on a global basis is difficult. Similarly, the absence of harmonized patent laws makes it more difficult to ensure consistent respect for patent rights.

Changes in the law may continue to weaken our ability to prevent the use of patented technology or collect revenue for licensing our patents. Additionally, licensees of our patents may fail to satisfy their obligations to pay us royalties or may contest the scope and extent of their obligations. Finally, our increasing engagement with open source software will also cause us to license our intellectual property rights broadly in certain situations. If we are unable to protect our intellectual property, our revenue may be adversely affected.

Source code, the detailed program commands for our operating systems and other software programs, is critical to our business. If our source code leaks, we might lose future trade secret protection for that code. It may then become easier for third parties to compete with our products by copying functionality, which could adversely affect our revenue and operating results. Unauthorized disclosure of source code also could increase the security risks described elsewhere in these risk factors.

Third parties may claim that we infringe their intellectual property. From time to time, others claim we infringe their intellectual property rights. To resolve these claims, we may enter into royalty and licensing agreements on terms that are less favorable than currently available, stop selling or redesign affected products or services, or pay damages to satisfy indemnification commitments with our customers. Adverse outcomes could also include monetary damages or injunctive relief that may limit or prevent importing, marketing, and selling our products or services that have infringing technologies. We have paid significant amounts to settle claims related to the use of technology and intellectual property rights and to procure intellectual property rights as part of our strategy to manage this risk, and may continue to do so.

GENERAL RISKS

If our reputation or our brands are damaged, our business and operating results may be harmed. Our reputation and brands are globally recognized and are important to our business. Our reputation and brands affect our ability to attract and retain consumer, business, and public-sector customers. There are numerous ways our reputation or brands could be damaged. These include product safety or quality issues, our environmental impact and sustainability, supply chain practices, or human rights record. We may experience backlash from customers, government entities, advocacy groups, employees, and other stakeholders that disagree with our product offering decisions or public policy positions. Damage to our reputation or our brands may occur from, among other things:

- The introduction of new features, products, services, or terms of service that customers, users, or partners do not like.
- Public scrutiny of our decisions regarding user privacy, data practices, or content.
- Data security breaches, compliance failures, or actions of partners or individual employees.

The proliferation of social media may increase the likelihood, speed, and magnitude of negative brand events. If our brands or reputation are damaged, it could negatively impact our revenues or margins, or ability to attract the most highly qualified employees.

Adverse economic or market conditions may harm our business. Worsening economic conditions, including inflation, recession, pandemic, or other changes in economic conditions, may cause lower IT spending and adversely affect our revenue. If demand for PCs, servers, and other computing devices declines, or consumer or business spending for those products declines, our revenue will be adversely affected.

Our product distribution system relies on an extensive partner and retail network. OEMs building devices that run our software have also been a significant means of distribution. The impact of economic conditions on our partners, such as the bankruptcy of a major distributor, OEM, or retailer, could cause sales channel disruption.

Challenging economic conditions also may impair the ability of our customers to pay for products and services they have purchased. As a result, allowances for doubtful accounts and write-offs of accounts receivable may increase.

We maintain an investment portfolio of various holdings, types, and maturities. These investments are subject to general credit, liquidity, market, and interest rate risks, which may be exacerbated by market downturns or events that affect global financial markets. A significant part of our investment portfolio comprises U.S. government securities. If global financial markets decline for long periods, or if there is a downgrade of the U.S. government credit rating due to an actual or threatened default on government debt, our investment portfolio may be adversely affected and we could determine that more of our investments have experienced a decline in fair value, requiring impairment charges that could adversely affect our consolidated financial statements.

Catastrophic events or geopolitical conditions may disrupt our business. A disruption or failure of our systems or operations because of a major earthquake, weather event, cyberattack, terrorist attack, pandemic, or other catastrophic event could cause delays in completing sales, providing services, or performing other critical functions. Our corporate headquarters, a significant portion of our research and development activities, and certain other essential business operations are in the Seattle, Washington area, and we have other business operations in the Silicon Valley area of California, both of which are seismically active regions. A catastrophic event that results in the destruction or disruption of any of our critical business or IT systems, or the infrastructure or systems they rely on, such as power grids, could harm our ability to conduct normal business operations. Providing our customers with more services and solutions in the cloud puts a premium on the resilience of our systems and strength of our business continuity management plans and magnifies the potential impact of prolonged service outages in our consolidated financial statements.

