

**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 December 31, 2022
Commission File Number 000-29472**

Amkor Technology, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation)

23-1722724
*(I.R.S. Employer
Identification Number)*

**2045 East Innovation Circle
Tempe, AZ 85284**
(Address of principal executive offices and zip code)
(480) 821-5000
(Telephone number, including area code)

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, \$0.001 par value	AMKR	The Nasdaq Global Select Market

**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, as amended, 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 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. (Check one):

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 Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2022, based upon the closing price of the common stock as reported by the Nasdaq Global Select Market on that date, was approximately \$1,732 million.

The number of shares outstanding of each of the issuer’s classes of common equity, as of February 17, 2023, was as follows: 245,284,192 shares of Common Stock, \$0.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant’s Proxy Statement relating to its 2023 Annual Meeting of Stockholders, to be filed subsequently, are incorporated by reference into Part III of this Report where indicated.

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Forward-Looking Statements

All references to “Amkor,” “we,” “us,” “our” or the “Company” in this Annual Report on Form 10-K (this “Form 10-K”) are to Amkor Technology, Inc. and its subsidiaries. We refer to the Republic of Korea, which is also commonly known as South Korea, as “Korea.” Amounts preceded by ¥ are in Japanese yen and ₩ are in Korean won. Amkor®, Amkor Technology®, MicroLeadFrame®, and SWIFT®, among others, are trademarks of Amkor Technology, Inc. All other trademarks appearing herein are held by their respective owners. Subsequent use of the above trademarks in this Form 10-K may occur without the respective superscript symbol (® and ™) in order to facilitate the readability of this Form 10-K and are not a waiver of any rights that may be associated with the relevant trademarks.

This Form 10-K contains forward-looking statements within the meaning of the federal securities laws, including, but not limited to, statements regarding (1) the amount, timing and focus of our expected capital investments in 2023, (2) our ability to fund our operating activities and financial requirements for the next twelve months, (3) the effect of changes in revenue levels and capacity utilization on our gross margin, (4) the impact of the Covid-19 pandemic on our operations, financial results and supply chain, including as a result of the government-mandated lockdown of our Shanghai factory during the second quarter of 2022, (5) the focus of our research and development activities, (6) the anticipated impact of tax law changes in the jurisdictions in which we operate, (7) the grant and expiration of conditional reduced tax rates in jurisdictions in which we operate and expectations regarding our effective tax rate and the availability of tax incentives, (8) the creation or release of valuation allowances related to taxes in the future, (9) our repurchase or repayment of outstanding debt, (10) payment of dividends, (11) compliance with restrictive covenants in the indentures and agreements governing our current and future indebtedness, (12) expected contributions to foreign pension plans and potential future conversion of our unfunded severance plan in Korea to a defined contribution plan, (13) liability for unrecognized tax benefits and the potential impact of our unrecognized tax benefits on our effective tax rate, (14) the effect of foreign currency exchange rate exposure on our financial results, (15) the volatility of the trading price of our common stock, (16) changes to our internal controls related to integration of acquired operations and implementation of an enterprise resource planning system, (17) our efforts to enlarge our customer base in certain geographic areas and markets, (18) demand for advanced packages in mobile and automotive devices and our technology leadership and potential growth in the communications and automotive and industrial end markets, (19) projects to install or integrate new information technology systems or upgrade our existing systems, (20) our expected revenue recognition, (21) the anticipated schedule for and benefits from our new manufacturing facility under construction in Vietnam and (22) other statements that are not historical facts. You are cautioned not to place undue reliance on forward-looking statements, which are often characterized by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue” or “intend,” by the negative of these terms or other comparable terminology or by discussions of strategy, plans or intentions. All forward-looking statements in this Form 10-K are made based on our current expectations, forecasts, estimates and assumptions. Because such statements include risks and uncertainties, actual results may differ materially from those anticipated in such forward-looking statements as a result of various factors, including those set forth in Part I, Item 1A and other sections of this Form 10-K and from time to time in our other reports filed with or furnished to the Securities and Exchange Commission (“SEC”). You should carefully consider the trends, risks and uncertainties described in this Form 10-K and other reports filed with or furnished to the SEC before making any investment decision with respect to our securities. If any of these trends, risks or uncertainties continues or occurs, our business, financial condition or operating results could be materially and adversely affected, the trading prices of our securities could decline and you could lose part or all of your investment. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this cautionary statement. We assume no obligation to review or update any forward-looking statements to reflect events or circumstances occurring after the date of this Form 10-K except as may be required by applicable law.

PART I

Item 1. *Business*

OVERVIEW

Amkor is one of the world's leading providers of outsourced semiconductor packaging and test services. Amkor was a pioneer in the outsourcing of semiconductor packaging and test services, and over the years we have built a leading position by:

- Designing and developing innovative packaging and test technologies;
- Building expertise in high-volume manufacturing processes and developing a reputation for high quality and solid execution;
- Cultivating long-standing relationships with our customers, which include many of the world's leading semiconductor companies;
- Collaborating with customers, foundries, original equipment manufacturers ("OEMs") and equipment and material suppliers;
- Focusing on strategic end markets that offer solid growth potential;
- Providing a geographically diverse operating base; and
- Developing a competitive cost structure through disciplined capital investment.

Our packaging and test services are designed to meet application and chip-specific requirements, including: the required type of interconnect technology; size; thickness; and electrical, mechanical and thermal performance. We provide turnkey packaging and test services including semiconductor wafer bump, wafer probe, wafer back-grind, package design, packaging, system-level and final test and drop shipment services. Our customers use us for one or more of these services.

We provide our services to integrated device manufacturers ("IDMs"), "fabless" semiconductor companies, OEMs and contract foundries. IDMs generally design, manufacture, package and test semiconductors in their own facilities. However, the availability of technologically advanced outsourced manufacturing services has encouraged IDMs to outsource a portion of their manufacturing. By offering a broad package portfolio, Amkor allows IDMs to outsource packaging and test services and focus their investments on core competencies such as silicon fabrication. Fabless semiconductor companies do not have factories. They focus exclusively on semiconductor design and outsource virtually every step of the manufacturing process, utilizing contract foundries to manufacture their semiconductors in wafer form and companies such as Amkor for their packaging and test needs. Some companies will engage a contract foundry to manage the complete semiconductor manufacturing process, and, in turn, the contract foundry will outsource some of its packaging and test needs.

INDUSTRY BACKGROUND

Semiconductor devices are essential building blocks used in most electronic products. As electronic and semiconductor devices have evolved, several important trends have emerged that have fueled the growth of the overall semiconductor industry, as well as the market for outsourced semiconductor packaging and test services. These trends include:

- Growing demand for mobile and connected devices, including the worldwide adoption of "smart" phones, tablets and other Internet-of-Things ("IoT") devices that can access the internet and provide multimedia capabilities.
- An increase in the semiconductor content within electronic products to provide greater functionality and higher levels of performance.
- The expansion of 5G infrastructure and 5G enabled devices.

- The proliferation of semiconductor devices into well-established end products such as automotive systems for automation and driver assist, electrification and infotainment systems.
- An increase in mobility and connectivity capabilities, driving demand for new broadband wired and wireless networking equipment.
- Digitalization, driving expansion of data generation and storage.
- The adoption of heterogeneous integration (diverse dies positioned close to each other within the same package) to reduce cost, improve yields and deliver required performance in data center computing, artificial intelligence and similar end uses.
- The growth of advanced system-in-package (“SiP”) modules (combining multiple semiconductor and other electronic components in a single package) to meet the demand for miniaturization and higher functionality at competitive cost.
- The increase in digital format in our environment, from sensors for automobiles (e.g., pressure, radar, LiDAR and image recognition), mobile devices (e.g., 3D motion, temperature, acceleration and imaging), and IoT (e.g., in-home sensing from temperature to weather and wearables).

As a supplier in the semiconductor industry, our business is cyclical and impacted by broad economic factors, such as worldwide gross domestic product and consumer spending. With the exception of 2020, where the Covid-19 pandemic caused worldwide gross domestic product levels to decline during a period of strong growth in the semiconductor industry, there has generally been a strong correlation between worldwide gross domestic product levels, consumer spending and semiconductor industry cycles.

Outsourcing Trends in Semiconductor Manufacturing

Semiconductor companies outsource their packaging and test needs to service providers such as Amkor for the following reasons:

Packaging and test service providers have developed expertise in advanced technologies.

The increasing demands for miniaturization, greater functionality, lower power consumption and improved thermal and electrical performance are driving the continuous development of semiconductor packaging and test technologies that are more sophisticated, complex, capital intensive and customized. This trend has led many semiconductor companies and OEMs to view packaging and test as enabling technologies requiring the technological innovation expertise found in the leading outsourced assembly and test companies. At the same time, these companies are often looking to reduce their internal manufacturing and research and development costs for packaging and test solutions. As a result, many of these companies are increasingly relying on packaging and test service providers as key sources for new package designs and advanced interconnect technologies.

Packaging and test service providers can facilitate a more efficient supply chain and help shorten time-to-market for new products.

We believe that semiconductor companies, together with their customers, are seeking to shorten the time-to-market for new products and that an efficient supply chain is a critical factor in facilitating timely and successful product introductions. Packaging and test service providers have the resources and expertise to timely develop and implement new packaging technology in high volume. For this reason, semiconductor companies and OEMs are leveraging the capabilities of outsourced packaging and test service providers to bring new high quality products to market more quickly.

High quality packaging and test service providers enable semiconductor manufacturers to focus their resources on semiconductor design and wafer fabrication.

As semiconductor process technology migrates to larger wafers and smaller feature sizes, the cost of building a state-of-the-art wafer fabrication factory has risen significantly. The high cost of investing in next generation silicon technology and equipment is causing many semiconductor companies to adopt or maintain a “fabless” or “fab-lite” strategy to reduce or eliminate their investment in wafer fabrication and associated packaging and test operations. As a result, these

companies are increasing their reliance on outsourced providers of semiconductor manufacturing services, including high quality packaging and test solutions.

