Risk Factors Comparison 2023-10-06 to 2022-10-07 Form: 10-K

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In addition to the factors discussed elsewhere in this Form 10- K, this section discusses important factors which could cause actual results or events to differ materially from those contained in any forward- looking statements made by us. The order of presentation is not necessarily indicative of the level of risk that each factor poses to us. Any of these factors could have a material adverse effect on our business, results of operations, financial condition, or stock price. Our operations could also be affected by other factors that are presently unknown to us or not considered significant. Risk Factor Summary Risks Related to Our Business, Operations, and Industry • volatility in average selling prices of our products; • ~~our ability to maintain~~ **a range of factors that may adversely affect** ~~or~~ **our** ~~improve~~ gross margins ~~; • the highly competitive nature of our industry; • a downturn in the worldwide economy; • our ability to develop and produce new and competitive memory and storage technologies and products; • dependency on specific customers, concentration of revenue with a select number of customers, and customers who are located internationally~~ ; • our international operations, including geopolitical risks; • ~~limited availability and quality~~ **the highly competitive nature** of ~~materials, supplies, and capital equipment and dependency on third- party service providers for ourselves and~~ our ~~customers~~ **industry** ; • **our ability to develop and produce new and competitive memory and storage technologies and** products ~~that fail to meet specifications, are defective, or are incompatible with end uses; • the effects of the COVID- 19 pandemic; • disruptions to our manufacturing process from operational issues, natural disasters, or other events; • breaches of our security systems or products, or those of our customers, suppliers, or business partners; • attracting, retaining, and motivating highly skilled employees~~ ; • realizing expected returns from capacity expansions; • achieving or maintaining certain performance **or other** obligations associated with incentives from various governments; • ~~acquisitions~~ **availability** and ~~/ or alliances~~ **quality of materials, supplies, and capital equipment and dependency on third- party service providers** ; • ~~restructure charges~~ **a downturn in regional or worldwide economies; • disruptions to our manufacturing process from operational issues, natural disasters, or other events; • dependency on a select number of key customers, including international customers; • products that fail to meet specifications, are defective, or are incompatible with end uses; • breaches of our security systems or products, or those of our customers, suppliers, or business partners; • attracting, retaining, and motivating highly skilled employees** ; • responsible sourcing requirements and related regulations; ~~and~~ • environmental, social, and governance considerations **; • acquisitions and / or alliances; and • restructure plans may not realize expected savings or other benefits** . Risks Related to Intellectual Property and Litigation • protecting our intellectual property and retaining key employees who are knowledgeable of and develop our intellectual property; • legal proceedings and claims; and • claims that our products or manufacturing processes infringe or otherwise violate the intellectual property rights of others or failure to obtain or renew license agreements covering such intellectual property. Risks Related to Laws and Regulations • **impacts of government actions and** compliance with tariffs, trade restrictions, and / or trade regulations; • tax expense and tax laws in key jurisdictions; and • compliance with laws, regulations, or industry standards, including ~~ESG~~ **environmental** considerations. Risks Related to Capitalization and Financial Markets • our ability to generate sufficient cash flows or obtain access to external financing; • our debt obligations; • changes in foreign currency exchange rates; • counterparty default risk; • volatility in the trading price of our common stock; and • fluctuations in the amount and ~~timing~~ **frequency** of our common stock repurchases and payment of cash dividends and resulting impacts. **21 | 2023 10-** ~~Volatility~~ **KVolatility** in average selling prices for our semiconductor memory and storage products may adversely affect our business. We have experienced significant volatility in our average selling prices and may continue to experience such volatility in the future. For **example, average selling prices for** DRAM **declined in the high- 40s percent range and NAND declined in the low- 50s percent range for 2023 as compared to 2022. Since 2017** , annual percentage changes in **DRAM** average selling prices have ranged from **approximately** plus ~~or minus approximately~~ 35 % **to a minus high- 40s percent range.** ~~since~~ **Since** 2017 ~~. For~~ **, annual percentage changes in** NAND ~~,~~ average selling prices have **ranged** ~~generally declined since 2017, with annual price declines ranging~~ from ~~approximately 10 % to~~ nearly **flat to a minus low-** ~~50~~ **50s** ~~%~~ **percent range** . In ~~some prior~~ **current and recent** periods, average selling prices for our products have been below our manufacturing costs and we may experience such circumstances in the future. Average selling prices for our products that decline faster than our costs **have recently had an adverse effect on our business and results of operations, and in future periods** could have a material adverse effect on our business, results of operations, or financial condition. **Our** ~~We may be unable to maintain or improve~~ gross margins **may be adversely affected by a range of factors** . Our gross margins are dependent, in part, upon continuing decreases in per gigabit manufacturing costs achieved through improvements in our manufacturing processes and product designs. Factors that may limit our ability to reduce our per gigabit manufacturing costs at sufficient levels to ~~maintain~~ **prevent deterioration of** or improve gross margins include, but are not limited to: • strategic product diversification decisions affecting product mix; • increasing complexity of manufacturing processes; • difficulties in transitioning to smaller line- width process technologies or additional 3D memory layers or NAND cell levels; • process complexity including number of mask layers and fabrication steps; • manufacturing yield; • technological barriers; • changes in process technologies; • new products that may require relatively larger die sizes; • start- up or other costs associated with capacity expansions; ~~and~~ • higher costs of goods and services due to inflationary pressures or market conditions **; and • higher manufacturing costs per gigabit due to fabrication facility underutilization, lower wafer output, and insufficient volume to run new technology nodes to achieve cost optimization** . Many factors may result in a reduction of our output or a delay in ramping production, which could lead to underutilization of our production assets. These factors may include, among others, a weak demand environment, industry oversupply, inventory surpluses, difficulties in ramping emerging technologies, supply chain disruptions, and delays from equipment suppliers **. See " Part II – Item 7. Management' s Discussion and Analysis of Financial Condition and Results of Operations – Overview – Industry Conditions " for information regarding our current underutilization** . A significant portion of our manufacturing costs are fixed and do not vary proportionally with changes in production output. As a result, lower utilization **, lower wafer output,** and corresponding increases in our per gigabit manufacturing costs **have resulted in higher inventory carrying costs, and have had, and** may **continue to have, an** ~~adversely~~ -- **adverse** ~~affect~~ **effect on** our gross margins, business, results of operations, or financial condition. We have a broad portfolio of products to address our customers' needs, which span multiple market segments and are subject to rapid technological changes. Our manufacturing costs on a per gigabit basis vary across our portfolio as they are largely influenced by the technology node in which the solution was developed. We strive to balance our demand and supply for each technology node, but the dynamics of our markets and our customers can create periods of imbalance, which can lead us to carry elevated inventory levels. Consequently, we may incur charges in connection with obsolete or excess inventories **,** or we may not fully recover our costs, which would reduce our gross margins. **For example, in 2023, we recorded aggregate charges of $ 1. 83 billion to write down the carrying value of our inventories to their estimated net realizable value.** In addition, due to the customized nature of certain ~~of the~~ products we manufacture, we may be unable to sell certain finished goods inventories to alternative customers or manufacture in- process inventory to different specifications, which may result in excess and obsolescence charges in future periods. In addition, if we are unable to supply products that meet customer design and performance specifications, we may be required to sell such products at lower average selling prices, which may reduce our gross margins. Our gross margins may also be impacted by shifts in product mix, driven by our strategy to optimize our portfolio to best respond to changing market dynamics. Our inability to ~~maintain~~ **prevent deterioration of** or improve gross margins could have a material adverse effect on our business, results of operations, or financial condition. **actions or civil** unrest preventing the flow of products and materials,including delays in shipping and obtaining products and materials,cancellation of orders,or loss or damage of products;• problems with the transportation or delivery of products and materials;• issues arising from cultural or language differences and labor unrest;• longer payment cycles and greater difficulty in collecting accounts receivable;• compliance with trade,technical standards,and other laws in a variety of jurisdictions;• contractual and regulatory limitations on the ability to maintain flexibility with staffing levels;• disruptions to manufacturing or R & D activities as a result of actions imposed by foreign governments;• changes in economic policies of foreign governments; **and** • difficulties in staffing and managing international operations ~~;and • public health issues~~ .If we or our customers,suppliers,or vendors are impacted by any of these risks **,it** 23 | ~~2022~~ **2023** 10- K **.