Abrupt political change, terrorist activity, and armed conflict, such as the ongoing conflict in Ukraine, pose a risk of general economic disruption in affected countries, which may increase our operating costs and negatively impact our ability to sell to and collect from customers in affected markets. These conditions also may add uncertainty to the timing and budget for technology investment decisions by our customers and may cause supply chain disruptions for hardware manufacturers. Geopolitical change may result in changing regulatory systems and requirements and market interventions that could impact our operating strategies, access to national, regional, and global markets, hiring, and profitability. Geopolitical instability may lead to sanctions and impact our ability to do business in some markets or with some public-sector customers. Any of these changes may negatively impact our revenues.

The occurrence of regional epidemics or a global pandemic, such as COVID-19, may adversely affect our operations, financial condition, and results of operations. The extent to which global pandemics impact our business going forward will depend on factors such as the duration and scope of the pandemic; governmental, business, and individuals' actions in response to the pandemic; and the impact on economic activity, including the possibility of recession or financial market instability. Measures to contain a global pandemic may intensify other risks described in these Risk Factors.

We may incur increased costs to effectively manage these aspects of our business. If we are unsuccessful, it may adversely impact our revenues, cash flows, market share growth, and reputation.

The long-term effects of climate change on the global economy and the IT industry in particular are unclear. Environmental regulations or changes in the supply, demand, or available sources of energy or other resources may affect the availability or cost of goods and services, including natural resources, necessary to run our business. Changes in climate where we operate may increase the costs of powering and cooling computer hardware we use to develop software and provide cloud-based services.

Our global business exposes us to operational and economic risks. Our customers are located throughout the world and a significant part of our revenue comes from international sales. The global nature of our business creates operational, economic, and geopolitical risks. Our results of operations may be affected by global, regional, and local economic developments, monetary policy, inflation, and recession, as well as political and military disputes. In addition, our international growth strategy includes certain markets, the developing nature of which presents several risks, including deterioration of social, political, labor, or economic conditions in a country or region, and difficulties in staffing and managing foreign operations. Emerging nationalist and protectionist trends and concerns about human rights, the environment, and political expression in specific countries may significantly alter the trade and commercial environments. Changes to trade policy or agreements as a result of populism, protectionism, or economic nationalism may result in higher tariffs, local sourcing initiatives, and non-local sourcing restrictions, export controls, investment restrictions, or other developments that make it more difficult to sell our products in foreign countries. Disruptions of these kinds in developed or emerging markets could negatively impact demand for our products and services, impair our ability to operate in certain regions, or increase operating costs. Although we hedge a portion of our international currency exposure, significant fluctuations in foreign exchange rates between the U.S. dollar and foreign currencies may adversely affect our results of operations.

Our business depends on our ability to attract and retain talented employees. Our business is based on successfully attracting and retaining talented employees representing diverse backgrounds, experiences, and skill sets. The market for highly skilled workers and leaders in our industry is extremely competitive. Maintaining our brand and reputation, as well as a diverse and inclusive work environment that enables all our employees to thrive, are important to our ability to recruit and retain employees. We are also limited in our ability to recruit internationally by restrictive domestic immigration laws. Changes to U.S. immigration policies that restrain the flow of technical and professional talent may inhibit our ability to adequately staff our research and development efforts. If we are less successful in our recruiting efforts, or if we cannot retain highly skilled workers and key leaders, our ability to develop and deliver successful products and services may be adversely affected. Effective succession planning is also important to our long-term success. Failure to ensure effective transfer of knowledge and smooth transitions involving key employees could hinder our strategic planning and execution. How employment-related laws are interpreted and applied to our workforce practices may result in increased operating costs and less flexibility in how we meet our workforce needs. Our global workforce is predominantly non-unionized, although we do have some employees in the U.S. and internationally who are represented by unions or works councils. In the U.S., there has been a general increase in workers exercising their right to form or join a union. The unionization of significant employee populations could result in higher costs and other operational changes necessary to respond to changing conditions and to establish new relationships with worker representatives.

ITEM 1B. UNRESOLVED STAFF COMMENTS

We have received no written comments regarding our periodic or current reports from the staff of the Securities and Exchange Commission that were issued 180 days or more preceding the end of our fiscal year 2023 that remain unresolved.

ITEM 2. PROPERTIES

Our corporate headquarters are located in Redmond, Washington. We have approximately 16 million square feet of space located in King County, Washington that is used for engineering, sales, marketing, and operations, among other general and administrative purposes. These facilities include approximately 11 million square feet of owned space situated on approximately 530 acres of land we own at our corporate headquarters, and approximately 5 million square feet of space we lease.