Packaging and test service providers offer a cost-effective solution in a cyclical, capital intensive industry.

The semiconductor industry is cyclical by nature and impacted by broad economic factors, such as changes in worldwide gross domestic product and consumer spending. Semiconductor packaging and test are complex processes requiring substantial investment in specialized equipment, factories and human capital. As a result of this cyclicity and the large investments required, manufacturing facilities must operate at consistently high levels of utilization to be cost-effective. Shorter product life cycles, coupled with the need to update or replace packaging and test equipment to accommodate new package types, make it more difficult for IDMs to maintain cost-effective utilization of their packaging and test assets throughout semiconductor industry cycles. Packaging and test service providers, on the other hand, can typically use their assets to support a broad range of customers and multiple end markets, potentially generating more efficient use of their production assets and a more cost-effective solution.

STRATEGY AND COMPETITIVE STRENGTHS

Strategy

Amkor is a leader in advanced packaging technology in the outsourced assembly and test market. Growth in the semiconductor industry is being driven primarily by advanced packaging within four key megatrends of 5G, automotive, IoT and high-performance computing (“HPC”). We believe Amkor is well positioned in each of these end markets.

- Within our communications end market, we have a strong position across multiple device functionalities within premium and high tier smartphones. We are collaborating with industry leaders as smartphones transition to 5G and drive semiconductor growth through the adoption of new wireless standards, integration of a broad range of applications, enhanced features, and higher performance requirements to support increased data processing. The trend to greater functionality drives miniaturization and cost reduction enabled by advanced packaging.
- Increasing semiconductor content in automobiles is driving increased demand for advanced packaging to enable the proliferation of safety features such as advanced driver assistance systems (“ADAS”) and radar and digital cockpit features such as infotainment displays and telematics. Increasing battery voltage, higher voltage power converters and automotive inverter components also require innovative power packaging solutions.
- The IoT wearables within our consumer end market are evolving in multiple applications, such as watches, health trackers, hearables, biometrics and smart glasses. Integration of multiple functions in small form factors, processors, sensors and connectivity devices depends on innovation in advanced packaging.
- Increased data traffic requiring higher networking speed and storage, as well as computing power increases in HPC, data centers, cloud computing, AI, PCs and laptops, are driving demand for more semiconductors and advanced packaging in the computing end market.

Our primary financial objective is profitable sales growth. We believe that we will continue to achieve that goal and create long-term shareholder value by building on our strength in advanced packaging and executing on the following strategies.

Leverage Our Leadership in Services for Advanced Technologies

We are an industry leader in developing and commercializing advanced packaging and test technologies, which we believe provide substantial value to our customers.

With approximately 700 employees, as of December 31, 2022, engaged in research and development for new semiconductor packaging and test technologies, we are a technology leader in areas such as fine pitch bumping, advanced flip chip, wafer-level processing, advanced SiPs and power modules.

We work closely with our customers to develop cost-effective leading-edge packages for the next generation of devices. These include integrated technologies such as advanced SiP, wafer-level fan-out (“WLFO”), Silicon Wafer Integrated Fan-out Technology (“SWIFT”), High Density Fan-Out (“HDFO”) and redistribution layer (“RDL”) solutions which enable very thin, very small products that combine application processors, memory, baseband and other peripheral integrated circuits (“ICs”). Our advanced packages may utilize Through Silicon Via (“TSV”) interconnects and silicon

interposers, which enable the integration of high-performance chips such as high bandwidth memory and graphics processors into a single package. In addition, we co-develop with customers high power modules involving gallium nitride (“GaN”) and silicon carbide (“SiC”) based devices. Our approach is to work with lead customers to develop processes that will enable volume manufacturing with high yields and reliability.

We believe that demand for advanced packaging services will continue to grow as our customers and leading electronics OEMs strive for smaller device geometries, higher levels of integration and performance and lower power consumption. We intend to continue to leverage our investment in advanced technology to meet the demand for these services in high growth markets.

Optimize Utilization of Existing Assets and Broaden Our Customer Base

Another key to our success is to optimize the utilization of our existing assets. The transition by leading edge customers to newer packaging and test equipment platforms typically frees up capacity in existing, previously installed equipment. As part of our strategy, we are focused on developing a second wave of customers to utilize these assets more effectively over a longer period of time. We are building and utilizing manufacturing lines which support multiple customers and increase factory utilization through more sophisticated planning processes and more intensive efficiency improvement activities.

Selectively Grow Our Scale and Scope through Strategic Investments

From time to time, we identify attractive opportunities to strengthen our leadership position and market share through expansion of our operations, joint ventures, acquisitions and other strategic investments. For example, we are making preparations to deliver advanced SiP modules and other packaging solutions from a new factory in Bac Ninh, Vietnam. We believe that the Bac Ninh site, which is expected to begin production in the fourth quarter of 2023, will provide customers with a cost-competitive high-volume manufacturing location that offers supply chain diversification. In addition, our broad geographic footprint, including our manufacturing presence in Portugal and our headquarters in the United States, are key differentiators for us and position us to participate in initiatives to regionalize supply chains. We believe that selective growth through these strategic actions can further strengthen customer relationships, help to maintain and enhance our technological leadership, diversify our revenue streams and improve our profits.

Competitive Strengths

The outsourced semiconductor packaging and test market is very competitive. We also compete with the internal semiconductor packaging and test capabilities of many of our customers and foundries. We believe we are well-positioned in the outsourced packaging and test services market. The following competitive strengths support our strategy to build upon our industry position and remain a preferred provider of semiconductor packaging and test services.

Advanced Packaging Technology Leadership

We are a leader in developing and deploying advanced semiconductor packaging and test solutions. We have designed and developed several state-of-the-art package formats and technologies, including our Double-Sided, Molded Ball Grid Array (“DSMBGA”) SiP platform and multi-chip modules that incorporate silicon interposers between the module chips and substrate. In addition, we believe that as semiconductor technology continues to achieve smaller device geometries with higher levels of integration, speed and performance, packages will increasingly require wafer-level Chip Scale Packaging (“CSP”), WLFO, SWIFT and Flip Chip interconnect solutions, advanced SiP products and medium and higher power density packages and modules.

We continue to invest in developing the key processes and packages, along with test solutions, required for our customers to deliver advanced integrated and modular solutions to their markets. We are also a developer of environmentally friendly IC packaging, which involves reducing the use of lead and other harmful materials and efficient use of energy and water.

Broad Offering of Semiconductor Package Design, Packaging and Test Services

Creating successful interconnect solutions for advanced semiconductor devices often poses unique thermal, electrical and mechanical design challenges, and we employ a large number of engineers to solve these challenges. This wide variety

of packaging offerings is necessary to meet the diverse needs of our customers for the optimal combination of performance, size and cost. Utilizing Amkor for its innovative packaging, test and design services enables our customers to focus their resources on semiconductor design and wafer fabrication.

We also offer an extensive line of advanced probe and final test services for analog, digital, logic, mixed signal, memory, sensors and radio frequency-semiconductor devices. We believe that the breadth of our design, packaging and test services is important to customers seeking to limit the number of their suppliers.

Geographically Diversified Manufacturing Base

We have a broad and geographically diverse manufacturing footprint strategically located in seven of the world's important electronics manufacturing regions. We believe that our scale and scope allow us to provide a flexible supply chain and cost-effective solutions to our customers by:

- Being located in key regions where customers are actively seeking to develop localized supply chains;
- Qualifying production of customer devices at multiple manufacturing sites with geographical diversity to mitigate the risks of supply disruptions;
- Providing capabilities and solutions for customer-specific requirements;
- Offering capacity to absorb large orders and accommodate quick turn-around times; and
- Obtaining favorable pricing and supply agreements on materials and equipment by using our purchasing power and leading industry position.

Long-Standing Relationships and Collaboration with Prominent Semiconductor Companies

Our customers include most of the world's largest semiconductor companies, and over the last five decades we have developed long-standing relationships with many of these companies. We believe that our production excellence, including high quality, reliability and predictability, has been a key factor in our success in attracting and retaining customers. We work with our customers and our suppliers to develop proprietary process technologies to enhance our existing capabilities, reduce time-to-market, improve quality and lower costs.

We believe that our focus on research and product development will enable us to enter new markets early, capture market share and promote the adoption of our new package formats as industry standards. We collaborate with customers and leading OEMs to develop comprehensive packaging solutions that make it easier for next-generation semiconductors to be designed into next-generation end products. By collaborating with leading semiconductor companies, foundries and OEM electronics companies, we are able to focus resources on developing new packages that will meet the requirements of new products. The traditional delineation between front-end semiconductor manufacturing and packaging is starting to converge. Foundries, and in some cases IDMs, are integrating some packaging activities closer to front-end wafer processes. We work closely with foundry partners to complement these offerings by offering similar wafer-based technologies as well as downstream processing.

PACKAGING AND TEST SERVICES

In general, the semiconductor manufacturing process consists of IC design, wafer fabrication, wafer probe, packaging and final test. The packaging and test services we provide occur subsequent to wafer fabrication, and the wafers that we receive from our customers are generally consigned to us.

Advanced Products and Mainstream Products

We offer a broad range of advanced and mainstream packaging and test services to our customers. We refer to our flip chip, wafer-level processing and related test services as "Advanced Products" and to our wirebond packaging, power device packaging and related test services as "Mainstream Products." The following table sets forth, for the periods

indicated, net sales for Advanced Products and Mainstream Products and the percentage of total net sales for each service offering.

	For the Year Ended December 31,								
	2022		2021		2020				
	(In millions, except percentage of net sales)								
Advanced Products	\$	5,368	75.7 %	\$	4,409	71.8 %	\$	3,605	71.4 %
Mainstream Products		1,724	24.3 %		1,729	28.2 %		1,446	28.6 %
Total net sales	\$	7,092	100.0 %	\$	6,138	100.0 %	\$	5,051	100.0 %

Advanced Products

Our Advanced Products include flip chip chip scale packages (“FC CSP”), wafer-level packages and flip chip ball grid array (“FCBGA”) packages. These package families use flip chip interconnect technology so that the die can be connected to a substrate package carrier or, in the case of wafer-level chip scale packages, directly to a printed circuit board.