** ~~operations,or~~ **For example,** ~~financial condition.Political~~ **political** ,economic,or other actions may adversely affect our operations in Taiwan.A majority of our DRAM production output in ~~2023~~ **2022** was from our fabrication facilities in Taiwan and any loss of output could have a material adverse effect on us.Any political,economic,or other actions may also adversely affect our customers and the technology industry supply chain,for which Taiwan is a central hub,and as a result,could have a material adverse impact on us.In addition,the U.S.government has in the past restricted American firms from selling products and software to certain of our customers and may in the future impose similar restrictions on one or more of our significant customers.These restrictions may not prohibit our competitors from selling similar products to our customers,which may result in our loss of sales and market share.Even ~~as~~ **when** such restrictions are lifted,financial or other penalties or continuing export restrictions imposed with respect to our customers could have a continuing negative impact on our future revenue and results of operations,and we may not be able to recover any customers or market share we lose,or make such recoveries at acceptable average selling prices,while complying with **such restrictions** The semiconductor memory and storage markets are highly competitive. We face intense competition in the semiconductor memory and storage markets from a number of companies, including ~~Intel;~~ Kioxia Holdings Corporation; Samsung Electronics Co., Ltd.; SK hynix Inc.; and Western Digital Corporation. Our competitors may use aggressive pricing to obtain market share. Some of our competitors are large corporations or conglomerates that may have **a larger market share and** greater resources to invest in technology, capitalize on growth opportunities, and withstand downturns in the semiconductor markets in which we compete. Consolidation of industry competitors could put us at a competitive disadvantage as our competitors may benefit from increased manufacturing scale and a stronger product portfolio. **We operate in different jurisdictions than our competitors and may be impacted by unfavorable changes in currency exchange rates.** In addition, some governments may provide, or have provided and may continue to provide, significant assistance, financial or otherwise, to some of our competitors or to new entrants and may intervene in support of national industries and / or competitors. In particular, we face the threat of increasing competition as a result of significant investment in the semiconductor industry by the Chinese government and various state- owned or affiliated entities, **in companies** such as **Yangtze Memory Technologies Co., Ltd. ("** YMTC **")** and **ChangXin Memory Technologies, Inc. ("** CXMT **"). In addition** , **the CAC** ~~that is intended to advance China~~ ' s **decision that critical information infrastructure operators** ~~stated national policy objectives. In addition, the Chinese government may restrict us from participating~~ in ~~the~~ China ~~market~~ **may not purchase Micron products had an impact on** ~~or~~ **our ability to** ~~may prevent us from competing~~ **compete** effectively ~~with Chinese companies~~ **in China and elsewhere** . We and our competitors generally seek to increase wafer output, improve yields, and reduce die size, which could result in significant increases in worldwide supply and downward pressure on prices. Increases in worldwide supply of semiconductor memory and storage also result from fabrication capacity expansions, either by way of new facilities, increased capacity utilization, or reallocation of other semiconductor production to semiconductor memory and storage production. Our competitors may increase capital expenditures resulting in future increases in worldwide supply. We, and some of our competitors, have plans to ramp, or are constructing or ramping, production at new fabrication facilities. Increases in worldwide supply of semiconductor memory and storage, if not accompanied by commensurate increases in demand, could lead to declines in average selling prices for our products and could materially adversely affect our business, results of operations, or financial condition. If competitors are more successful at developing or implementing new product or process technology, their products could have cost or performance advantages. The competitive nature of our industry could have a material adverse effect on...... result, downturns in the worldwide economy could have a material adverse effect on our business, results of operations, or financial condition. Our future success depends on our ability to develop and produce new and competitive memory and storage technologies and products. Our key semiconductor memory and storage technologies face technological barriers to continue to meet long- term customer needs. These barriers include potential limitations on stacking additional 3D memory layers, increasing bits per cell (i. e., cell levels), meeting higher density requirements, improving power consumption and reliability, and delivering advanced features and higher performance. We may face technological barriers to continue to shrink our products at our current or historical rate, which has generally reduced per gigabit cost. We have invested and expect to continue to invest in R & D for new and existing products and process technologies, such as EUV lithography, to continue to deliver advanced product requirements. Such new technologies can add complexity and risk to our schedule and may affect our costs and production output. We may be unable to recover our investment in R & D or otherwise realize the economic benefits of reducing die size or increasing memory and storage densities. Our competitors are working to develop new memory and storage technologies that may offer performance and / or cost advantages to existing technologies and render existing technologies obsolete. Accordingly, our future success may depend on our ability to develop and produce viable and competitive new memory and storage technologies. We are developing new products, including system- level memory and storage products and solutions, which complement our traditional products or leverage their underlying design or process technology. We have invested and expect to continue to invest in new semiconductor product and system- level solution development. We are increasingly differentiating our products and solutions to meet the specific demands of our customers, which increases our reliance on our customers' ability to accurately forecast the needs and preferences of their customers. As a result, our product demand forecasts may be impacted significantly by the strategic actions of our customers. In addition, our ability to successfully introduce new products often requires us to make product specification decisions multiple years in advance of when new products enter the market. It is important that we deliver products in a timely manner with increasingly advanced performance characteristics at the time our customers are designing and evaluating samples for their products. If we do not meet their product design schedules, our customers may exclude us from further consideration as a supplier for those products. The process to develop new products requires us to demonstrate advanced functionality, performance, and reliability, often well in advance of a planned ramp of production, in order to secure design wins with our customers. Many factors may negatively impact our ability to meet anticipated timelines and / or expected or required quality standards with respect to the development of certain of our products. In addition, some of our components have long lead- times, requiring us to place orders up to a year in advance of anticipated demand. Such long lead- times increase the risk of excess inventory or loss of sales in the event our forecasts vary substantially from actual demand. There can be no assurance of the following: • we will be successful in developing competitive new semiconductor memory and storage technologies and products; • we will be able to cost- effectively manufacture new products; • we will be able to successfully market these technologies; • margins generated from sales of these products will allow us to recover costs of development efforts; • we will be able to establish or maintain key relationships with customers, or that we will not be prohibited from working with certain customers, for specific chip set or design requirements; • we will accurately predict and design products that meet our customers' specifications; or • we will be able to introduce new products into the market and qualify them with our customers on a timely basis. Unsuccessful efforts to develop new memory and storage technologies and products could have a material adverse effect on our business, results of operations, or financial condition. 25 | ~~2022~~ **2023** 10- K **We may not be able to achieve expected returns** ~~A significant portion of our revenue is concentrated with a select number of customers. In each of the last three years, approximately one- half of our total revenue was~~ from **capacity expansions** ~~our top ten customers. A disruption in our relationship with any of these customers could adversely affect our business~~. We **have announced** ~~could experience fluctuations in our customer base or~~ **our intent to expand our production capacity and / or make capital investments in the United States and in** ~~the~~ **other regions where we operate. These expansions** ~~mix of revenue by customer as markets and strategies evolve~~ **involve** ~~. Our customers' demand~~ **several risks including the following: • capital expenditure requirements** for **capacity expansions during periods** ~~our products may fluctuate due to factors beyond our control. In addition, any consolidation~~ of **relatively low free cash flow generation, resulting from challenging memory and storage** ~~our customers could reduce the number of customers to whom our products may be sold. Our inability to meet our customers' requirements or to qualify our products with them could adversely impact our revenue. A meaningful change in the inventory strategy of our customers could impact our~~ industry **conditions; • availability** ~~bit demand growth outlook. The loss~~ of **necessary funding** , **which may include external sources; • ability to realize expected grants, investment tax credits, and other government incentives, including through the U. S. CHIPS and Science Act of 2022 (" CHIPS Act ") and other national, international, state, and local grants; • potential changes in laws** or **provisions of grants, investment tax credits, and other government incentives; • potential** restrictions on ~~our~~ **expanding in certain geographies; • availability of equipment and construction materials; •** ability to ~~sell~~ **complete construction as scheduled and within budget; • availability of the necessary workforce; • ability** to ~~, one~~ **timely ramp production in a cost- effective manner; • increases to** ~~or~~ **our** ~~more of our major~~ **cost structure until new production is ramped to adequate scale; and • sufficient** ~~customers~~ - **customer** ~~,~~ **demand to utilize** ~~or~~ **our** ~~any~~ **increased capacity. We invest our capital in areas that we believe best align with our business strategy and optimize future returns. Investments in capital expenditures may not generate expected returns or cash flows. Significant judgment is required to determine which capital investments will result in optimal returns, and we could invest in projects that are ultimately less profitable than those projects we do not select. Delays in completion and ramping of new production facilities, or failure to optimize our investment choices, could** ~~significant~~ **significantly impact** ~~reduction in orders from, or~~ **our** ~~a shift in product mix by, customers~~ **ability to realize expected returns on our capital expenditures. Any of the above factors** could have a material adverse effect on our business, results of operations, or financial condition. ~~We face geopolitical and~~ **Our incentives from**