We own and lease other facilities domestically and internationally, primarily for offices, datacenters, and research and development. The largest owned international properties include space in the following locations: China, India, Ireland, and the Netherlands. The largest leased international properties include space in the following locations: Australia, Canada, China, France, Germany, India, Ireland, Israel, Japan, the Netherlands, and the United Kingdom. Refer to Research and Development (Part I, Item 1 of this Form 10-K) for further discussion of our research and development facilities.

In fiscal year 2023, we made decisions to consolidate our office leases to create higher density across our workspaces, and we may make similar decisions in future periods as we continue to evaluate our real estate needs.

The table below shows a summary of the square footage of our properties owned and leased domestically and internationally as of June 30, 2023:

(Square feet in millions)

Location	Owned	Leased	Total
U.S.	27	20	47
International	9	22	31
Total	36	42	78

ITEM 3. LEGAL PROCEEDINGS

Refer to Note 15 – Contingencies of the Notes to Financial Statements (Part II, Item 8 of this Form 10-K) for information regarding legal proceedings in which we are involved.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET AND STOCKHOLDERS

Our common stock is traded on the NASDAQ Stock Market under the symbol MSFT. On July 24, 2023, there were 83,883 registered holders of record of our common stock.

SHARE REPURCHASES AND DIVIDENDS

Following are our monthly share repurchases for the fourth quarter of fiscal year 2023:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
(In millions)				
April 1, 2023 – April 30, 2023	5,007,656	\$ 287.97	5,007,656	\$ 25,467
May 1, 2023 – May 31, 2023	5,355,638	314.26	5,355,638	23,784
June 1, 2023 – June 30, 2023	4,413,960	334.15	4,413,960	22,309
	14,777,254		14,777,254	

All share repurchases were made using cash resources. Our share repurchases may occur through open market purchases or pursuant to a Rule 10b5-1 trading plan. The above table excludes shares repurchased to settle employee tax withholding related to the vesting of stock awards.

Our Board of Directors declared the following dividends during the fourth quarter of fiscal year 2023:

Declaration Date	Record Date	Payment Date	Dividend Per Share	Amount
(In millions)				
June 13, 2023	August 17, 2023	September 14, 2023	\$ 0.68	\$ 5,054

We returned \$9.7 billion to shareholders in the form of share repurchases and dividends in the fourth quarter of fiscal year 2023. Refer to Note 16 – Stockholders' Equity of the Notes to Financial Statements (Part II, Item 8 of this Form 10-K) for further discussion regarding share repurchases and dividends.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to help the reader understand the results of operations and financial condition of Microsoft Corporation. MD&A is provided as a supplement to, and should be read in conjunction with, our consolidated financial statements and the accompanying Notes to Financial Statements (Part II, Item 8 of this Form 10-K). This section generally discusses the results of our operations for the year ended June 30, 2023 compared to the year ended June 30, 2022. For a discussion of the year ended June 30, 2022 compared to the year ended June 30, 2021, please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended June 30, 2022.

OVERVIEW

Microsoft is a technology company whose mission is to empower every person and every organization on the planet to achieve more. We strive to create local opportunity, growth, and impact in every country around the world. We are creating the platforms and tools, powered by artificial intelligence ("AI"), that deliver better, faster, and more effective solutions to support small and large business competitiveness, improve educational and health outcomes, grow public-sector efficiency, and empower human ingenuity.

We generate revenue by offering a wide range of cloud-based solutions, content, and other services to people and businesses; licensing and supporting an array of software products; delivering relevant online advertising to a global audience; and designing and selling devices. Our most significant expenses are related to compensating employees; supporting and investing in our cloud-based services, including datacenter operations; designing, manufacturing, marketing, and selling our other products and services; and income taxes.

Highlights from fiscal year 2023 compared with fiscal year 2022 included:

- Microsoft Cloud revenue increased 22% to \$111.6 billion.
- Office Commercial products and cloud services revenue increased 10% driven by Office 365 Commercial growth of 13%.
- Office Consumer products and cloud services revenue increased 2% and Microsoft 365 Consumer subscribers increased to 67.0 million.
- LinkedIn revenue increased 10%.
- Dynamics products and cloud services revenue increased 16% driven by Dynamics 365 growth of 24%.
- Server products and cloud services revenue increased 19% driven by Azure and other cloud services growth of 29%.
- Windows original equipment manufacturer licensing ("Windows OEM") revenue decreased 25%.
- Devices revenue decreased 24%.
- Windows Commercial products and cloud services revenue increased 5%.
- Xbox content and services revenue decreased 3%.
- Search and news advertising revenue excluding traffic acquisition costs increased 11%.