FC CSP Products: FC CSP packages are small form factor packages where the substrate size is not much larger than the die itself. FC CSP can be a single die or multi die format. The size advantage provided by CSP technologies has made FC CSP an attractive choice for a wide variety of applications that require very small form factors such as smartphones, tablets and other mobile consumer electronic devices.

Flip chip stacked chip scale packages (“FC SCSP”) stack a second die on top of the original flip-chip die. The top die is typically a memory device, and wirebond interconnects are used to attach the top die to the substrate. FC SCSP is frequently used to stack memory on top of digital baseband and applications processors for use in mobile devices.

We continue to drive thinner package solutions for our Package on Package (“PoP”) technology through the development of ultra-thin substrates and enhancing our pre-stacking and thin die handling capabilities.

We developed fine pitch copper pillar flip chip interconnect technology, which creates interconnections at finer pitches using a plating process to reduce the number of substrate layers to facilitate very thin packages. This innovative solution is also an enabling technology for package stacking with TSVs.

FCBGA Products: FCBGA packages are large form factor substrate-based packages which are used where processing power and speed are a higher priority than a small form factor. Our FCBGA packages are assembled using state-of-the-art substrates. Utilizing multiple high density routing layers, laser drilled vias, and ultra-fine line and space metallization, FCBGA substrates have the highest routing density available. The variety of FCBGA package options, from large single die to multi-chip packages with memory, allows package selection to be tailored to the specific thermal needs of the end product. We offer FCBGA packaging in a variety of product formats to fit a wide range of end application requirements, including networking, storage, computing, automotive and consumer applications.

Memory Products: Memory packages consist of either standalone packaging and testing or a combination of NAND Flash, DRAM, or a memory controller IC using a variety of packaging technologies, including FC, SCSP, SiP, PoP and other state-of-the-art packaging technologies. These products are used as system memory or platform data storage in all of our end markets.

Wafer-level Package Products: We offer three types of wafer-level packages: wafer-level CSP; WLFO; and SWIFT. Wafer-level CSP and WLFO are complementary technologies. Customers can choose between the two package types as their die sizes shrink or grow.

- Wafer-level CSP packages (also known as fan-in wafer-level packages) do not utilize a package carrier. The bumped wafer is singulated into individual die, and the wafer-level package is then attached directly to the system board. Wafer-level CSP offers one of the lowest total system costs, enabling higher semiconductor content while leveraging the smallest form factor and one of the highest performing, most reliable semiconductor package platforms on the market today. Applications for wafer-level CSP include power management, transceivers, sensors, wireless charging, codecs, and specialty silicon for new or unique functionality.

- WLFO packages (also known as low-density fan-out packages) are utilized for ICs where the die surface area is too small to accommodate all of the required bond pads. The fan-out package enlarges the bondable surface area by building a border around the die using low-cost molding compound. These packages can include multiple die. Applications for WLFO packages include power management, transceivers, radar and specialty silicon.
- SWIFT, also known as high-density fan-out, can either replace the laminate substrate with a thinner structure or reduce the complexity of the substrate by housing the dense interconnects in the SWIFT structure, allowing for a less expensive substrate that provides a high level of performance with a balanced cost structure. SWIFT solutions enable high performance in a compact form factor that combines tiled processors, memory, I/O die and other peripheral ICs.

Mainstream Products

Our Mainstream Products include leadframe packages, substrate-based wirebond packages and micro-electro-mechanical systems (“MEMS”) packages. These package families use wirebond interconnect technology to connect a die to a leadframe or substrate package carrier.

Leadframe Packages: Leadframe packages use wirebond or flip chip technology to connect a die to a leadframe package carrier. Leadframe packages are used in many electronic devices and remain the most practical and cost-effective solution for many low to medium pin count analog and mixed signal applications.

Traditional leadframe packages support a wide variety of device types and applications. Two of our most popular traditional leadframe package types are small outline integrated circuit and quad flat package, commonly known as “dual” and “quad” products, respectively, based upon the number of sides from which the leads extend. The traditional leadframe package family has evolved from “through hole design,” where the leads are plugged into holes on the circuit board to “surface mount design,” where the leads are soldered to the surface of the circuit board. We offer a wide range of lead counts and body sizes to satisfy variations in the size of customers’ semiconductor devices.

Through a process of continuous engineering and customization, we have designed several leadframe package types that are thinner and smaller than traditional leadframe packages and can accommodate more leads on the perimeter of the package. These leadframe packages typically have superior thermal and electrical characteristics, which allow them to dissipate heat generated by high-powered semiconductor devices while providing enhanced electrical connectivity. We are developing increasingly smaller versions of these packages to keep pace with continually shrinking semiconductor device sizes and demand for miniaturization of portable electronic products. One of our more successful leadframe package offerings is the *MicroLeadFrame* family of quad flat no lead packages. These packages offer cost effective, miniaturized solutions for multiple analog power and signal chain applications.

Power discrete devices use a leadframe as the package carrier and primarily use wirebond interconnect technology. However, power applications that require improved thermal and electrical performance will use packaging with copper clip interconnect technology that creates multi die power modules.

Substrate-based Wirebond Packages: Substrate-based wirebond packages use wirebond technology to connect a die to a substrate. Some of our packages in this category include stacked CSP, wirebond ball grid array packages and plastic ball grid array (“PBGA”) packages.

Stacked CSP technology enables the stacking of a wide range of different semiconductor devices to deliver high levels of silicon integration and area efficiency. Stacked CSP utilizes high density thin core substrates and advanced materials, along with leading-edge wafer thinning, die attach and molding capabilities, to stack multiple die on a substrate. Stacked CSP is ideal for memory and mixed signal applications.

Wirebond ball grid array packages offer a broad selection of ball array pitches, ball counts and body sizes, single and multi-die layouts, stacked die and passive component integration together with thermal management solutions. They are applicable for a wide range of semiconductors requiring a smaller package size than conventional PBGAs or leadframe packages.

PBGA packages are used in applications requiring higher pin count than leadframe packages, but typically have lower pin counts than flip chip. PBGA packages are designed for low inductance, improved thermal operation and enhanced surface-mount technology ability. Custom performance enhancements, like ground and power planes, are also available.

Micro-Electro-Mechanical Systems Packages: MEMS are miniaturized mechanical and electro-mechanical devices that can sense and provide information about the physical world and sometimes trigger a response. Examples of MEMS devices include microphones, accelerometers, airbag deployment sensors, gyrometers, magnetometers and humidity, temperature and pressure sensors. We also specialize in sensor fusion products which utilize our cavity MEMS platform and combine multiple sensors into a single package. MEMS packages leverage our expertise in wafer thinning, die stacking, wirebonding and flip chip interconnect to deliver sophisticated products with a very small form factor.

Advanced System-in-Package Modules

Advanced SiP modules combine multiple semiconductor and other electronic components with different functionalities into a single package. These modules use wirebond, flip chip or wafer-level interconnect technologies. Components can include ICs, passive devices (inductors, capacitors, resistors, filters and diplexers), antennas and mechanical parts.

The increasing demand for miniaturization and higher functionality at competitive cost is driving the adoption of advanced SiP in new products. Advanced SiP modules are used for many applications such as radio frequency (“RF”) and front-end modules, basebands, connectivity, fingerprint sensors, display and touch screen drivers, sensors and MEMS, NAND memory and solid state drives. Advanced SiP modules are found in many products including smartphones and tablets, automobiles, IoT wearables, high-performance gaming systems, computers and network systems.

In 2022, 2021 and 2020, we had net sales of approximately \$2,930 million, \$2,280 million and \$1,885 million, respectively, from our advanced SiP modules, which are mostly included in Advanced Products, depending upon the interconnect technology used in the module.

Test Services

Our Test Services complement our wafer and packaging services across our Advanced and Mainstream Products. Our test services offer customers the cycle time and cost advantages of co-located turn-key services. Our test services are used as both an interim step or as the final testing step to ensure screening and rejection of defects, performance grading and overall outgoing quality and reliability. Interim testing eliminates the manufacturing costs of assembling the defective chips. Below is a description of our test services:

Wafer Level Test: Wafer level test is a manufacturing step performed while a wafer is still in its full form and before being singulated for further package processing.

Package Level Test: Package level test is performed on a product or products that have been assembled in a package.

Burn-In Test: Burn-in test is a process in which components of a system are exercised, monitored and measured in extreme operational conditions such as high temperature, voltage and frequency over time. The purpose of the environmental and operational stress conditions of burn-in testing is to accelerate and screen early life failures and estimate and monitor long-term degradation and ultimate lifetime.

System Level Test: System level test identifies defective SiP products that may not otherwise be screened by traditional wafer level, package level or burn-in testing. As advanced packaging proliferates and the integration of more individual components into a SiP grows, system level testing becomes more important.

Test Development Services: Prior to mass production, an integrated manufacturing ready test solution must be developed and deployed. Amkor’s test development services offer both co-development and full development of complete test software and hardware solutions to our customers. These services also enable early engagement with our customers in the product design phases for maximum compatibility with manufacturing. Our test development teams are experienced in a full suite of test engineering disciplines for Memory, Power, RF, Mixed Signal, Analog and digital test solution development.

End Markets

The following table lists the end markets that use our products and sets forth, for the periods indicated, the percentage of net sales in each end market:

	2022	2021	2020
End Market Distribution Data (an approximation including representative devices and applications based on a sampling of our largest customers):			
Communications (smartphones, tablets)	44 %	41 %	41 %
Automotive, industrial and other (ADAS, electrification, infotainment, safety)	20 %	21 %	20 %
Consumer (AR & gaming, connected home, home electronics, wearables)	20 %	22 %	24 %
Computing (data center, infrastructure, PC/laptop, storage)	16 %	16 %	15 %
Total net sales	100 %	100 %	100 %

RESEARCH AND DEVELOPMENT

We believe that technology development is one of the keys to success in the semiconductor packaging and test industry. Our research efforts focus on developing new packaging solutions and test services, as well as improving the efficiency and capabilities of our existing production processes. By concentrating our research and development on our customers' needs for innovative packages, increased performance, higher density, smaller size and lower cost, we gain opportunities to enter markets early, successfully compete for new products and promote our new package offerings as industry leading technology.