various governments are conditional upon achieving or maintaining certain performance or other **obligations** ~~risks associated with our international operations that could materially adversely affect our business, results of operations, or financial condition. In addition to our U. S. operations, a substantial portion of our operations are conducted in Taiwan, Singapore, Japan, Malaysia, China,~~ and ~~India, and many of our customers, suppliers, and vendors also operate internationally. In 2022, nearly half of our revenue was from sales to customers who have headquarters located outside the United States, while over 80 % of our revenue in 2022 was from products shipped to customer locations outside the United States. Our international operations~~ are subject to ~~a number~~ **reduction, termination, clawback, or could impose certain limitations on our business. We have received, and may in the future continue to receive, benefits and incentives from national, state, and local governments in various regions** of ~~risks~~ **the world designed to encourage us to establish, maintain, or increase investment, workforce, or production in those regions. These incentives may take various forms** , including **grants** ~~: • export and import duties~~ , **loan subsidies** ~~changes to import and export regulations~~ , ~~customs regulations~~ and ~~processes~~ **tax arrangements** , and **typically require us to achieve or maintain certain levels of investment, capital spending, employment, technology deployment, or research and development activities to qualify for such incentives or could** ~~restrictions~~ ---- **restrict** ~~on the transfer of~~ **us from undertaking certain activities. We may be unable to obtain significant future incentives to continue to** ~~funds~~ - **fund a portion of our capital expenditures and operating costs** , **without** ~~including currency controls in China,~~ which ~~could negatively affect the amount and timing of payments from certain of our customers and, as a result, our cash flows; • imposition of bans on sales of goods or~~ **our** ~~services to one or more of~~ **cost structure would be adversely impacted. We also cannot guarantee that we will successfully achieve performance** ~~our~~ - **or** ~~significant foreign customers; • public health issues; •~~ **other obligations required to qualify for these incentives or that the granting agencies will provide such funding. These incentive arrangements typically provide the granting agencies with rights to audit our** compliance with ~~U. S. and international laws involving international operations, including the~~ **their terms** ~~Foreign Corrupt Practices Act of 1977, as amended, sanctions~~ and ~~anti- corruption laws~~ **obligations. Such audits could result in modifications to** , **or termination of** ~~export and import laws~~ , ~~and similar rules and regulations; • theft~~ -- **the** ~~of intellectual property; • political and economic instability~~ **applicable incentive program. The incentives we receive could be subject to reduction** , **termination, or clawback,** ~~including the effects of disputes between China~~ and **any decrease or clawback** ~~Taiwan and Russia' s invasion~~ of ~~Ukraine; •~~ government **incentives** actions or civil unrest preventing the flow...... by any of these risks, it could have a material adverse effect on our business, results of operations, or financial condition . For example, political, economic...... prices, while complying with such restrictions . Our business, results of operations, or financial condition could be adversely affected by the ~~limited~~ availability and quality of materials, supplies, and capital equipment, or dependency on third- party service providers. Our supply chain and operations are dependent on the availability of materials that meet exacting standards and the use of third parties to provide us with components and services. We generally have multiple sources of supply for our materials and services. However, only a limited number of suppliers are capable of delivering certain materials, components, and services that meet our standards and, in some cases, materials, components, or services are provided by a single or sole source, and we may be unable to qualify new suppliers on a timely basis. The availability of materials or components such as chemicals, silicon wafers, gases, photoresist, controllers, substrates, lead frames, printed circuit boards, targets, and reticle glass blanks is impacted by various factors. These factors could include a shortage of raw materials or a disruption in the processing or purification of those raw materials into finished goods. Shortages or increases in lead times have occurred in the past, are currently occurring with respect to some materials and components, and may occur from time to time in the future. Constraints within our supply chain for certain materials and integrated circuit components could limit our bit shipments, which could have a material adverse effect on our business, results of operations, or financial condition. Our manufacturing processes are also dependent on our relationships with third- party manufacturers of controllers, analog integrated circuits, and other components used in some of our products and with outsourced semiconductor foundries, assembly and test providers, contract manufacturers, logistics carriers, and other service providers, including providers of electricity and other utilities. Although we have certain long- term contracts with some of our suppliers, many of these contracts do not provide for long- term capacity or pricing commitments. To the extent we do not have firm commitments from our third- party suppliers over a specific time period or for any specific capacity, quantity, and / or pricing, our suppliers may allocate capacity to their other customers and capacity and / or materials may not be available when needed or at reasonable prices. Inflationary pressures ~~and shortages~~ have increased, and may continue to increase ~~,~~ costs for materials, supplies, and services. Regardless of contract structure, large swings in demand may exceed our contracted supply and / or our suppliers' capacity to meet those demand changes resulting in a shortage of parts, materials, or capacity needed to manufacture our products. In addition, if any of our suppliers was to cease operations or become insolvent, this could impact their ability to provide us with necessary supplies, and we may not be able to obtain the needed supply in a timely way or at all from other providers. Certain materials are primarily available in a limited number of countries, including rare earth elements, minerals, and metals. Trade disputes, geopolitical tensions, economic circumstances, political conditions, or public health issues ~~, such as COVID- 19,~~ may limit our ability to obtain such materials. Although these rare earth and other materials are generally available from multiple suppliers, China is the predominant producer of certain of these materials. If China were to restrict or stop exporting these materials, our suppliers' ability to obtain such supply may be constrained and we may be unable to obtain sufficient quantities, or obtain supply in a timely manner, or at a commercially reasonable cost. Constrained supply of rare earth elements, minerals, and metals may restrict our ability to manufacture certain of our products and make it difficult or impossible to compete with other semiconductor memory **and storage** manufacturers who are able to obtain sufficient quantities of these materials from China. We and / or our suppliers and service providers could be affected by regional conflicts, **civil unrest, labor disruptions,** sanctions, tariffs, embargoes, or other trade restrictions, as well as laws and regulations enacted in response to concerns regarding climate change, conflict minerals, responsible sourcing practices, public health crises ~~, contagious disease outbreaks~~ , or other matters, which could limit the supply of our materials and / or increase the cost. Environmental regulations could limit our ability to procure or use certain chemicals or materials in our operations or products. In addition, disruptions in transportation lines could delay our receipt of materials. Our ability to procure components to repair equipment essential for our manufacturing processes could also be negatively impacted by various restrictions or disruptions in supply chains, among other items. The disruption of our supply of materials, components, or services, or the extension of our lead times could have a material adverse effect on our business, results of operations, or financial condition. 27 | ~~2022~~ **2023** 10- K Our operations are dependent on our ability to procure advanced semiconductor manufacturing equipment that enables the transition to lower cost manufacturing processes. For certain key types of equipment, including photolithography tools, we are sometimes dependent on a single supplier. From time to time, we have experienced difficulties in obtaining some equipment on a timely basis due to suppliers' limited capacity. Our inability to obtain equipment on a timely basis could adversely affect our ability to transition to next generation manufacturing processes and reduce our costs. Delays in obtaining equipment could also impede our ability to ramp production and could increase our overall costs of a ramp. Our inability to obtain advanced semiconductor manufacturing equipment in a timely manner could have a material adverse effect on our business, results of operations, or financial condition. Our construction projects to expand production and R & D capacity are highly dependent on available sources of labor, materials, equipment, and services. Increasing demand, supply constraints, inflation, and other market conditions could result in increasing shortages and higher costs for these items. Difficulties in obtaining these resources could result in significant delays in completion of our construction projects and cost increases, which could have a material adverse effect on our business, results of operations, or financial condition. Our inability to source materials, supplies, capital equipment, or third- party services could affect our overall production output and our ability to fulfill customer demand. Significant or prolonged shortages of our products could halt customer manufacturing and damage our relationships with these customers. Any damage to our customer relationships as a result of a shortage of our products could have a material adverse effect on our business, results of operations, or financial condition. Similarly, if our customers experience disruptions to their supplies, materials, components, or services, or the extension of their lead times, they may reduce, cancel, or alter the timing of their purchases with us, which could have a material adverse effect on our business, results of operations, or financial condition. ~~The continued~~ **could have a material adverse effect on our business,results of operations,or financial condition.A downturn in the worldwide** ~~economies~~ **economy** may harm our business.Downturns in **the** ~~regional or~~ worldwide ~~economies~~ **economy** ,due to inflation,geopolitics,major central bank policy actions including interest rate increases,public health crises,or other factors,have harmed our business in the past and ~~current and~~ future downturns could also adversely affect our business.Adverse economic conditions affect demand for devices that incorporate our products,such as personal computers,smartphones,automobiles,and servers.Reduced demand for these or other products could result in significant decreases in our average selling prices and product sales.In addition,to the extent our customers or distributors have elevated inventory levels ~~or are impacted by a deterioration in credit markets~~ ,we may experience a decrease in short- term and / or long- term demand resulting in industry oversupply and declines in pricing for our products.A deterioration of conditions in ~~regional or~~ worldwide credit markets could limit our ability to obtain external financing to fund our operations and capital expenditures.In addition,we may experience losses on our holdings of cash and investments due to failures of financial institutions and other parties.Difficult economic conditions may also result in a higher rate of losses on our accounts receivable due to credit defaults.As a result,downturns in **the** ~~regional or~~ worldwide ~~economies~~ **economy** ~~could have a material adverse effect on our~~ effects **from a shift in product mix can reduce yields or disrupt production and may increase our per gigabit manufacturing costs. We and our subcontractors maintain operations and continuously implement new product and process technology at manufacturing facilities, which are widely dispersed in multiple locations in several countries including the United States, Singapore, Taiwan, Japan, Malaysia, and China. As a result** of **the necessary** interdependence within our network of manufacturing facilities,an operational disruption at one of our or a subcontractor' s facilities may have a disproportionate impact on our ability to produce many of our products.From time to time,there have been disruptions in our manufacturing operations as a result of power outages,improperly functioning equipment,disruptions in supply of raw materials or components,or equipment failures.We have manufacturing and other operations in locations subject to natural occurrences and possible climate changes,such as severe and variable weather and geological events resulting in increased costs,or disruptions to our manufacturing operations or those of our suppliers or customers.In addition,climate change may pose physical risks to our manufacturing facilities or our suppliers' facilities,including increased extreme weather events that could result in supply delays or disruptions.Other events,including political or public health crises,such as an outbreak of contagious diseases **,** ~~like COVID- 19~~ may also affect our production capabilities or that of our suppliers,including as a result of quarantines,closures of production facilities,lack of supplies,or delays caused by restrictions on travel or shipping.Events of the types noted above have occurred from time to time and may occur in the future.As a result,in addition to disruptions to operations,our insurance premiums may increase or we may not be able to fully recover any sustained losses through insurance.If production is disrupted for any reason,manufacturing yields may be adversely affected,or we may be unable to meet our customers' requirements **and** ~~the~~ **they** ~~COVID~~ **may purchase products from other suppliers. This could result in a significant increase in manufacturing costs, loss of revenue, or damage to customer relationships, any of which could have a material adverse effect on our business, results of operations, or financial condition. A significant portion of our revenue is concentrated with a select number of customers. In each of the last three years, approximately one** - ~~19 pandemic~~ **half of our total revenue was from our top ten customers. A disruption in our relationship with any of these customers** could adversely affect our business ~~, results~~ **. We could experience fluctuations in our customer base or the mix** of ~~operations,~~ **revenue by customer as markets** and ~~financial condition~~ **strategies evolve. Our customers' demand for our products may fluctuate due to factors beyond our control. In addition, any consolidation of our customers could reduce the number of customers to whom our products may be sold. Our inability to meet our customers' requirements or to qualify our products with them could adversely impact our revenue. A meaningful change in the inventory strategy of our customers could impact our industry bit demand growth** outlook . The loss ~~ongoing effects~~ of ~~the public health crisis caused~~ , or restrictions on our ability to sell to, one or more of our major customers, or any significant reduction in orders from, or a shift in product mix by ~~the COVID- 19 pandemic and the measures being taken to limit COVID- 19' s impact on our business~~ , ~~results of operations, and financial condition are uncertain and difficult to predict, but may include, and in some cases, have included and may continue to include: • Disruptions to our supply chain and our operations, or those of our suppliers, especially as a result of public health measures, including zero-COVID policies in China or elsewhere; • Impacts to customer~~ customers ~~demand, resulting in industry oversupply and declines in pricing for our products; • Adverse impacts to our business activities and increased costs from our efforts to mitigate the impact of COVID- 19; • Increased costs for, or unavailability of, transportation, raw materials, components, electricity and / or other energy sources, or other inputs necessary for the operation of our business; • Reductions in, or cessation of operations at one or more of our sites or those of our subcontractors or suppliers, resulting from government restrictions and / or our own measures to prevent and / or mitigate the spread of COVID- 19; and • Adverse impacts to our construction projects, which could hamper our ability to introduce new technologies, reduce costs, or meet customer demand. These effects and other impacts of the pandemic, alone or taken together,~~ could have a material adverse effect on our business, results of operations, or financial condition. Increases in sales of system solutions may increase our dependency upon specific customers and our costs to develop, qualify, and manufacture our system solutions. Our development of system- level memory and storage products is dependent, in part, upon successfully identifying and meeting our customers' specifications for those products. Developing and manufacturing system- level products with specifications unique to a customer increases our reliance upon that customer for purchasing our products at sufficient volumes and prices in a timely manner. Even if our products meet customer specifications, our sales of system- level solutions are dependent upon our customers choosing our products over those of our competitors and purchasing our products at sufficient volumes and prices. Our competitors' products may be less costly, provide better performance, or include additional features when compared to our products. Our long- term ability to sell system- level memory and storage products is reliant upon our customers' ability to create, market, and sell their products containing our system- level solutions at sufficient volumes and prices in a timely manner. If we fail to successfully develop and market system- level products, our business, results of operations, or financial condition may be materially adversely affected. 29 | 2023 10- K Manufacturing system- level solutions, such as SSDs ~~and~~ , managed NAND , and HBM , typically results in higher per- unit manufacturing costs as compared to other products. Even if we are successful in selling system- level solutions to our customers in sufficient volume, we may be unable to generate sufficient profit if our per- unit manufacturing costs are not offset by higher per- unit selling prices. Manufacturing system- level solutions to customer specifications requires a longer development cycle, as compared to discrete products, to design, test, and qualify, which may increase our costs. Some of our system solutions are increasingly dependent on sophisticated firmware that may require significant customization to meet customer specifications, which increases our costs and time to market. Additionally, we may need to update our controller and hardware design as well as our firmware or develop new firmware as a result of new product introductions or changes in customer specifications and / or industry standards, which increases our costs. System complexities and extended warranties for system- level products could also increase our warranty costs. Our failure to cost- effectively manufacture system- level solutions and / or controller, hardware design, and firmware in a timely manner may result in reduced demand for our system- level products and could have a material adverse effect on our business, results of operations, or financial condition. Products that fail to meet specifications, are defective, or are otherwise incompatible with end uses could impose significant costs on us. Products that do not meet specifications or that contain, or are perceived by our customers to contain, defects or that are otherwise incompatible with end uses could impose significant costs on us or otherwise materially adversely affect our business, results of operations, or financial condition. From time to time, we experience problems with nonconforming, defective, or incompatible products after we have shipped such products. In recent periods, we have further diversified and expanded our product offerings, which could potentially increase the chance that one or more of our products could fail to meet specifications in a particular application. Our products and solutions may be deemed fully or partially responsible for functionality in our customers' products and may result in sharing or shifting of product or financial liability from our customers to us for costs incurred by the end user as a result of our customers' products failing to perform as specified. In addition, if our products and solutions perform critical functions in our customers' products or are used in high- risk consumer end products, such as autonomous driver assistance programs, home and enterprise security, smoke and noxious gas detectors, medical monitoring equipment, or wearables for child and elderly safety, our potential liability may increase. We could be adversely affected in several ways, including the following: • we may be required or agree to compensate customers for costs incurred or damages caused by defective or incompatible products and to replace products; • we could incur a decrease in revenue or adjustment to pricing commensurate with the reimbursement of such costs or alleged damages; and • we may encounter adverse publicity, which could cause a decrease in sales of our products or harm our reputation or relationships with existing or potential customers. Any of the foregoing items could have a material adverse effect on our business, results of operations, or financial condition. 