Industry Trends

Our industry is dynamic and highly competitive, with frequent changes in both technologies and business models. Each industry shift is an opportunity to conceive new products, new technologies, or new ideas that can further transform the industry and our business. At Microsoft, we push the boundaries of what is possible through a broad range of research and development activities that seek to identify and address the changing demands of customers and users, industry trends, and competitive forces.

Economic Conditions, Challenges, and Risks

The markets for software, devices, and cloud-based services are dynamic and highly competitive. Our competitors are developing new software and devices, while also deploying competing cloud-based services for consumers and businesses. The devices and form factors customers prefer evolve rapidly, influencing how users access services in the cloud and, in some cases, the user's choice of which suite of cloud-based services to use. Aggregate demand for our software, services, and devices is also correlated to global macroeconomic and geopolitical factors, which remain dynamic. We must continue to evolve and adapt over an extended time in pace with this changing environment.

The investments we are making in cloud and AI infrastructure and devices will continue to increase our operating costs and may decrease our operating margins. We continue to identify and evaluate opportunities to expand our datacenter locations and increase our server capacity to meet the evolving needs of our customers, particularly given the growing demand for AI services. Our datacenters depend on the availability of permitted and buildable land, predictable energy, networking supplies, and servers, including graphics processing units ("GPUs") and other components. Our devices are primarily manufactured by third-party contract manufacturers. For the majority of our products, we have the ability to use other manufacturers if a current vendor becomes unavailable or unable to meet our requirements. However, some of our products contain certain components for which there are very few qualified suppliers. Extended disruptions at these suppliers could impact our ability to manufacture devices on time to meet consumer demand.

Our success is highly dependent on our ability to attract and retain qualified employees. We hire a mix of university and industry talent worldwide. We compete for talented individuals globally by offering an exceptional working environment, broad customer reach, scale in resources, the ability to grow one's career across many different products and businesses, and competitive compensation and benefits.

Our international operations provide a significant portion of our total revenue and expenses. Many of these revenue and expenses are denominated in currencies other than the U.S. dollar. As a result, changes in foreign exchange rates may significantly affect revenue and expenses. Fluctuations in the U.S. dollar relative to certain foreign currencies reduced reported revenue and expenses from our international operations in fiscal year 2023.

On January 18, 2023, we announced decisions we made to align our cost structure with our revenue and customer demand, prioritize our investments in strategic areas, and consolidate office space. As a result, we recorded a \$1.2 billion charge in the second quarter of fiscal year 2023 ("Q2 charge"), which included employee severance expenses of \$800 million, impairment charges resulting from changes to our hardware portfolio, and costs related to lease consolidation activities. First, we reduced our overall workforce by approximately 10,000 jobs through the third quarter of fiscal year 2023 related to the Q2 charge, which represents less than 5% of our total employee base. While we eliminated roles in some areas, we will continue to hire in key strategic areas. Second, we are allocating both our capital and talent to areas of secular growth and long-term competitiveness, while divesting in other areas. Third, we are consolidating our leases to create higher density across our workspaces, which impacted our financial results through the remainder of fiscal year 2023, and we may make similar decisions in future periods as we continue to evaluate our real estate needs.

Refer to Risk Factors (Part I, Item 1A of this Form 10-K) for a discussion of these factors and other risks.

Seasonality

Our revenue fluctuates quarterly and is generally higher in the second and fourth quarters of our fiscal year. Second quarter revenue is driven by corporate year-end spending trends in our major markets and holiday season spending by consumers, and fourth quarter revenue is driven by the volume of multi-year on-premises contracts executed during the period.

Change in Accounting Estimate

In July 2022, we completed an assessment of the useful lives of our server and network equipment. Due to investments in software that increased efficiencies in how we operate our server and network equipment, as well as advances in technology, we determined we should increase the estimated useful lives of both server and network equipment from four years to six years. This change in accounting estimate was effective beginning fiscal year 2023. Based on the carrying amount of server and network equipment included in property and equipment, net as of June 30, 2022, the effect of this change in estimate for fiscal year 2023 was an increase in operating income of \$3.7 billion and net income of \$3.0 billion, or \$0.40 per both basic and diluted share.

Reportable Segments

We report our financial performance based on the following segments: Productivity and Business Processes, Intelligent Cloud, and More Personal Computing. The segment amounts included in MD&A are presented on a basis consistent with our internal management reporting. We have recast certain prior period amounts to conform to the way we internally manage and monitor our business.