One of our priorities is developing highly integrated SiP modules, such as DSMBGA packages, to reduce material and processing costs and minimize form factor for wearables and mobile devices. Another important focus area is the development of wafer-level and panel-level packages for chips in 2D and 3D system implementations. These wafer-level chip-scale packages and WLFO packages are increasingly the preferred package type for many applications in IoT and mobile devices, including processors, power management integrated circuits ("PMICs"), display drivers and antenna package products. Our development of Panel Level Fan Out ("PLFO") technology will permit higher economies of scale for fan-out package devices manufactured on a panel versus wafer basis. We are also developing new applications for the automotive market using existing and new package technologies as higher performance compute, energy efficiency, power distribution and sensor content are used to support new automotive features including ADAS, infotainment, optical sensors and electric vehicles. In addition, we are developing high power management modules involving SiC-based devices.

Another focus for development is integrated multi-die solutions, including multichip modules and high-density WLFO solutions, which enable package level integration of different types and levels of silicon technologies for high performance computing, networking and data center applications. This is accomplished by combining processors and other chiplets into one packaged module. Through die partitioning and heterogeneous integration, these modules provide higher functionality at lower total product cost.

Our research and development employees are based in Korea, the United States, Portugal and other locations in Asia. At December 31, 2022, we had approximately 700 employees engaged in research and development activities. In 2022, 2021 and 2020, we incurred \$149.4 million, \$166.0 million and \$140.7 million, respectively, of research and development expense.

SALES AND MARKETING

Our sales offices are located throughout Asia, Europe and North America. Our support personnel manage and promote our packaging and test services and provide key customer and technical support. To provide comprehensive sales and customer service, we typically assign our customers a direct support team consisting of an account manager, technical program manager, test program manager and both field and factory customer support representatives. We also support our largest multinational customers from multiple office locations to ensure that we are aligned with their global operational and business requirements.

Our direct support teams are further supported by an extended staff of product, process, quality and reliability engineers, as well as marketing and advertising specialists, information systems technicians and factory personnel. Together, these direct and extended support teams deliver an array of services to our customers.

SEASONALITY

Our sales have generally been higher in the second half of the year than in the first half due to consumer buying patterns in the U.S., Europe and Asia and the timing of flagship mobile device launches. In addition, semiconductor companies generally reduce their production during the holidays at the end of December, which generally results in a decrease in packaging and test services during the first quarter. General economic conditions, changes in our product mix or overall demand in any of our end markets can impact our seasonality.

CUSTOMERS

Our customers include many of the largest semiconductor companies in the world. Our ten largest customers accounted for 65% of our net sales in 2022. Direct sales to Apple Inc. and Qualcomm Technologies, Inc. accounted for 20.6% and 10.1% of our net sales, respectively, for the year ended December 31, 2022.

MATERIALS AND EQUIPMENT

Materials

Our materials are used primarily for packaging activities. Our packaging operations depend upon obtaining adequate supplies of materials on a timely basis. The principal materials used in our packaging process are laminate substrates, ICs, capacitors, leadframes and gold wire. The silicon wafer is generally consigned from the customer. We generally do not take ownership of the customer consigned wafer, and title and risk of loss remains with the customer for these materials. Test materials constitute a very small portion of our total test cost. Generally, we purchase materials based on Amkor's commitments to customer forecasts, and our customers are generally responsible for any unused materials we purchase based on such commitments.

We obtain the materials required for packaging services from various suppliers and source most of our materials, including critical materials such as leadframes, laminate substrates and gold wire, from a limited group of suppliers. We work closely with our primary material suppliers to ensure consistent quality, availability and timely delivery. We also negotiate worldwide pricing agreements with our major suppliers to take advantage of the scale of our operations.

Equipment

Our ability to meet the changing demand from our customers for manufacturing capacity depends upon obtaining packaging and test equipment in a timely manner. We work closely with our main equipment suppliers to coordinate the ordering and delivery of equipment to meet our expected capacity needs.

The primary types of equipment used in providing our packaging services are wirebonders, die bonders, chip shooters, and die attach. In addition, we maintain a variety of other packaging equipment, including mold, singulation, ball attach and wafer backgrind, along with numerous other types of manufacturing equipment. A substantial portion of our packaging equipment base can generally be used and adapted to support the manufacture of many of our packages, with equipment used in traditional wirebond packaging being easier to redeploy than the equipment used in advanced packaging.

We also purchase wafer bumping equipment to facilitate our flip chip and wafer level packaging services. Wafer bumping equipment includes sputter and spin coaters, electroplating equipment, reflow ovens and other types of equipment. This equipment tends to have longer lead times for delivery and installation than other packaging equipment and is sold in relatively larger increments of capacity.

The primary equipment used in the testing process includes testers, handlers and probers. Handlers are used to transfer individual or small groups of packaged ICs to a tester. Test equipment is generally a more capital-intensive activity than packaging, and test equipment tends to have longer delivery lead times than most types of packaging equipment. We focus our capital expenditures on standardized tester platforms to maximize test equipment utilization where possible. For tester platforms that are less standardized, we generally lease test equipment for the expected life cycle of the project. In some cases, our customers will consign test equipment to us.

GOVERNMENTAL REGULATIONS

As a public company with global operations, we are subject to various federal, state, local, and foreign laws, and our products and services are governed by a number of rules and regulations. These regulations, which differ among jurisdictions, include financial and other external reporting disclosure rules, accounting standards, and environmental, corporate governance, intellectual property, tax, trade, antitrust, employment, immigration and travel, privacy and anti-corruption laws. Costs and accruals incurred to comply with these governmental regulations are presently not material to our capital expenditures, results of operations and competitive position. Although there is no assurance that existing or future government laws applicable to our operations, services or products will not have a material adverse effect on our capital expenditures, results of operations and competitive position, we do not currently anticipate material expenditures for compliance with government regulations.

Environmental Matters

We use chemicals and materials in the semiconductor packaging process that generate byproducts such as wastewater, solid waste and flue gas. For example, water used for rinsing or cooling wafers being sawed or used in the etching or solder deposition process produces wastewater. Scrap from metal lead-frame or substrate processing or excessive molding resin produces solid waste. Emissions from solvents used for coating produce flue gases. In addition to byproducts, semiconductor packages have historically contained lead, a naturally occurring element that can be toxic. The use of lead in our packages has decreased over time due to the use of lead-free alternatives. The use and storage of chemicals and materials are subject to various laws and regulations governing waste disposal, water discharge, emissions into the atmosphere and employee health and safety. We are engaged in continuing efforts to comply with these environmental laws and regulations, including the establishment of environmental management systems, safety training for employees and installation of pollution control equipment at our factories.

In the future, we may be subject to changes to existing environmental regulations or new green initiatives required by our customers, investors, governments or other stakeholders. We do not believe that capital expenditures or other costs attributable to compliance with environmental laws and regulations or green initiatives will have a material adverse effect on our business, liquidity, results of operations, financial condition or cash flows.

We are also committed to responsible environmental practices that go beyond legal requirements in conducting our business. These environmental practices include:

- Certification of our factories worldwide to International Organization for Standards (“ISO”) framework 14001, widely recognized as the standard for effective environmental management systems.
- Measurement and independent verification of greenhouse gases (“GHGs”) generated by our factories worldwide. Once collected, our GHG data is submitted to, and disclosed publicly by, CDP, formerly known as the Carbon Disclosure Project. CDP is a leading organization that assesses the impact of climate change and promotes a sustainable economy.
- Membership in the Responsible Business Alliance (“RBA”), an international industry group dedicated to corporate social responsibility. RBA members agree to follow a uniform Code of Conduct that includes standards of environmental responsibility, and our factories have been subject to independent audits to assess compliance with these standards.
- Capital investment and process optimization activities to reduce GHGs include installation of solar photovoltaic panels, replacement of, or improvements to, chiller unit systems and use of light-emitting diode (“LED”) technology.

COMPETITION

The outsourced semiconductor packaging and test market is very competitive. We face substantial competition from established packaging and test service providers primarily located in Asia, including companies with significant manufacturing capacity, financial resources, research and development operations, marketing and other capabilities. These companies include ASE Technology Holding Co., Ltd. and JCET Group Co., Ltd. In addition, we compete with electronic manufacturing service providers or contract electronics manufacturers, including Universal Scientific Industrial (Shanghai) Co., Ltd., that also provide advanced integrated device solutions. Such companies also have

developed relationships with most of the world's largest semiconductor companies, including current or potential customers of Amkor.

We also compete with the internal semiconductor packaging and test capabilities of many of our customers. Our IDM customers continually evaluate the attractiveness of outsourced services against their own in-house packaging and test services and at times may decide to shift some or all of their outsourced packaging and test services to internally sourced capacity. We also compete with contract foundries, such as Taiwan Semiconductor Manufacturing Company Limited and Samsung Electronics Co., Ltd., which offer full turnkey services from silicon wafer fabrication through packaging and final test. In addition, we compete with companies that offer test-only services.

The principal elements of competition in the outsourced semiconductor packaging and test services market include price, available capacity, flexibility, quality, customer service and support, new product introduction experience, cycle time, reputation and reliability, customer satisfaction, technological expertise and innovation, breadth of packaging and test services offered, including turnkey services, and the ability to invest in capacity, geographic location and scale of manufacturing. We believe that we compete favorably with respect to each of these elements.