29 | 2022 10- K If...... of operations, or financial condition. Breaches of our security systems or products, or those of our customers, suppliers, or business partners, could expose us to losses. We maintain a system of controls over the physical security of our facilities. We also manage and store various proprietary information and sensitive or confidential data relating to our operations. In addition, we process, store, and transmit large amounts of data relating to our customers and employees, including sensitive personal information. Unauthorized persons, employees, former employees, nation states, or other ~~third~~ parties may gain access to our facilities or technology infrastructure and systems to steal trade secrets or other proprietary information, compromise confidential information, create system disruptions, or cause shutdowns. This risk is exacerbated as competitors for talent, particularly engineering talent, ~~increasingly~~ attempt to hire our employees. Through cyberattacks on technology infrastructure and systems, unauthorized parties may obtain access to computer systems, networks, and data, including cloud- based platforms. The technology infrastructure and systems of our suppliers, vendors, service providers, cloud solution providers, and partners have in the past experienced, and may in the future experience, such attacks, which could impact our operations. Cyberattacks can include ransomware, computer denial- of- service attacks, worms, supply chain attacks, social engineering **, open source vulnerabilities** , and other malicious software programs or other attacks, including those using techniques that change frequently or may be disguised or difficult to detect, or designed to remain dormant until a triggering event, impersonation of authorized users, and efforts to discover and exploit any design flaws, " bugs, " security vulnerabilities, as well as intentional or unintentional acts by employees or other insiders with access privileges **. Additionally, some actors are using artificial intelligence technology to launch more automated, targeted and coordinated attacks** . Globally, cyberattacks are increasing in number and the attackers are increasingly organized and well- financed, or supported by state actors, and are developing increasingly sophisticated systems to not only attack, but also to evade detection. In addition, geopolitical tensions or conflicts may create a heightened risk of cyberattacks. Breaches of our physical security, attacks on our technology infrastructure and systems, or breaches or attacks on our customers, suppliers, or business partners who have confidential or sensitive information regarding us and our customers and suppliers, could result in significant losses and damage our reputation with customers and suppliers and may expose us to litigation if the confidential information of our customers, suppliers, or employees is compromised. Our products are also targets for cyberattacks, including those products utilized in cloud- based environments. While some of our products contain encryption or security algorithms to protect third- party content or user- generated data stored on our products, these products could still be hacked or the encryption schemes could be compromised, breached, or circumvented by motivated and sophisticated attackers. Further, our products contain sophisticated hardware and firmware and applications that may contain security vulnerabilities or defects in design or manufacture, including " bugs " and other problems that could interfere with the intended operation of our products. To the extent our products are hacked, or the encryption schemes are compromised or breached, this could harm our business by requiring us to employ additional resources to fix the errors or defects, exposing us to litigation, claims, and harm to our reputation. Any of the foregoing security risks could have a material adverse effect on our business, results of operations, or financial condition. We must attract, retain, and motivate highly skilled employees. To remain competitive, we must attract, retain, and motivate executives and other highly skilled, diverse employees, as well as effectively manage succession for key employees. Competition for experienced employees in our industry ~~is~~ **can be** intense. Hiring and retaining qualified executives and other employees is critical to our business. If our total compensation programs, employment benefits, and workplace culture are not viewed as competitive and inclusive, our ability to attract, retain, and motivate employees could be compromised. At times, we experience higher levels of attrition, increasing compensation costs, and more intense competition for talent across our industry. To the extent we experience significant attrition and are unable to timely replace employees, we could experience a loss of critical skills and reduced employee morale, potentially resulting in business disruptions or increased expenses to address any disruptions. Additionally, changes to immigration policies in the countries in which we operate, as well as restrictions on travel due to public health crises or other causes, may limit our ability to hire and / or retain talent in, or transfer talent to, specific locations. Our inability to attract, retain, and motivate executives and other employees or effectively manage succession of key roles may inhibit our ability to maintain or expand our business operations. **31 | 2023 10- K Compliance with responsible sourcing requirements and any related regulations could increase our operating costs, or limit the supply and increase the cost of certain materials, supplies, and services, and if we fail to comply, customers may reduce purchases from us or disqualify us as a supplier.** We **and** ~~may~~ **many** ~~not and many~~ of our customers have adopted responsible sourcing programs that require us to meet certain ~~ESG~~ **environmental,social and governance** criteria,and to periodically report on our performance against these requirements,including that we source the materials,supplies,and services we use and incorporate into the products we sell as prescribed by these programs.Many customer programs require us to remove a supplier within a prescribed period if such supplier ceases to comply with prescribed criteria,and our supply chain may at any time contain suppliers at risk of being removed due to non- compliance with responsible sourcing requirements.Some of our customers may elect to disqualify us as a supplier (resulting in a permanent or temporary loss of sales to such customer) or reduce purchases from us if we are unable to verify that our performance or products (including the underlying supply chain) meet the specifications of our customers' responsible sourcing programs on a continuous basis.Meeting responsible sourcing requirements may increase operating requirements and costs or limit the sourcing and availability of some of the materials,supplies,and services we use,particularly when the availability of such materials,supplies,and services is concentrated to a limited number of suppliers.From time to time,we remove suppliers or require our suppliers to remove suppliers from their supply chains based on our responsible sourcing requirements or customer requirements,and we or our suppliers may ~~be unable~~ be ~~able~~ **unable** to **replace such removed suppliers** ~~achieve expected returns from capacity expansions. We have announced our intent to expand our DRAM production capacity~~ in **a** ~~the United States and we also make capital investments in projects outside the United States. These expansions involve several risks including the following: • capital expenditure requirements for capacity expansions during periods of relatively low free cash flow generation, resulting from challenging memory and storage industry conditions; • availability of necessary funding, which may include external sources; • ability to realize expected grants, investment tax credits, and other government incentives, including through the U. S. CHIPS and Science Act of 2022 (" CHIPS Act ") and foreign, state, and local grants; • potential changes in laws or provisions of grants, investment tax credits, and other government incentives; • potential restrictions on expanding in certain geographies; • availability of equipment and construction materials; • ability to complete construction as scheduled and within budget; • availability of the necessary workforce; • ability to~~ timely **or** ~~ramp production in a~~ cost- effective manner ~~; • increases~~ **. Any inability** to **replace removed suppliers in a timely** ~~our~~ - **or** cost **effective manner may affect our ability** ~~structure until new production is ramped to adequate scale;~~ and ~~•~~ **/ or the cost to obtain** sufficient ~~growth in customer demand to meet~~ **quantities of materials, supplies, and services necessary for the manufacture of** our **products** ~~increased output~~ . **Our inability to replace suppliers** ~~We invest our capital in areas that~~ we ~~believe best align~~ **have removed in a timely or cost- effective manner or comply** with **customers' responsible sourcing requirements** ~~our~~ - **or with any related regulations** ~~business strategy and optimize future returns. Investments in capital~~

~~expenditures may not generate expected returns or cash flows. Significant judgment is required to determine which capital investments will result in optimal returns, and we could invest in projects that are ultimately less profitable than those projects we do not select. Delays in completion and ramping of new production facilities, or failure to optimize our investment choices, could significantly impact our ability to realize expected returns on our capital expenditures. 