Additional information on our reportable segments is contained in Note 19 – Segment Information and Geographic Data of the Notes to Financial Statements (Part II, Item 8 of this Form 10-K).

Metrics

We use metrics in assessing the performance of our business and to make informed decisions regarding the allocation of resources. We disclose metrics to enable investors to evaluate progress against our ambitions, provide transparency into performance trends, and reflect the continued evolution of our products and services. Our commercial and other business metrics are fundamentally connected based on how customers use our products and services. The metrics are disclosed in the MD&A or the Notes to Financial Statements (Part II, Item 8 of this Form 10-K). Financial metrics are calculated based on financial results prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"), and growth comparisons relate to the corresponding period of last fiscal year.

In the first quarter of fiscal year 2023, we made updates to the presentation and method of calculation for certain metrics, most notably expanding our Surface metric into a broader Devices metric to incorporate additional revenue streams, along with other minor changes to align with how we manage our businesses.

Commercial

Our commercial business primarily consists of Server products and cloud services, Office Commercial, Windows Commercial, the commercial portion of LinkedIn, Enterprise Services, and Dynamics. Our commercial metrics allow management and investors to assess the overall health of our commercial business and include leading indicators of future performance.

Commercial remaining performance obligation	Commercial portion of revenue allocated to remaining performance obligations, which includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods
Microsoft Cloud revenue	Revenue from Azure and other cloud services, Office 365 Commercial, the commercial portion of LinkedIn, Dynamics 365, and other commercial cloud properties
Microsoft Cloud gross margin percentage	Gross margin percentage for our Microsoft Cloud business

Productivity and Business Processes and Intelligent Cloud

Metrics related to our Productivity and Business Processes and Intelligent Cloud segments assess the health of our core businesses within these segments. The metrics reflect our cloud and on-premises product strategies and trends.

Office Commercial products and cloud services revenue growth	Revenue from Office Commercial products and cloud services (Office 365 subscriptions, the Office 365 portion of Microsoft 365 Commercial subscriptions, and Office licensed on-premises), comprising Office, Exchange, SharePoint, Microsoft Teams, Office 365 Security and Compliance, Microsoft Viva, and Microsoft 365 Copilot
Office Consumer products and cloud services revenue growth	Revenue from Office Consumer products and cloud services, including Microsoft 365 Consumer subscriptions, Office licensed on-premises, and other Office services
Office 365 Commercial seat growth	The number of Office 365 Commercial seats at end of period where seats are paid users covered by an Office 365 Commercial subscription
Microsoft 365 Consumer subscribers	The number of Microsoft 365 Consumer subscribers at end of period
Dynamics products and cloud services revenue growth	Revenue from Dynamics products and cloud services, including Dynamics 365, comprising a set of intelligent, cloud-based applications across ERP, CRM (including Customer Insights), Power Apps, and Power Automate; and on-premises ERP and CRM applications
LinkedIn revenue growth	Revenue from LinkedIn, including Talent Solutions, Marketing Solutions, Premium Subscriptions, and Sales Solutions
Server products and cloud services revenue growth	Revenue from Server products and cloud services, including Azure and other cloud services; SQL Server, Windows Server, Visual Studio, System Center, and related Client Access Licenses ("CALs"); and Nuance and GitHub

More Personal Computing

Metrics related to our More Personal Computing segment assess the performance of key lines of business within this segment. These metrics provide strategic product insights which allow us to assess the performance across our commercial and consumer businesses. As we have diversity of target audiences and sales motions within the Windows business, we monitor metrics that are reflective of those varying motions.

Windows OEM revenue growth	Revenue from sales of Windows Pro and non-Pro licenses sold through the OEM channel
Windows Commercial products and cloud services revenue growth	Revenue from Windows Commercial products and cloud services, comprising volume licensing of the Windows operating system, Windows cloud services, and other Windows commercial offerings
Devices revenue growth	Revenue from Devices, including Surface, HoloLens, and PC accessories
Xbox content and services revenue growth	Revenue from Xbox content and services, comprising first- and third-party content (including games and in-game content), Xbox Game Pass and other subscriptions, Xbox Cloud Gaming, advertising, third-party disc royalties, and other cloud services
Search and news advertising revenue (ex TAC) growth	Revenue from search and news advertising excluding traffic acquisition costs ("TAC") paid to Bing Ads network publishers and news partners