INTELLECTUAL PROPERTY

We maintain an active program to protect and derive value from our investment in technology and the associated intellectual property rights. Intellectual property rights that apply to our various products and services include patents, copyrights, trade secrets and trademarks. We have filed and obtained a number of patents in the U.S. and other countries, and their durations vary depending on the jurisdiction in which each patent is filed. Although our patents are an important element of our intellectual property strategy, we are not materially dependent on any one patent or any one technology. We expect to continue to file patent applications when appropriate to protect our proprietary technologies, but we cannot provide assurances that we will receive patents from pending or future applications. In addition, any patents we obtain could be challenged, invalidated or circumvented and may not provide meaningful protection or other commercial advantage to us. Nonetheless, our patents afford an important means of protection for our technologies. Further, to distinguish our products from our competitors' products, we have obtained certain trademarks and service marks and may promote our particular brands through advertising and other marketing techniques.

We also protect and maintain the confidentiality of certain information about our processes, products and strategies which we believe provides us with a competitive advantage. We have ongoing programs designed to maintain the confidentiality of such information. As part of these efforts, all employees who have access to Amkor's information systems are required to participate in cybersecurity training within the first 15 days of employment, after which recurring mandatory training is required on an annual basis.

HUMAN CAPITAL RESOURCES

Employees

As of December 31, 2022, Amkor employed 31,300 regular full-time employees, of whom approximately 97%, 2% and 1% resided in the Asia-Pacific region, Europe and North America, respectively. Our global workforce spans 12 countries, reflecting various cultures, backgrounds, ages, genders and ethnicities. Of our global employee base, 93% are employed in manufacturing roles. Our employees in France, Germany, the Philippines, Singapore, Taiwan, Vietnam and the U.S. are not represented by any union. Certain employees at our factories in China, Japan, Korea, Malaysia and Portugal are members of a union, and we operate subject to collective bargaining agreements that we have entered into with these unions. We believe that our relations with our employees are good, and we have not experienced a work stoppage in any of our factories.

Amkor believes that its future success is highly dependent upon our continued ability to attract, retain and motivate qualified employees. As part of our effort to attract and motivate employees, Amkor is committed to providing competitive and comprehensive benefits that are designed to enable our employees and their families to live healthier and more secure lives. Additionally, Amkor has implemented various retention programs to incentivize and retain high-performing employees. We regularly evaluate such retention programs and our compensation practices generally to ensure they remain competitive and are aligned with local market practices. We look to promote our management-level employees from within Amkor, and we believe that we have been successful in this effort. Factory locations also

maintain training and development programs that enable the continued learning and growth of our employees, and senior management regularly meets to share and implement best practices among our various facilities.

Amkor also uses human capital initiatives to support our broad geographic footprint. For career development and advancement, we may provide employees with the opportunity to move between factories, often in support of new factories or the introduction of new packaging offerings. We believe that these initiatives are efficient for training new local employees and allow existing employees to continue to develop in their careers.

We believe that our efforts to motivate, retain and support the growth of qualified employees is reflected in the long average tenure of our key employees.

Health and Safety

The health and safety of our employees is very important to us and, accordingly, we endeavor to provide comprehensive health benefits to our full-time employees. Our focus on health and safety is further evident in our response to the Covid-19 pandemic. Because our business involves the manufacturing and testing of physical products, many of our employees have been unable to work from home. To keep our employees safe and to maintain operations during the Covid-19 pandemic, we implemented increased health and safety-related measures across our global footprint. While the long-term impact of the Covid-19 pandemic remains uncertain, we have retained those enhanced measures as part of our commitment to protect the health and safety of our employees.

AVAILABLE INFORMATION

Amkor files annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains annual, quarterly and current reports, proxy statements and other information that issuers (including Amkor) file electronically with the SEC. The SEC's website is www.sec.gov.

Amkor's website is www.amkor.com. Amkor makes available, free of charge, through its website: our annual reports on Form 10-K; quarterly reports on Form 10-Q; current reports on Form 8-K; Forms 3, 4 and 5 filed on behalf of directors and executive officers; and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We also make available, free of charge, through our website, our Corporate Governance Guidelines, the charters of the Audit Committee, Nominating and Governance Committee and Compensation Committee of our Board of Directors, our Code of Business Conduct, our Code of Ethics for Directors and other information and materials. The information on Amkor's website is not incorporated by reference into this Form 10-K.

Item 1A. Risk Factors

The factors discussed below are cautionary statements that identify important factors and risks that could cause actual results to differ materially from those anticipated by the forward-looking statements contained in this Form 10-K. For more information, see the Forward-Looking Statements within this Form 10-K. You should carefully consider the risks and uncertainties described below, together with all of the other information included in this Form 10-K, in considering our business and prospects. The risks and uncertainties described below are not the only ones facing Amkor. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also adversely affect our business operations. The occurrence of any of the risks and uncertainties described below could materially and adversely affect our business, liquidity, results of operations, financial condition or cash flows.

Summary of Risk Factors

An investment in our common stock involves various risks, and you are urged to carefully consider all of the matters discussed in Part I, Item 1A of this Form 10-K under the caption "Risk Factors" (in addition to those discussed under this

“Summary of Risk Factors” section) in considering our business and prospects. The following is a list of some of these risks:

Company-Specific Risk Factors

- dependence on the cyclical and volatile semiconductor industry and vulnerability to industry downturns and declines in global economic and financial conditions;
- changes in costs, quality, availability and delivery times of raw materials, components and equipment;
- fluctuations in operating results and cash flows;
- dependence on international factories and operations, and risks relating to our customers’ and vendors’ international operations;
- competition with established competitors in the packaging and test business, the internal capabilities of IDMs, and new competitors, including foundries;
- our substantial investments in equipment and facilities to support the demand of our customers;
- difficulty achieving the relatively high-capacity utilization rates necessary to realize satisfactory gross margins given our high percentage of fixed costs;
- our absence of backlog and the short-term nature of our customers’ commitments;
- the historical downward pressure on the prices of our packaging and test services;
- fluctuations in our manufacturing yields;
- our ability to develop new proprietary technology, protect our proprietary technology, operate without infringing the proprietary rights of others, and implement new technologies;
- warranty claims, product return and liability risks, and the risk of negative publicity if our products fail, as well as the risk of litigation incident to our business;
- restrictive covenants in the indentures and agreements governing our current and future indebtedness;
- the possibility that we may decrease or suspend our quarterly dividend;
- significant severance plan obligations associated with our manufacturing operations in Korea; and
- the ability of certain of our stockholders to effectively determine or substantially influence the outcome of matters requiring stockholder approval.

General Risk Factors

- health conditions or pandemics, such as the Covid-19 pandemic, impacting labor availability and operating capacity, capital availability, the supply chain and consumer demand for our customers’ products and services;
- laws, rules, regulations and policies imposed by U.S. or other governments, such as tariffs, customs, duties, export controls, sanctions and other restrictive trade barriers and national security, data privacy and cybersecurity, antitrust and competition, tax, currency and banking, labor and environmental, health and safety laws;
- our substantial indebtedness;
- fluctuations in interest rates and changes in credit risk;
- difficulty funding our liquidity needs;
- dependence on key customers or concentration of customers in certain end markets, such as mobile communications and automotive;
- difficulty attracting, retaining or replacing qualified personnel;
- maintaining an effective system of internal controls;

- our continuing development and implementation of changes to, and maintenance and security of, our information technology systems;
- challenges with integrating diverse operations;
- any changes in tax laws, taxing authorities not agreeing with our interpretation of applicable tax laws, including whether we continue to qualify for conditional reduced tax rates, or any requirements to establish or adjust valuation allowances on deferred tax assets; and
- natural disasters and other calamities, health conditions or pandemics, political instability, hostilities or other disruptions.

Company-Specific Risk Factors

Our packaging and test services are used in volatile industries, and industry downturns, and declines in global economic and financial conditions could harm our performance.

Our business is impacted by market conditions in the semiconductor industry, which is cyclical by nature and impacted by broad economic factors, such as worldwide gross domestic product and consumer spending. We believe that the general semiconductor market is currently going through a cyclical correction. The semiconductor industry has experienced significant and sometimes sudden and prolonged downturns in the past. If the industry or markets in which we compete experience slower, or even negative growth, our business and results of operations may be materially and adversely affected.

Since our business is, and will continue to be, dependent on the requirements of semiconductor companies for outsourced packaging and test services, any downturn in the semiconductor industry or any other industry that uses a significant number of semiconductor devices, such as telecommunications, automotive, consumer electronics, or computing, could have a material adverse effect on our business and operating results. During downturns, we have experienced, among other things, reduced demand, excess capacity and reduced sales. For example, the Covid-19 pandemic disrupted demand in the automotive and industrial end market in 2020, and during 2019, there was weakness in the general market and an inventory correction in the smartphone market.

In addition, declines in global economic and financial conditions have harmed our business in the past, and future global downturns could materially and adversely affect our business. New variants or the potential re-emergence of the Covid-19 pandemic or the occurrence of other epidemics or pandemics, and the imposition of related public health measures and travel and business restrictions, may materially and adversely impact our business, financial condition, operating results and cash flows. In addition, we have experienced, and may experience in the future, disruptions to our business operations resulting from quarantines, self-isolations or other movement and restrictions on the ability of our employees to perform their jobs that may impact our ability to meet customer commitments. In March 2022, as part of a broad effort to mitigate a rising number of Covid-19 cases in Shanghai, the Chinese government mandated a temporary lockdown of our Shanghai factory. The Shanghai facility reopened during the second quarter and returned to normal operating levels in late June 2022. Other national, regional, and local governments have implemented, and may implement in the future, restrictions to mitigate the spread of Covid-19, the emergence of new variants, or the re-emergence of Covid-19 in jurisdictions in which we, our customers and our suppliers operate, and such restrictions may materially and adversely impact our operations and the operations of our customers and suppliers. We also remain subject to industry-wide supply constraints and inflationary price pressures, which have resulted in long lead times, rising prices and supply chain disruptions.

It is difficult to predict the timing, strength or duration of any economic disruption caused by the Covid-19 pandemic or which end markets will experience a slowdown or subsequent economic recovery which, in turn, makes it more challenging for us to forecast our operating results, make business decisions and identify risks that may materially affect our business, sources and uses of cash, financial condition and results of operations. Additionally, if industry conditions deteriorate, we could suffer significant losses, as we have in the past, that could materially and adversely impact our business, liquidity, results of operations, financial condition and cash flows.