31 | 2022 10- K Any of the above factors~~ could have a material adverse effect on our business, results of operations, or financial condition. ~~Our incentives~~ **Failure to meet environmental, social, and governance expectations or standards or achieve our related goals could adversely affect our business, results of operations, financial condition, or stock price. In recent years, there has been an increased focus** from ~~various governments~~ **stakeholders on environmental, social, and governance matters, including greenhouse gas emissions and climate- related risks, sustainability, renewable energy, water stewardship, waste management, diversity, equality and inclusion, responsible sourcing and supply chain, human rights, and social responsibility. Given our commitment to relevant social and environmental issues as it relates to our business, we actively manage these issues and have established and publicly announced certain goals, commitments, and targets which we may refine or even expand further in the future. These goals, commitments, and targets reflect our current plans and aspirations and** are **not** ~~conditional upon achieving or maintaining certain performance obligations and are subject to reduction, termination, or clawback. We have received, and may in the future continue to receive, benefits and incentives from national, state, and local governments in various regions of the world designed to encourage us to establish, maintain, or increase investment, workforce, or production in those regions. These incentives may take various forms, including grants, loan subsidies, and tax arrangements, and typically require us to achieve or maintain certain levels of investment, capital spending, employment, technology deployment, or research and development activities to qualify for such incentives or could restrict us from undertaking certain activities. We may be unable to obtain significant future incentives to continue to fund a portion of our capital expenditures and operating costs, without which our cost structure would be adversely impacted. We also cannot guarantee~~ **guarantees** that we will ~~successfully~~ **be able to** achieve ~~performance obligations required to qualify~~ **them. Achieving these goals may entail significant costs,** for **example we have entered into several virtual power purchase agreements to obtain renewable energy credits at a cost that will vary based on future prices for electrical power. Evolving stakeholder expectations and our efforts to manage** these ~~incentives or that~~ **issues, report on** ~~the~~ **them** ~~granting agencies will provide such funding. These incentive arrangements typically provide the granting agencies with rights to audit our compliance with their terms and obligations. Such audits could result in modifications to~~ , **and accomplish** ~~or~~ **our** ~~termination of~~ **goals present numerous operational** , **regulatory, reputational, financial, legal, and** ~~the~~ **other risks** ~~applicable incentive program. The incentives we receive could be subject to reduction~~ , ~~termination, or clawback, and~~ any ~~decrease or clawback~~ of **which** ~~government incentives~~ could have a material **adverse impact, including on our reputation and stock price. Such risks and uncertainties include: • reputational harm, including damage to our relationships with customers, suppliers, investors, governments, or other stakeholders; • adverse impacts on our ability to manufacture and sell products and maintain our market share; • the success of our collaborations with third parties; • increased risk of litigation, investigations, or regulatory enforcement action; • unfavorable environmental, social, and governance ratings or investor sentiment; • diversion of resources and increased costs to control, assess, and report on environmental, social, and governance metrics; • our ability to achieve our goals, commitments, and targets within timeframes announced; • increased costs to achieve our goals, commitments, and targets; • unforeseen operational and technological difficulties; • access to and increased cost of capital; and • adverse impacts on our stock price. Any failure, or perceived failure, to meet evolving stakeholder expectations and industry standards or achieve our environmental, social, and governance goals, commitments, and targets could have an** adverse effect on our business, results of operations, ~~or~~ financial condition **, or stock price** . Acquisitions and / or alliances involve numerous risks. Acquisitions and the formation or operation of alliances, such as joint ventures and other partnering arrangements, involve numerous risks, including the following: • integrating the operations, technologies, and products of acquired or newly formed entities into our operations; • increasing capital expenditures to upgrade and maintain facilities; • increased debt levels; • the assumption of unknown or underestimated liabilities; • the use of cash to finance a transaction, which may reduce the availability of cash to fund working capital, capital expenditures, R & D expenditures, and other business activities; • diverting management' s attention from daily operations; • managing larger or more complex operations and facilities and employees in separate and diverse geographic areas; • hiring and retaining key employees; • requirements imposed by government authorities in connection with the regulatory review of a transaction, which may include, among other things, divestitures or restrictions on the conduct of our business or the acquired business; • underestimating the costs or overestimating the benefits, including product, revenue, cost and other synergies and growth opportunities that we expect to realize, and we may not achieve those benefits; • failure to maintain customer, vendor, and other relationships; • inadequacy or ineffectiveness of an acquired company' s internal financial controls, disclosure controls and procedures, compliance programs, and / or environmental, health and safety, anti- corruption, human resource, or other policies or practices; and • impairment of acquired intangible assets, goodwill, or other assets as a result of changing business conditions or technological advancements. The global memory and storage industry has experienced consolidation and may continue to consolidate. We engage, from time to time, in discussions regarding potential acquisitions and similar opportunities. To the extent we are successful in completing any such transactions, we could be subject to some or all of the risks described above ~~, including the risks pertaining to funding, assumption of liabilities, integration challenges, and increases in debt that may accompany such transactions~~ . Acquisitions of, or alliances with, technology companies are inherently risky and may not be successful and could have a material adverse effect on our business, results of operations, or financial condition. We **have incurred restructure charges and** may incur restructure charges in future periods and may not realize expected savings or other benefits from restructure ~~activities~~ **plans** . **In 2023** ~~From time to time~~ , we ~~have,~~ **initiated a restructure plan in response to current market conditions. See " Part II – Item 8. Financial Statements** and **Supplementary Data – Notes to Consolidated Financial Statements – Restructure and Asset**

Impairments " and " Part II – Item 7. Management' s Discussion and Analysis of Financial Condition and Results of Operations – Overview. " In addition, we may in the future ~~,~~ enter into **other** restructure initiatives in order to, among other items, streamline our operations, respond to changes in business conditions, our markets, or product offerings, or to centralize certain key functions. We may not realize expected savings or other benefits from our **current or future** restructure activities and may incur additional restructure charges or other losses in future periods associated with other initiatives. In connection with any restructure initiatives, we could incur restructure charges, loss of production output, loss of key personnel, disruptions in our operations, and difficulties in the timely delivery of products, which could have a material adverse effect on our business, results of operations, or financial condition. Compliance with responsible sourcing requirements and any......, and targets within timeframes announced; 33 | ~~2022~~ **2023** 10- K ~~• increased costs to achieve our goals, commitments, and targets; • unforeseen operational and technological difficulties; • access to and increased cost of capital; and • adverse impacts on our stock price. Any failure, or perceived failure, to meet evolving stakeholder expectations and industry standards or achieve our ESG goals, commitments, and targets could have an adverse effect on our business, results of operations, financial condition, or stock price.~~ We may be unable to protect our intellectual property or retain key employees who are knowledgeable of and develop our intellectual property. We maintain a system of controls over our intellectual property, including U. S. and foreign patents, trademarks, copyrights, trade secrets, licensing arrangements, confidentiality procedures, non- disclosure agreements with employees, consultants, and vendors, and a general system of internal controls. Despite our system of controls over our intellectual property, it may be possible for our current or future competitors to obtain, copy, use, or disclose, illegally or otherwise, our product and process technology or other proprietary information. The laws of some foreign countries may not protect our intellectual property to the same degree as do U. S. laws, and our confidentiality, non- disclosure, and non- compete agreements may be unenforceable or difficult and costly to enforce. Additionally, our ability to maintain and develop intellectual property is dependent upon our ability to attract, develop, and retain highly skilled employees. If our competitors or future entrants into our industry are successful in hiring our employees, they may directly benefit from the knowledge these employees gained while they were under our employment, and this may also negatively impact our ability to maintain and develop intellectual property. Our inability to protect our intellectual property or retain key employees who are knowledgeable of and develop our intellectual property could have a material adverse effect on our business, results of operations, or financial condition. Legal proceedings and claims could have a material adverse effect on our business, results of operations, or financial condition. From time to time, we are subject to various legal proceedings and claims that arise out of the ordinary conduct of our business or otherwise, both domestically and internationally. Such claims include, but are not limited to, allegations of anticompetitive conduct and infringement of intellectual property. See " Part II – Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Contingencies. " Any claim, with or without merit, could result in significant legal fees that could negatively impact our financial results, disrupt our operations, and require significant attention from our management. We may be associated with and subject to litigation, claims, or arbitration disputes arising from, or as a result of: • our relationships with vendors or customers, supply agreements, or contractual obligations with our subcontractors or business partners; • the actions of our vendors, subcontractors, or business partners; • our indemnification obligations, including obligations to defend our customers against third- party claims asserting infringement of certain intellectual property rights, which may include patents, trademarks, copyrights, or trade secrets; and • the terms of our product warranties or from product liability claims. As we continue to focus on developing system solutions with manufacturers of consumer products, including autonomous driving, augmented reality, and others, we may be exposed to greater potential for personal liability claims against us as a result of consumers' use of those products. We, our officers, or our directors could also be subject to claims of alleged violations of securities laws. There can be no assurance that we are adequately insured to protect against all claims and potential liabilities, and we may elect to self- insure with respect to certain matters. Exposures to various legal proceedings and claims could lead to significant costs and expenses as we defend claims, are required to pay damage awards, or enter into settlement agreements, any of which could have a material adverse effect on our business, results of operations, or