SUMMARY RESULTS OF OPERATIONS

(In millions, except percentages and per share amounts)		2023	2022	Percentage Change
Revenue	\$	211,915	\$ 198,270	7%
Gross margin		146,052	135,620	8%
Operating income		88,523	83,383	6%
Net income		72,361	72,738	(1)%
Diluted earnings per share		9.68	9.65	0%
Adjusted gross margin (non-GAAP)		146,204	135,620	8%
Adjusted operating income (non-GAAP)		89,694	83,383	8%
Adjusted net income (non-GAAP)		73,307	69,447	6%
Adjusted diluted earnings per share (non-GAAP)		9.81	9.21	7%

Adjusted gross margin, operating income, net income, and diluted earnings per share ("EPS") are non-GAAP financial measures. Current year non-GAAP financial measures exclude the impact of the Q2 charge, which includes employee severance expenses, impairment charges resulting from changes to our hardware portfolio, and costs related to lease consolidation activities. Prior year non-GAAP financial measures exclude the net income tax benefit related to transfer of intangible properties in the first quarter of fiscal year 2022. Refer to Note 12 – Income Taxes of the Notes to Financial Statements (Part II, Item 8 of this Form 10-K) for further discussion. Refer to the Non-GAAP Financial Measures section below for a reconciliation of our financial results reported in accordance with GAAP to non-GAAP financial results.

Fiscal Year 2023 Compared with Fiscal Year 2022

Revenue increased \$13.6 billion or 7% driven by growth in Intelligent Cloud and Productivity and Business Processes, offset in part by a decline in More Personal Computing. Intelligent Cloud revenue increased driven by Azure and other cloud services. Productivity and Business Processes revenue increased driven by Office 365 Commercial and LinkedIn. More Personal Computing revenue decreased driven by Windows and Devices.

Cost of revenue increased \$3.2 billion or 5% driven by growth in Microsoft Cloud, offset in part by the change in accounting estimate.

Gross margin increased \$10.4 billion or 8% driven by growth in Intelligent Cloud and Productivity and Business Processes and the change in accounting estimate, offset in part by a decline in More Personal Computing.

- Gross margin percentage increased slightly. Excluding the impact of the change in accounting estimate, gross margin percentage decreased 1 point driven by declines in Intelligent Cloud and More Personal Computing, offset in part by sales mix shift between our segments.

- Microsoft Cloud gross margin percentage increased 2 points to 72%. Excluding the impact of the change in accounting estimate, Microsoft Cloud gross margin percentage decreased slightly driven by a decline in Azure and other cloud services and sales mix shift to Azure and other cloud services, offset in part by improvement in Office 365 Commercial.

Operating expenses increased \$5.3 billion or 10% driven by employee severance expenses, 2 points of growth from the Nuance and Xandr acquisitions, investments in cloud engineering, and LinkedIn.

Operating income increased \$5.1 billion or 6% driven by growth in Productivity and Business Processes and Intelligent Cloud and the change in accounting estimate, offset in part by a decline in More Personal Computing.

Revenue, gross margin, and operating income included an unfavorable foreign currency impact of 4%, 4%, and 6%, respectively. Cost of revenue and operating expenses both included a favorable foreign currency impact of 2%.

Current year gross margin, operating income, net income, and diluted EPS were negatively impacted by the Q2 charge, which resulted in decreases of \$152 million, \$1.2 billion, \$946 million, and \$0.13, respectively. Prior year net income and diluted EPS were positively impacted by the net tax benefit related to the transfer of intangible properties, which resulted in an increase to net income and diluted EPS of \$3.3 billion and \$0.44, respectively.

SEGMENT RESULTS OF OPERATIONS

(In millions, except percentages)	2023		2022	Percentage Change
Revenue				
Productivity and Business Processes	\$	69,274	\$ 63,364	9%
Intelligent Cloud		87,907	74,965	17%
More Personal Computing		54,734	59,941	(9)%
Total	\$	211,915	\$ 198,270	7%
Operating Income				
Productivity and Business Processes	\$	34,189	\$ 29,690	15%
Intelligent Cloud		37,884	33,203	14%
More Personal Computing		16,450	20,490	(20)%
Total	\$	88,523	\$ 83,383	6%

Reportable Segments

Fiscal Year 2023 Compared with Fiscal Year 2022

Productivity and Business Processes

Revenue increased \$5.9 billion or 9%.