Our business may suffer if the cost, quality or supply of materials or equipment changes adversely.

We obtain the materials and equipment required for the packaging and test services performed by our factories from various vendors. We source most of our materials, including critical materials such as leadframes, laminate substrates

and gold wire, from a limited group of suppliers. A disruption to the operations of one or more of our suppliers could extend lead times for materials and equipment and have a negative impact on our business, and the Covid-19 pandemic and resulting supply chain disruptions and economic turbulence have created extended lead times for some materials and equipment. To the extent the impact of such disruptive events continues or worsens, we anticipate having greater difficulty obtaining, or waiting longer to obtain, certain equipment, supplies and other materials necessary for performance of our services or necessary to increase the services we provide to customers. Furthermore, fire, severe weather, earthquakes, flooding and tsunamis in the past have impacted the supply of specialty chemicals, substrates, silicon wafers, equipment and other supplies to the electronics industry.

In addition, we purchase the majority of our materials on a purchase order basis. Our business may be harmed if we cannot obtain materials and other supplies from our vendors in a timely manner, in sufficient quantities, at acceptable quality or at competitive prices or are unable to increase our prices sufficiently to recover inflationary price increases in materials or supplies. Some of our customers are also dependent on a limited number of suppliers for certain materials and silicon wafers. Shortages or disruptions in our customers' supply channels, including any disruptions arising out of the conflict in Ukraine, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

SEC rules and related industry initiatives require diligence and disclosure regarding the use of certain minerals originating from the conflict zones of the Democratic Republic of Congo and adjoining countries. Many of our customers' initiatives require us to certify that the covered materials we use in our packages do not come from the conflict areas. We incur costs associated with complying with these requirements and customer initiatives, and we may be required to increase our efforts in the future to cover additional materials and geographic areas. These requirements and customer initiatives could affect the pricing, sourcing and availability of materials used in the manufacture of semiconductor devices, and we cannot assure you that we will be able to obtain conflict-free materials or other materials covered by customer initiatives in sufficient quantities and at competitive prices or that we will be able to verify the origin of all of the materials we procure. If we are unable to meet these requirements and customer initiatives, some customers may move their business to other suppliers, and our reputation and business could be materially and adversely affected.

We purchase new packaging and test equipment to maintain and expand our operations. From time to time, increased demand for new equipment may cause lead times to extend beyond those normally required by equipment vendors, and the Covid-19 pandemic and resulting supply chain disruptions and economic turbulence have created extended lead times for some equipment. In periods of increased demand and reduced availability, equipment suppliers may delay orders or only partially satisfy our equipment orders in the normal time frame. The unavailability of equipment or failures to deliver equipment on a timely basis could delay or impair our ability to meet customer orders. If we are unable to meet customer orders, we could lose potential and existing customers. Generally, we acquire our equipment on a purchase order basis and do not enter into long-term equipment agreements. As a result, we could experience adverse changes in pricing, currency risk and potential shortages in equipment in a strong market, any of which could have a material adverse effect on our results of operations.

We are a large buyer of gold and other commodity materials, including substrates and copper. The prices of gold and other commodities used in our business fluctuate. Historically, we have been able to partially offset the effect of commodity price increases through price adjustments to some customers and changes in our product designs that reduce the material content and cost, such as the use of shorter, thinner gold wire and migration to copper wire. However, we typically do not have long-term contracts that permit us to impose price adjustments, and market conditions may limit our ability to do so. Significant price increases may materially and adversely impact our gross margin in future periods to the extent we are unable to pass along past or future commodity price increases to our customers.

Our operating results and cash flows have varied and may vary significantly as a result of factors that we cannot control.

Many factors could have a material adverse effect on our net sales, gross profit, operating results and cash flows or lead to significant variability of quarterly or annual operating results. Our profitability and ability to generate cash from operations is principally dependent upon demand for semiconductors, the utilization of our capacity, semiconductor

package mix, the average selling price of our services, our ability to manage our capital expenditures and our ability to control our costs including labor, material, overhead and financing costs.

Our net sales, gross margin, gross profit, operating income, net income and cash flows have historically fluctuated significantly from quarter to quarter as a result of many of the following factors, over which we have little or no control and which we expect to continue to impact our business:

- fluctuations in demand for semiconductors and conditions in the semiconductor industry generally, as well as by specific customers, such as inventory reductions by our customers impacting demand in key markets;
- changes in cost, quality, availability and delivery times of raw materials, components, equipment and labor;
- inflation, including wage inflation, and fluctuations in commodity prices, including gold, copper and other precious metals;
- our ability to achieve our major growth objectives, including transitioning second-wave customers to advanced packages and increasing our share of the automotive and industrial end market;
- changes in our capacity and capacity utilization rates;
- fluctuations in interest rates and currency exchange rates, including the current rising interest rate environment;
- changes in average selling prices which can occur quickly due to the absence of long-term agreements on price;
- changes in the mix of the semiconductor packaging and test services that we sell;
- fluctuations in our manufacturing yields;
- the development, transition and ramp to high volume manufacture of more advanced silicon nodes and evolving wafer, packaging and test technologies may cause production delays, lower manufacturing yields and supply constraints for new wafers and other materials;
- the absence of backlog, the short-term nature of our customers' commitments, double bookings by customers and deterioration in customer forecasts and the impact of these factors, including the possible delay, rescheduling and cancellation of large orders, or the timing and volume of orders relative to our production capacity;
- the timing of expenditures in anticipation of future orders;
- changes in effective tax rates;
- the availability and cost of financing;
- leverage and debt covenants;
- intellectual property transactions and disputes;
- warranty and product liability claims and the impact of quality excursions and customer disputes and returns;
- costs associated with legal claims, indemnification obligations, judgments and settlements;
- political instability, conflicts (such as the ongoing conflict in Ukraine) and government shutdowns, civil disturbances and international events;
- environmental or natural disasters such as earthquakes, typhoons and volcanic eruptions;
- pandemics or other widespread illnesses that may impact our labor force, operations, liquidity, supply chain and end-user demand for products which incorporate semiconductors, such as the Covid-19 pandemic;
- costs of acquisitions and divestitures and difficulties integrating acquisitions;

- our ability to attract and retain qualified personnel to support our global operations;
- our ability to penetrate new end markets or expand our business in existing end markets;
- dependence on key customers or concentration of customers in certain end markets, such as mobile communications and automotive; and
- restructuring charges, asset write-offs and impairments.

In addition to the above factors, restrictive trade barriers adopted by U.S. and foreign governments applicable to the semiconductor supply chain, including the export rules and regulations adopted by the U.S. government in October 2022 regarding the sale of certain semiconductor chip and chipmaking equipment products to customers in China, could impact our business and the businesses of our customers. These factors may have a material and adverse effect on our business, liquidity, results of operations, financial condition and cash flows or lead to significant volatility in our quarterly or annual operating results. In addition, these factors may materially and adversely affect our credit ratings, which could make it more difficult and expensive for us to raise capital and could materially and adversely affect the price of our securities.

We depend on our factories and operations in various foreign jurisdictions and many of our customers' and vendors' operations are also located outside of the U.S.

We provide packaging and test services through our factories and other operations located in China, Japan, Korea, Malaysia, the Philippines, Portugal, Singapore and Taiwan and are preparing to offer packaging and test services from a new factory under construction in Vietnam. Substantially all of our property, plant and equipment is located outside of the United States, and many of our customers and the vendors in our supply chain are also located outside the U.S. The following are some of the risks we face in doing business internationally:

- restrictive trade barriers considered or adopted by U.S. and foreign governments applicable to the semiconductor supply chain, including laws, rules, regulations and policies in areas such as national security, licensing requirements for exports, tariffs, customs and duties, including the export rules and regulations applicable to U.S. companies that sell certain semiconductor and chipmaking equipment products to customers in China;
- laws, rules, regulations and policies within China and other countries that may favor domestic companies over non-domestic companies, including customer- or government-supported efforts to promote the development and growth of local competitors;
- health and safety concerns, including widespread outbreak of infectious diseases, such as Covid-19, and governmental responses thereto;
- changes in consumer demand resulting from current or expected inflation or other variations in local economies;
- laws, rules, regulations and policies imposed by U.S. or foreign governments in areas such as data privacy, cybersecurity, antitrust and competition, tax, currency and banking, labor, environmental, and health and safety;
- the payment of dividends and other payments by non-U.S. subsidiaries may be subject to prohibitions, limitations or taxes in local jurisdictions;
- fluctuations in currency exchange rates, particularly the U.S. dollar to Japanese yen exchange rate for our operations in Japan;
- political and social conditions, and the potential for civil unrest, terrorism or other hostilities (such as the ongoing conflict in Ukraine);
- disruptions or delays in shipments caused by customs brokers or government agencies;
- difficulties in attracting and retaining qualified personnel and managing foreign operations, including foreign labor disruptions;

- difficulty in enforcing contractual rights and protecting our intellectual property rights;
- potentially adverse tax consequences resulting from tax laws in the U.S. and in other jurisdictions; and
- local business and cultural factors that differ from our normal standards and practices, including business practices that we are prohibited from engaging in by the U.S. Foreign Corrupt Practices Act and other anti-corruption laws and regulations.

On October 7, 2022, the U.S. Bureau of Industry and Security announced new export control regulations applicable to U.S. semiconductor technology sold in China. The new regulations place limitations on the ability of companies to export certain advanced computing semiconductor chips, as well as chipmaking equipment, by requiring companies to obtain licenses to export such products and equipment into China. Certain of the Company's competitors may be exempt from the new regulations by virtue of being non-U.S. manufacturers. To the extent required, Amkor would pursue export licenses and authorizations, but there can be no assurances that Amkor would obtain such licenses or authorizations on a timely or cost-effective basis or at all, or that our customers will not reroute business that would have otherwise been given to Amkor to one or more of our competitors as a result of the new restrictions, particularly if our competitors have, or are not required to have, required licenses or authorizations that we have not obtained. It is also possible that government agencies in China or in other countries may adopt retaliatory export control rules in response to the new U.S. regulations, which could further impact our business, liquidity, results of operations, financial condition and cash flows.