financial condition. Claims that our products or manufacturing processes infringe or otherwise violate the intellectual property rights of others, or failure to obtain or renew license agreements covering such intellectual property, could materially adversely affect our business, results of operations, or financial condition. As is typical in the semiconductor and other high technology industries, from time to time others have asserted, and may in the future assert, that our products or manufacturing processes infringe upon, misappropriate, misuse, or otherwise violate their intellectual property rights. We are unable to predict the outcome of these assertions made against us. Any of these types of claims, regardless of the merits, could subject us to significant costs to defend or resolve such claims and may consume a substantial portion of management' s time and attention. As a result of these claims, we may be required to: • pay significant monetary damages, fines, royalties, or penalties; • enter into license or settlement agreements covering such intellectual property rights; • make material changes to or redesign our products and / or manufacturing processes; and / or • cease manufacturing, having made, selling, offering for sale, importing, marketing, or using products and / or manufacturing processes in certain jurisdictions. We may not be able to take any of the actions described above on commercially reasonable terms and any of the foregoing results could have a material adverse effect on our business, results of operations, or financial condition. See " Part II – Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Contingencies. " We have a number of intellectual property license agreements. Some of these license agreements require us to make one- time or periodic payments. We may need to obtain additional licenses or renew existing license agreements in the future. We are unable to predict whether these license agreements can be obtained or renewed on terms acceptable to us. The failure to obtain or renew licenses as necessary could have a material adverse effect on our business, results of operations, or financial condition. Government actions and regulations, such as export restrictions, tariffs, and trade protection measures, may limit our ability to sell our products to certain customers or markets, or could otherwise restrict our ability to conduct operations. International trade disputes, geopolitical tensions, and military conflicts have led, and continue to lead, to new and increasing export restrictions, trade barriers, tariffs, and other trade measures that can increase our manufacturing costs, make our products less competitive, reduce demand for our products, limit our ability to sell to certain customers or markets, limit our ability to procure, or increase our costs for, components or raw materials, impede or slow the movement of our goods across borders, impede our ability to perform R & D activities, or otherwise restrict our ability to conduct operations. Increasing protectionism, economic nationalism, and national security concerns may lead to further changes in trade policy, domestic sourcing initiatives, or other formal and informal measures that could make it more difficult to sell our products in, or restrict our access to, some markets and / or customers. **For example, following the May 21, 2023 decision of its cybersecurity review of our products sold in China, the CAC determined that critical information infrastructure operators in China may not purchase Micron products, impacting our revenue with companies headquartered in mainland China and Hong Kong, including direct sales as well as indirect sales through distributors. Some revenue with customers headquartered outside of China has also been impacted. Further actions by the Chinese government could impact additional revenue inside or outside China, or our operations in China, or our ability to ship products to our customers, any of which could have a material adverse effect on our business, results of operations, or financial condition.** 35 | ~~2022~~ **2023** 10- K We cannot predict what further actions may ultimately be taken with respect to export regulations, tariffs **,** or other trade regulations between the United States and other countries, what products or companies may be subject to such actions, or what actions may be taken by other countries in retaliation. Further changes in trade policy, tariffs, restrictions on exports or other trade barriers, or restrictions on supplies, equipment, and raw materials including rare earth minerals, may limit our ability to produce products, increase our selling and / or manufacturing costs, decrease margins, reduce the competitiveness of our products, or inhibit our ability to sell products or purchase necessary equipment and supplies. Such changes may also result in reputational harm to us, the development or adoption of technologies that compete with our products, long- term changes in global trade and technology supply chains, or negative impacts on our customers' products which incorporate our solutions. Any of the effects described in this risk factor could have a material adverse effect on our business, results of operations, or financial condition. The technology industry is subject to intense media, political, and regulatory scrutiny, which can increase our exposure to government investigations, legal actions, and penalties. Although we have policies, controls, and procedures designed to help ensure compliance with applicable laws, there can be no assurance that our employees, contractors, suppliers, or agents will not violate such laws or our policies. Violations of trade laws, restrictions, or regulations can result in fines; criminal sanctions against us or our officers, directors, or employees; prohibitions on the conduct of our business; and damage to our reputation. Tax- related matters could have a material adverse effect on our business, results of operations, or financial condition. We are subject to income taxes in the United States and many foreign jurisdictions. Our provision for income taxes and cash tax liabilities in the future could be adversely affected by numerous factors, including changes in the geographic mix of our earnings among jurisdictions ~~, mandatory capitalization of R & D expenses beginning in 2023~~ , challenges by tax authorities to our tax positions and intercompany transfer pricing arrangements, failure to meet performance obligations with respect to tax incentive agreements, expanding our operations in various countries, fluctuations in foreign currency exchange rates, adverse resolution of audits and examinations of previously filed tax returns, and changes in tax laws and regulations. Changes to income tax laws and regulations, or the interpretation of such laws, in any of the jurisdictions in which we operate could significantly increase our effective tax rate and ultimately reduce our cash flows from operating activities and otherwise have a material adverse effect on our financial condition. Beginning in 2024, the Inflation Reduction Act of 2022 imposes a 15 % book minimum tax on corporations with three- year average annual adjusted financial statement income exceeding $ 1 billion. **The impact** ~~We are in the process~~ of **this** ~~assessing whether the book minimum~~ tax ~~would impact~~ **will depend on** our ~~effective~~ **facts in each year, anticipated guidance from the U. S. Department of the Treasury, and other developing global** tax ~~rate~~ **legislation** . Further changes in the tax laws of foreign jurisdictions could arise as a result of the base erosion and profit shifting project undertaken by the Organisation for Economic Co- operation and Development **(" OECD "). In December 2022, the European Union (" EU ") member states reached an agreement to implement the minimum tax component (" Pillar Two ") of the OECD' s tax reform initiative. The directive is expected to be enacted into the national law of the EU member states by December 31, 2023** . If ~~implemented~~ **similar directives under Pillar Two are adopted** by taxing authorities in **other** countries where we do business, such changes ~~,~~ could have a material adverse effect on our business, results of operations, or financial condition. We and others are subject to a variety of **complex and evolving** laws, regulations, or industry standards, including with respect to ~~ESG~~ **environmental, health, safety, and product** considerations, which may have a material adverse effect on our business, results of operations, or financial condition. The manufacture of our products requires the use of facilities, equipment **, chemicals** , and materials that are subject to a broad array of laws and regulations in numerous jurisdictions in which we operate. Additionally, we are subject to a variety of other laws and regulations relative to the construction, maintenance, and operations of our facilities. Any changes in laws, regulations, or industry standards could cause us to incur additional direct costs, as well as increased indirect costs related to our relationships with our customers and suppliers, and otherwise harm our operations and financial condition. Any failure to comply with laws, regulations, or industry standards could adversely impact our reputation and our financial results. Additionally, we engage various third parties as sales channel partners or to represent us or otherwise act on our behalf who are also subject to a broad array of laws, regulations, and industry standards. Our engagement with these third parties may also expose us to risks associated with their respective compliance with laws and regulations. New ~~ESG~~ **and evolving environmental health, safety, and product** considerations, including those related to **greenhouse gas emissions and** climate change **, the purchase, use and disposal of regulated and / or hazardous chemicals,** and the potential resulting environmental **, health or safety** ~~impact~~ **impacts** , may result in new laws, regulations, or industry standards that may affect us, our suppliers, and our customers. Such laws, regulations, or industry standards could cause us to incur additional direct costs for compliance, as well as increased indirect costs resulting from our customers, suppliers, or both incurring additional compliance costs that are passed on to us. These costs may adversely impact our results of operations and financial condition. As a result of the ~~items~~ **considerations** detailed in this risk factor, we could experience the following: • suspension of production or sales of **our products; • limited supplies of chemicals or materials used to make** our products; • remediation costs; • increased compliance costs; • alteration of our manufacturing processes; • regulatory penalties, fines, **civil or criminal sanctions,** and **other** legal liabilities; and • reputational challenges. Compliance with, or our failure, or the failure of our third- party sales channel partners or agents, to comply with, laws, regulations, or industry standards could have a material adverse effect on our business, results of operations, or financial condition. We may be unable to generate sufficient cash flows or obtain access to external financing necessary to fund our operations, make scheduled debt payments, pay our dividend, and make adequate