- Office Commercial products and cloud services revenue increased \$3.7 billion or 10%. Office 365 Commercial revenue grew 13% with seat growth of 11%, driven by small and medium business and frontline worker offerings, as well as growth in revenue per user. Office Commercial products revenue declined 21% driven by continued customer shift to cloud offerings.
- Office Consumer products and cloud services revenue increased \$140 million or 2%. Microsoft 365 Consumer subscribers grew 12% to 67.0 million.
- LinkedIn revenue increased \$1.3 billion or 10% driven by Talent Solutions.
- Dynamics products and cloud services revenue increased \$750 million or 16% driven by Dynamics 365 growth of 24%.

Operating income increased \$4.5 billion or 15%.

- Gross margin increased \$5.8 billion or 12% driven by growth in Office 365 Commercial and LinkedIn, as well as the change in accounting estimate. Gross margin percentage increased. Excluding the impact of the change in accounting estimate, gross margin percentage increased slightly driven by improvement in Office 365 Commercial, offset in part by sales mix shift to cloud offerings.
- Operating expenses increased \$1.3 billion or 7% driven by investment in LinkedIn and employee severance expenses.

Revenue, gross margin, and operating income included an unfavorable foreign currency impact of 5%, 5%, and 8%, respectively.

Intelligent Cloud

Revenue increased \$12.9 billion or 17%.

- Server products and cloud services revenue increased \$12.6 billion or 19% driven by Azure and other cloud services. Azure and other cloud services revenue grew 29% driven by growth in our consumption-based services. Server products revenue decreased 1%.
- Enterprise Services revenue increased \$315 million or 4% driven by growth in Enterprise Support Services, offset in part by a decline in Industry Solutions (formerly Microsoft Consulting Services).

Operating income increased \$4.7 billion or 14%.

- Gross margin increased \$8.9 billion or 17% driven by growth in Azure and other cloud services and the change in accounting estimate. Gross margin percentage decreased slightly. Excluding the impact of the change in accounting estimate, gross margin percentage decreased 3 points driven by sales mix shift to Azure and other cloud services and a decline in Azure and other cloud services.
- Operating expenses increased \$4.2 billion or 21% driven by investments in Azure, 4 points of growth from the Nuance acquisition, and employee severance expenses.

Revenue, gross margin, and operating income included an unfavorable foreign currency impact of 4%, 4%, and 6%, respectively. Operating expenses included a favorable foreign currency impact of 2%.

More Personal Computing

Revenue decreased \$5.2 billion or 9%.

- Windows revenue decreased \$3.2 billion or 13% driven by a decrease in Windows OEM. Windows OEM revenue decreased 25% as elevated channel inventory levels continued to drive additional weakness beyond declining PC demand. Windows Commercial products and cloud services revenue increased 5% driven by demand for Microsoft 365.
- Devices revenue decreased \$1.8 billion or 24% as elevated channel inventory levels continued to drive additional weakness beyond declining PC demand.
- Gaming revenue decreased \$764 million or 5% driven by declines in Xbox hardware and Xbox content and services. Xbox hardware revenue decreased 11% driven by lower volume and price of consoles sold. Xbox content and services revenue decreased 3% driven by a decline in first-party content, offset in part by growth in Xbox Game Pass.
- Search and news advertising revenue increased \$617 million or 5%. Search and news advertising revenue excluding traffic acquisition costs increased 11% driven by higher search volume and the Xandr acquisition.

Operating income decreased \$4.0 billion or 20%.

- Gross margin decreased \$4.2 billion or 13% driven by declines in Windows and Devices. Gross margin percentage decreased driven by a decline in Devices.
- Operating expenses decreased \$195 million or 2% driven by a decline in Devices, offset in part by investments in Search and news advertising, including 2 points of growth from the Xandr acquisition.

Revenue, gross margin, and operating income included an unfavorable foreign currency impact of 3%, 4%, and 6%, respectively. Operating expenses included a favorable foreign currency impact of 2%.

OPERATING EXPENSES

Research and Development

(In millions, except percentages)	2023	2022	Percentage Change
Research and development	\$ 27,195	\$ 24,512	11%
As a percent of revenue	13%	12%	1ppt

Research and development expenses include payroll, employee benefits, stock-based compensation expense, and other headcount-related expenses associated with product development. Research and development expenses also include third-party development and programming costs and the amortization of purchased software code and services content.

Fiscal Year 2023 Compared with Fiscal Year 2022

Research and development expenses increased \$2.7 billion or 11% driven by investments in cloud engineering and LinkedIn.