The Covid-19 pandemic has impacted, and may impact in the future, our operations and the operations of our customers and suppliers as a result of illness, quarantines, facility closures and travel and logistics restrictions in connection with the outbreak. For example, quarantine orders and orders restricting movement have adversely affected, and may in the future adversely affect, our operations in China, the Philippines and Malaysia. Additionally, other national, regional, and local governments have implemented, and may implement in the future, restrictions to mitigate the spread of Covid-19, the emergence of new variants or the re-emergence of Covid-19 in jurisdictions in which we, our customers and our suppliers operate, and such restrictions may materially and adversely impact our operations and the operations of our customers and suppliers. Such restrictions may also affect end-user demand in each geography where our customers sell their products and services, which may materially and adversely affect demand for our services, our operating results and financial condition. We also remain subject to industry-wide supply constraints and inflationary price pressures, which have resulted in long lead times, rising prices and supply chain disruptions.

In addition, we have significant facilities and other investments in Korea, and there have been heightened security concerns in recent years stemming from North Korea's nuclear weapon and long-range missile programs as well as its military actions in the region. Furthermore, there has been a history of conflict and tension within and among other countries in the region.

We compete against established competitors in the packaging and test business as well as internal capabilities of IDMs and face competition from new competitors, including foundries.

The outsourced semiconductor packaging and test services market is very competitive. We face substantial competition from established and emerging packaging and test service providers primarily located in Asia, including companies with significantly greater processing capacity, financial resources, local presence, research and development operations, marketing, technology and other capabilities. In addition, we may compete with electronics manufacturing service providers or contract electronics manufacturers that also provide advanced integrated device solutions. We also may face increased competition from domestic companies located in China, where there are government-supported efforts to promote and subsidize the development and growth of the local semiconductor industry. We may be at a disadvantage in attempting to compete with entities associated with such government-supported initiatives based on their lower cost of capital, access to government resources and incentives, preferential sourcing practices, stronger local relationships or otherwise. Our competitors may also have established relationships, or enter into new strategic relationships, with one or more of the large semiconductor companies that are our current or potential customers or key suppliers to these customers. Consolidation among our competitors could also strengthen their competitive position.

Historically, we have also been dependent on the trend in outsourcing of packaging and test services by IDM and foundry customers. Our IDM and foundry customers continually evaluate the need for outsourced services against their own in-house packaging and test services. As a result, at any time and for a variety of reasons, IDMs and foundries may

decide to shift some or all of their outsourced packaging and test services to internally sourced capacity. To the extent we limit capacity commitments for certain customers, these customers may increase their level of in-house packaging and test capabilities, which could make it more difficult for us to regain their business when we have available capacity. If we experience a significant loss of IDM or foundry business, it could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows, especially during a prolonged industry downturn.

We also face competition from contract foundries, such as Taiwan Semiconductor Manufacturing Company Limited and Samsung Electronics Co., Ltd., which offer full turnkey services from silicon wafer fabrication through packaging and final test. These foundries, which are substantially larger than us and have greater financial resources than we do, have expanded their operations to include packaging and test services and may continue to expand these capabilities in the future. If a key customer decides to purchase wafers from a semiconductor foundry that provides packaging and test services, our business could be adversely affected if the customer also engages that foundry for related packaging and test services.

We cannot assure you that we will be able to compete successfully in the future against our existing or potential competitors, that our customers will not rely on internal sources or foundries for packaging and test services or that our business, liquidity, results of operations, financial condition or cash flows will not be materially and adversely affected by such increased competition.

We make substantial investments in equipment and facilities to support the demand of our customers, which may materially and adversely affect our business if the demand of our customers does not develop as we expect or is adversely affected.

We make significant investments in equipment and facilities in order to service the demand of our customers. The amount of our capital expenditures depends on several factors, including the performance of our business, our assessment of future industry and customer demand, our capacity utilization levels and availability, advances in technology, our liquidity position and the availability of financing. Our ongoing capital expenditure requirements may strain our cash and liquidity, and, in periods when we are expanding our capital base, we expect that depreciation expense and factory operating expenses associated with capital expenditures to increase production capacity will put downward pressure on our gross profit, at least in the near term. From time to time, we also make significant capital expenditures based on specific business opportunities with one or a few key customers, and the additional equipment purchased may not be readily usable to support other customers. If demand is insufficient to fill our capacity, or we are unable to efficiently redeploy such equipment, our capacity utilization and gross profit could be negatively impacted.

Furthermore, if we cannot generate or raise additional funds to pay for capital expenditures, particularly in some of the advanced packaging and bumping areas, as well as research and development activities, our growth and future profitability may be materially and adversely affected. Our ability to obtain external financing in the future is subject to a variety of uncertainties, including: our future financial condition, results of operations and cash flows; general market conditions for financing; volatility in fixed income, credit and equity markets; and economic, political and other global conditions.

During 2022, we began construction for the first phase of a new manufacturing facility in Bac Ninh, Vietnam, which will have approximately 1.9 million square feet of space. We expect to complete the first phase and begin high-volume manufacturing in the fourth quarter of 2023. There can be no assurance, however, that the construction will be completed, or that high-volume manufacturing will begin, on that schedule or that the actual scope, costs or benefits of the project will be consistent with our current expectations.

Due to our high percentage of fixed costs, we may be unable to maintain satisfactory gross margins if we are unable to achieve relatively high-capacity utilization rates.

Our operations are characterized by high fixed costs and the absence of any material backlog. Our profitability depends in part not only on pricing levels for our packaging and test services but also on the efficient utilization of our human resources and packaging and test equipment. Increases or decreases in our capacity utilization can significantly affect gross margins. Transitions between different packaging technologies can also impact our capacity utilization if we do not efficiently redeploy our equipment for other packaging and test opportunities. We cannot assure you that we will be

able to achieve consistently high-capacity utilization, and if we fail to do so, our gross margins may be negatively impacted.

In addition, our fixed operating costs have increased as a result of capital expenditures for capacity expansion. The anticipated customer demand for which we have made capital investments may not materialize, and our sales may not adequately cover fixed costs, resulting in reduced profit levels or even significant losses, either of which may materially and adversely impact our business, liquidity, results of operations, financial condition and cash flows.

The lack of contractually committed customer demand may materially and adversely affect our sales.

Our packaging and test business does not typically operate with any material backlog. Our quarterly net sales from packaging and test services are substantially dependent upon our customers' demand in that quarter. Generally, our customers do not commit to purchase any significant amount of packaging or test services or to provide us with binding forecasts of demand for packaging and test services for any future period, in any material amount. In addition, we sometimes experience double booking by customers, and our customers often reduce, cancel or delay their purchases of packaging and test services for a variety of reasons, including industry-wide, customer-specific and Amkor-specific reasons. This makes it difficult for us to forecast our capacity utilization and net sales in future periods. Since a large portion of our costs is fixed and our expense levels are based in part on our expectations of future sales, we may not be able to adjust costs in a timely manner to compensate for any sales shortfall. If we are unable to adjust costs in a timely manner, our margins, operating results, financial condition and cash flows could be materially and adversely affected.

Additionally, while we generally purchase materials based on Amkor's commitments to customer forecasts, and our customers are generally responsible for any unused materials we purchase based on such commitments, due to the Covid-19 pandemic and the resulting supply chain constraints and extended lead times, we have been placing an increasing number of our orders for materials in advance of customer forecasts. If we are unable to timely fulfill our customers' orders, or if we are required to bear the cost of a substantial amount of unused materials, our margins, operating results, financial condition and cash flows could be materially and adversely affected.

Historically, there has been downward pressure on the prices of our packaging and test services.

Prices for packaging and test services have generally declined over time, and sometimes prices can change significantly in relatively short periods of time. We expect downward pressure on average selling prices for our packaging and test services to continue in the future, and this pressure may intensify during downturns in business. If we experience declining average selling prices and are unable to offset such declines by developing and marketing new packages with higher prices, reducing our purchasing costs, recovering more of our material cost increases from our customers and reducing our manufacturing costs, our business, liquidity, results of operations, financial condition and cash flows could be materially and adversely affected.

Packaging and test processes are complex, and our production yields and customer relationships may suffer from defects in the services we provide or if we do not successfully implement new technologies.

Semiconductor packaging and test services are complex processes that require significant technological and process expertise, and in line with industry practice, customers usually require us to pass a lengthy and rigorous qualification process that may take several months. Once qualified and in production, defective packages primarily result from:

- contaminants in the manufacturing environment;
- human error;
- equipment malfunction;
- changing processes to address environmental requirements;
- defective raw materials; or
- defective plating services.

Test is also complex and involves sophisticated equipment and software. Similar to many software programs, these software programs are complex and may contain programming errors or “bugs.” The test equipment is also subject to malfunction, and the test process is subject to operator error.

These and other factors have, from time to time, contributed to lower production yields. They may also do so in the future, particularly as we adjust our capacity, change our processing steps or ramp new technologies. In addition, we must continue to develop and implement new packaging and test technologies and expand our offering of packages to be competitive. Our production yields on new packages, particularly those packages which are based on new technologies, typically are significantly lower than our production yields on our more established packages.

Our failure to qualify new processes, maintain quality standards or acceptable production yields, if significant and prolonged, could result in the loss of customers, increased costs of production, delays, substantial amounts of returned goods and claims by customers relating thereto. Any of these problems could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows.

Our business will suffer if we are not able to develop new proprietary technology, protect our proprietary technology and operate without infringing the proprietary rights of others.

The complexity and scope of semiconductor packaging, SiP modules and test services are rapidly increasing. As a result, we expect to develop, acquire and implement new manufacturing processes and packaging technologies and tools in order to respond to competitive industry conditions and customer requirements. Technological advances may lead to rapid and significant price erosion and may make our existing packages less competitive or our existing inventories obsolete. If we cannot achieve advances in packaging design or obtain access to advanced packaging designs developed by others, our business could suffer.