capital investments. Our cash flows from operations depend primarily on the volume of semiconductor memory and storage products sold, average selling prices, and manufacturing costs. To develop new product and process technology, support future growth, achieve operating efficiencies, and maintain product quality, we must make significant capital investments in manufacturing technology, capital equipment, facilities, R & D, and product and process technology. We estimate capital expenditures in ~~2023~~ **2024** for property, plant, and equipment, net of partner contributions, ~~will~~ **to** be ~~around~~ **slightly above** $ ~~8~~ **7** billion. In the past **,** we have utilized external sources of financing when needed. As a result of our debt levels, expected debt amortization, **prevailing interest rates,** and general capital market and other economic conditions, it may be difficult for us to obtain financing on terms acceptable to us or at all. We have experienced volatility in our cash flows and operating results and ~~may~~ **we expect to** continue to experience such volatility in the future, which may negatively affect our credit rating. Our credit rating may also be affected by our liquidity, financial results, economic risk, or other factors, which may increase the cost of ~~future~~ borrowings and make it difficult for us to obtain financing on terms acceptable to us or at all. There can be no assurance that we will be able to generate sufficient cash flows, access capital or credit markets, or find other sources of financing to fund our operations, make debt payments, **refinance our debt,** pay our quarterly dividend, and make adequate capital investments to remain competitive in terms of technology development and cost efficiency. Our inability to do any of the foregoing could have a material adverse effect on our business, results of operations, or financial condition. **37 | 2023 10- K** Debt obligations could adversely affect our financial condition. We have incurred in the past, and expect to incur in the future, debt to finance our capital investments, business acquisitions, and to realign our capital structure. As of ~~September 1~~ **August 31** , ~~2022~~ **2023** , we had debt with a carrying value of $ ~~6~~ **13** . ~~91~~ **33** billion and may incur additional debt, including under our $ 2. 50 billion Revolving Credit Facility. Our debt obligations could adversely impact us as follows: • require us to use a large portion of our cash flow to pay principal and interest on debt, which will reduce the amount of cash flow available to fund our business activities; • adversely impact our credit rating, which could increase ~~future~~ borrowing costs; • limit our future ability to raise funds for capital expenditures, strategic acquisitions or business opportunities, R & D, and other general corporate requirements; ~~37 | 2022 10- K~~ • restrict our ability to incur specified indebtedness, create or incur certain liens, and enter into sale- leaseback financing transactions; • increase our vulnerability to adverse economic and industry conditions; • increase our exposure to rising interest rates from variable rate indebtedness; and • result in certain of our debt instruments becoming immediately due and payable or being deemed to be in default if applicable cross default, cross- acceleration and / or similar provisions are triggered. Our ability to meet our payment obligations under our debt instruments depends on our ability to generate significant cash flows or obtain external financing in the future. This, to some extent, is subject to market, economic, financial, competitive, legislative, and regulatory factors as well as other factors that are beyond our control. There can be no assurance that our business will generate cash flow from operations, or that additional capital will be available to us, in amounts sufficient to enable us to meet our debt payment obligations and to fund other liquidity needs. Additionally, events and circumstances may occur which would cause us to not be able to satisfy applicable draw- down conditions and utilize our Revolving Credit Facility. **In light of industry conditions, in 2023, we amended the financial covenants in our Revolving Credit Facility and term loan agreements. See " Part II – Item 7. Management' s Discussion and Analysis of Financial Condition and Results of Operations – Overview – Industry Conditions " and " Part II- Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt. "** If we are unable to generate sufficient cash flows to service our debt payment obligations **or satisfy our debt covenants** , we may need to refinance ~~or~~ **,** restructure **, or amend the terms of** our debt, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we are unable to implement one or more of these alternatives, we may be unable to meet our debt payment obligations, which could have a material adverse effect on our business, results of operations, or financial condition. Changes in foreign currency exchange rates could materially adversely affect our business, results of operations, or financial condition. Across our global operations, significant transactions and balances are denominated in currencies other than the U. S. dollar (our reporting currency), primarily the **Chinese yuan,** euro **, Indian rupee, Japanese yen** , Malaysian ringgit ~~, Singapore dollar~~ , New Taiwan dollar, and ~~yen~~ **Singapore dollar** . In addition, a significant portion of our manufacturing costs are denominated in foreign currencies. Exchange rates for some of these currencies against the U. S. dollar have been volatile and may be volatile in future periods. If these currencies strengthen against the U. S. dollar, our manufacturing costs could significantly increase. Exchange rates for the U. S. dollar that adversely change against our foreign currency exposures could have a material adverse effect on our business, results of operations, or financial condition. We are subject to counterparty default risks. We have numerous arrangements with financial institutions that subject us to counterparty default risks, including cash deposits, investments, and derivative instruments. Additionally, we are subject to counterparty default risk from our customers for amounts receivable from them. As a result, we are subject to the risk that the counterparty will default on its performance obligations. A counterparty may not comply with its contractual commitments which could then lead to its defaulting on its obligations with little or no notice to us, which could limit our ability to mitigate our exposure. Additionally, our ability to mitigate our exposures may be constrained by the terms of our contractual arrangements or because market conditions prevent us from taking effective action. If one of our counterparties becomes insolvent or files for bankruptcy, our ability to recover any losses suffered as a result of that counterparty' s default may be limited by the liquidity of the counterparty or the applicable laws governing the bankruptcy proceedings. In the event of such default, we could incur significant losses, which could have a material adverse effect on our business, results of operations, or financial condition. The trading price of our common stock has been and may continue to be volatile. Our common stock has experienced substantial price volatility in the past and may continue to do so in the future. Additionally, we, the technology industry, and the stock market as a whole have on occasion experienced extreme stock price and volume fluctuations that have affected stock prices in ways that may have been unrelated to the specific operating performance of individual companies. The trading price of our common stock may fluctuate widely due to various factors, including, but not limited to, actual or anticipated fluctuations in our financial condition and operating results, changes in financial forecasts or estimates by us or financial or other market estimates and ratings by securities and other analysts, changes in our capital structure, including issuance of additional debt or equity to the public, interest rate changes, regulatory changes, news regarding our products or products of our competitors, and broad market and industry fluctuations. For these reasons, investors should not rely on recent or historical trends to predict future trading prices of our common stock, financial condition, results of operations, or cash flows. Investors in our common stock may not realize any return on their investment in us and may lose some or all of their investment. Volatility in the trading price of our common stock could also result in the filing of securities class action litigation matters, which could result in substantial costs and the diversion of management time and resources. The amount and frequency of our share repurchases may fluctuate, and we cannot guarantee that we will fully consummate our share repurchase authorization, or that it will enhance long- term shareholder value. Share repurchases could also increase the volatility of the trading price of our stock and will diminish our cash reserves. The amount, ~~timing~~ **frequency** , and execution of our share repurchases pursuant to our share repurchase authorization may fluctuate based on our operating results, cash flows, and priorities for the use of cash for other purposes. Our expenditures for share repurchases were $ **425 million in 2023, $** 2. 43 billion in 2022, $ 1. 20 billion in 2021 ~~, $ 176 million in 2020, and $ 2. 66 billion in 2019~~ . These other purposes include, but are not limited to, operational spending, capital spending, acquisitions, and repayment of debt. Other factors, including changes in tax laws, could also impact our share repurchases. Although our Board of Directors has authorized share repurchases of up to $ 10 billion of our outstanding common stock, the authorization does not obligate us to repurchase any common stock. We cannot guarantee that our share repurchase authorization will be fully consummated or that it will enhance long- term shareholder value. The repurchase authorization could affect the trading price of our stock and increase volatility, and any announcement of a pause in, or termination of, this program may result in a decrease in the trading price of our stock. In addition, this program will diminish our cash reserves. There can be no assurance that we will continue to declare cash dividends in any particular amounts or at all. Our Board of Directors has adopted a dividend policy pursuant to which we currently pay a cash dividend on our common shares on a quarterly basis. The declaration and payment of any dividend is subject to the approval of our Board of Directors and our dividend may be discontinued or reduced at any time. There can be no assurance that we will declare cash dividends in the future in any particular amounts, or at all. Future dividends, if any, and their timing and amount, may be affected by, among other factors: our financial condition, results of operations, capital requirements, business conditions, debt service obligations, contractual restrictions, industry practice, legal requirements, regulatory constraints, and other factors that our Board of Directors may deem relevant. A reduction in or elimination of our dividend payments could have a negative effect on the trading price of our stock.