Sales and Marketing

(In millions, except percentages)	2023	2022	Percentage Change
Sales and marketing	\$ 22,759	\$ 21,825	4%
As a percent of revenue	11%	11%	0ppt

Sales and marketing expenses include payroll, employee benefits, stock-based compensation expense, and other headcount-related expenses associated with sales and marketing personnel, and the costs of advertising, promotions, trade shows, seminars, and other programs.

Fiscal Year 2023 Compared with Fiscal Year 2022

Sales and marketing expenses increased \$934 million or 4% driven by 3 points of growth from the Nuance and Xandr acquisitions and investments in commercial sales, offset in part by a decline in Windows advertising. Sales and marketing included a favorable foreign currency impact of 2%.

General and Administrative

(In millions, except percentages)	2023	2022	Percentage Change
General and administrative	\$ 7,575	\$ 5,900	28%
As a percent of revenue	4%	3%	1ppt

General and administrative expenses include payroll, employee benefits, stock-based compensation expense, employee severance expense incurred as part of a corporate program, and other headcount-related expenses associated with finance, legal, facilities, certain human resources and other administrative personnel, certain taxes, and legal and other administrative fees.

Fiscal Year 2023 Compared with Fiscal Year 2022

General and administrative expenses increased \$1.7 billion or 28% driven by employee severance expenses and a charge related to a non-public preliminary draft decision provided by the Irish Data Protection Commission. General and administrative included a favorable foreign currency impact of 2%.

OTHER INCOME (EXPENSE), NET

The components of other income (expense), net were as follows:

(In millions)

Year Ended June 30,	2023	2022
Interest and dividends income	\$ 2,994	\$ 2,094
Interest expense	(1,968)	(2,063)
Net recognized gains on investments	260	461
Net losses on derivatives	(456)	(52)
Net gains (losses) on foreign currency remeasurements	181	(75)
Other, net	(223)	(32)
Total	\$ 788	\$ 333

We use derivative instruments to manage risks related to foreign currencies, equity prices, interest rates, and credit; enhance investment returns; and facilitate portfolio diversification. Gains and losses from changes in fair values of derivatives that are not designated as hedging instruments are primarily recognized in other income (expense), net.

Fiscal Year 2023 Compared with Fiscal Year 2022

Interest and dividends income increased due to higher yields, offset in part by lower portfolio balances. Interest expense decreased due to a decrease in outstanding long-term debt due to debt maturities. Net recognized gains on investments decreased due to lower gains on equity securities and higher losses on fixed income securities. Net losses on derivatives increased due to losses related to managing strategic investments.

INCOME TAXES

Effective Tax Rate

Our effective tax rate for fiscal years 2023 and 2022 was 19% and 13%, respectively. The increase in our effective tax rate was primarily due to a \$3.3 billion net income tax benefit in the first quarter of fiscal year 2022 related to the transfer of intangible properties and a decrease in tax benefits relating to stock-based compensation.

In the first quarter of fiscal year 2022, we transferred certain intangible properties from our Puerto Rico subsidiary to the U.S. The transfer of intangible properties resulted in a \$3.3 billion net income tax benefit in the first quarter of fiscal year 2022, as the value of future U.S. tax deductions exceeded the current tax liability from the U.S. global intangible low-taxed income tax.

Our effective tax rate was lower than the U.S. federal statutory rate, primarily due to earnings taxed at lower rates in foreign jurisdictions resulting from producing and distributing our products and services through our foreign regional operations center in Ireland.

The mix of income before income taxes between the U.S. and foreign countries impacted our effective tax rate as a result of the geographic distribution of, and customer demand for, our products and services. In fiscal year 2023, our U.S. income before income taxes was \$52.9 billion and our foreign income before income taxes was \$36.4 billion. In fiscal year 2022, our U.S. income before income taxes was \$47.8 billion and our foreign income before income taxes was \$35.9 billion.

Uncertain Tax Positions

We settled a portion of the Internal Revenue Service ("IRS") audit for tax years 2004 to 2006 in fiscal year 2011. In February 2012, the IRS withdrew its 2011 Revenue Agents Report related to unresolved issues for tax years 2004 to 2006 and reopened the audit phase of the examination. We also settled a portion of the IRS audit for tax years 2007 to 2009 in fiscal year 2016, and a portion of the IRS audit for tax years 2010 to 2013 in fiscal year 2018. In the second quarter of fiscal year 2021, we settled an additional portion of the IRS audits for tax years 2004 to 2013 and made a payment of \$1.7 billion, including tax and interest. We remain under audit for tax years 2004 to 2017.