The need to develop and maintain advanced packaging capabilities and equipment could require significant research and development, capital expenditures and acquisitions in future years. In addition, converting to new packaging designs or process methodologies could result in delays in producing new package types, which could impact our ability to meet customer orders and materially and adversely impact our business.

Although we seek patent protection for some of our technology under U.S. and foreign patent laws, the process of seeking patent protection takes a long time and is expensive. There can be no assurance that patents will issue from pending or future applications or that, if patents are issued, the rights granted under the patents will provide us with meaningful protection or any commercial advantage. Any patents we do obtain will eventually expire and may be challenged, invalidated or circumvented. As a result, such patents may not offer us meaningful protection or provide the commercial advantage for which they were designed.

Some of our technologies are not covered by any patent or patent application. The confidentiality agreements on which we rely to protect these technologies may be breached or may not be adequate to protect our proprietary technologies. There can be no assurance that other countries in which we market our services will protect our intellectual property rights to the same extent as the U.S.

Our competitors may develop, patent or gain access to know-how and technology similar or superior to our own. In addition, many of our patents are subject to cross licenses, several of which are with our competitors. The semiconductor industry is characterized by frequent claims regarding the infringement of patent and other intellectual property rights. If any third party makes an enforceable infringement claim against us or our customers, we could be required to:

- discontinue the use of certain processes or cease to provide the services at issue, which could curtail our business;
- pay substantial damages;
- develop non-infringing technologies, which may not be feasible; or
- acquire licenses to such technology, which may not be available on commercially reasonable terms or at all.

We may need to enforce our patents or other intellectual property rights, including our rights under patent and intellectual property licenses with third parties, or defend ourselves against claimed infringement of the rights of others through litigation, which could result in substantial cost and diversion of our resources and may not be successful. Furthermore, if we fail to obtain necessary licenses, our business could suffer, and we could be exposed to claims for damages and injunctions from third parties, as well as claims from our customers for indemnification. Unfavorable outcomes in any legal proceedings involving intellectual property could result in significant liabilities or loss of commercial advantage and could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows. The potential impact from the legal proceedings referred to in this Form 10-K on our results of operations, financial condition and cash flows could change in the future.

We may face warranty claims, product return and liability risks, economic damage claims and negative publicity if our packages fail.

Our packages are incorporated into a number of end products. If our packages fail, our business may be exposed to warranty claims, product return and liability risks, economic damage claims and negative publicity.

We receive warranty claims from our customers from time to time in the ordinary course of our business. If we were to experience an unusually high incidence of warranty claims, we could incur significant costs and our business could be materially and adversely affected. In addition, we are exposed to the product and economic liability risks and the risk of negative publicity affecting our customers. Our sales may decline if any of our customers are sued on a product liability claim. We also may suffer a decline in sales from the negative publicity associated with such a lawsuit or with adverse public perceptions in general regarding our customers' products. Further, if our packages are delivered with defects, we could incur additional development, repair or replacement costs or suffer other economic losses, and our credibility and the market's acceptance of our packages could be harmed.

Covenants in the indentures and agreements governing our current and future indebtedness could restrict our operating flexibility.

The indentures and agreements governing our existing debt contain, and debt we incur in the future may contain, affirmative and negative covenants that materially limit our ability to take certain actions, including our ability to incur debt, pay dividends and repurchase stock, make certain investments and other payments, enter into certain mergers and consolidations, engage in sale leaseback transactions and encumber and dispose of assets. In addition, certain of our debt agreements contain, and our future debt agreements may contain, financial covenants and ratios.

The breach of any of these covenants by us, or the failure by us to meet any of the financial ratios or conditions, could result in a default under any or all of such indebtedness. If a default occurs under any such indebtedness, all of the outstanding obligations thereunder could become immediately due and payable, which could result in a default under our other outstanding debt and could lead to an acceleration of obligations related to other outstanding debt. The existence of such a default or event of default could also preclude us from borrowing funds under our revolving credit facilities. Our ability to comply with the provisions of the indentures, credit facilities and other agreements governing our outstanding debt and indebtedness we may incur in the future can be affected by events beyond our control, and a default under any debt instrument, if not cured or waived, could have a material adverse effect on us.

We may decrease or suspend our quarterly dividend, and any decrease in or suspension of the dividend could cause our stock price to decline.

Since October 2020, we have paid a regular quarterly cash dividend on our outstanding common stock. However, the payment, amount and timing of future cash dividends are subject to the final determination each quarter by our Board of Directors or a committee thereof that there are sufficient funds available to lawfully pay a dividend, that the dividend is compliant with the applicable restrictions in our debt agreements and that the payment of the dividend remains in our and our stockholders' best interests. The determination will be based on our results of operations, financial condition, cash requirements, debt restrictions and other factors. Given these considerations, we may increase or decrease the amount of the dividend at any time and may also decide to vary the timing of or suspend the payment of dividends in the future. Any decrease or suspension of dividend payments could cause our stock price to decline.

We have significant severance plan obligations associated with our manufacturing operations in Korea which could reduce our cash flow and negatively impact our financial condition.

Our subsidiary in Korea maintains an unfunded severance plan, under which we have an accrued liability of \$56.2 million as of December 31, 2022. The plan covers certain employees that were employed prior to August 1, 2015. In the event of a significant layoff or other reduction in our labor force in Korea, our subsidiary in Korea would be required to make lump-sum severance payments under the plan, which could have a material adverse effect on our liquidity, financial condition and cash flows. We have made, and may in the future make, offers to some or all of the covered employees the option to convert from the severance plan to a defined contribution plan. Some employees have accepted previous offers, and future offers to make similar conversions could impact the timing of future payments, reducing our cash flow and materially and adversely affecting our financial condition.

James J. Kim and members of his family can effectively determine or substantially influence the outcome of all matters requiring stockholder approval.

As of December 31, 2022, James J. Kim, the Executive Chairman of our Board of Directors, Susan Y. Kim, the Executive Vice Chairman of our Board of Directors, and members of the Kim family and affiliates owned approximately 142.0 million shares, or approximately 58%, of our outstanding common stock. The Kim family also has options to acquire approximately 0.6 million shares. If the options are exercised, the Kim family's total ownership would be an aggregate of approximately 142.6 million shares, or approximately 58% of our outstanding common stock.

In June 2013, the Kim family exchanged convertible notes issued by Amkor in 2009 for approximately 49.6 million shares of common stock (the "Convert Shares"). The Convert Shares are subject to a voting agreement. The voting agreement requires the Kim family to vote these shares in a "neutral manner" on all matters submitted to our stockholders for a vote, so that such Convert Shares are voted in the same proportion as all of the other outstanding securities (excluding the other shares owned by the Kim family) that are actually voted on a proposal submitted to Amkor's stockholders for approval. The Kim family is not required to vote in a "neutral manner" any Convert Shares that, when aggregated with all other voting shares held by the Kim family, represent 41.6% or less of the total then-outstanding voting shares of our common stock. The voting agreement for the Convert Shares terminates upon the earliest of (i) such time as the Kim family no longer beneficially owns any of the Convert Shares, (ii) consummation of a change of control (as defined in the voting agreement) or (iii) the mutual agreement of the Kim family and Amkor.

Mr. Kim and his family and affiliates, acting together, have the ability to effectively determine or substantially influence matters submitted for approval by our stockholders by voting their shares or otherwise acting by written consent, including the election of our Board of Directors. There is also the potential, through the election of members of our Board of Directors, that the Kim family could substantially influence matters decided upon by our Board of Directors. This concentration of ownership may also have the effect of impeding a merger, consolidation, takeover or other business consolidation involving us, or discouraging a potential acquirer from making a tender offer for our shares, and could also negatively affect our stock's market price or decrease any premium over market price that an acquirer might otherwise pay. Concentration of ownership also reduces the public float of our common stock. There may be less liquidity and higher price volatility for the stock of companies with a smaller public float compared to companies with broader public ownership. Also, the sale or the prospect of the sale of a substantial portion of the Kim family shares may cause the market price of our stock to decline significantly.

General Risk Factors

The Covid-19 pandemic has impacted, and may impact in the future, the supply chain and consumer demand for our customers' products and services, and such impact on the supply chain and consumer demand may ultimately have a material and adverse effect on our business, results of operations and financial condition.

The impacts of the Covid-19 pandemic have varied, and may continue to vary, by location, by industry and by end market. We, our suppliers and our customers have been disrupted by worker illness and absenteeism, quarantines and restrictions on employees' ability to work, office and factory closures, disruptions to ports and other shipping infrastructure and border closures or other travel or health-related restrictions. Restrictions on our workforce or access to our manufacturing facilities, or similar limitations for our suppliers, or restrictions or disruptions of transportation, such as reduced availability of air transport, port closures, and increased border controls, could limit our capacity to meet customer demand and have a material adverse effect on our business, results of operations and financial condition. Such restrictions and efforts to contain the spread of Covid-19 have caused, and may cause in the future, disruptions to our

supply chain in connection with the sourcing of equipment, supplies and other materials. The resumption of normal business operations after any such restrictions are lifted may be delayed or constrained by lingering effects of the Covid-19 pandemic on our suppliers or customers or both, and additional restrictions may be implemented in response to the emergence of new variants or re-emergence of Covid-19. Additionally, other national, regional and local governments have implemented, and may implement in the future, restrictions to mitigate the spread of Covid-19, the emergence of new variants, or the re-emergence of Covid-19 in jurisdictions in which we, our customers and our suppliers operate (such as the government-mandated lockdown of our Shanghai factory during the second quarter of 2022), and such restrictions may materially and adversely impact our operations and the operations of our customers and suppliers. We also remain subject to industry-wide supply constraints and inflationary price pressures, which have resulted in long lead times, rising prices and supply chain disruptions.

The spread of Covid-19 has caused us to modify our business practices (including corporate hygiene protocols at factories, restricting employee travel and employee work locations and cancelling physical participation in meetings, events and conferences) and, while the long-term impact of the Covid-19 pandemic remains uncertain, we have retained those enhanced measures as part of our commitment to protect the health and safety of our employees. We may also take further actions in the future as may be required by government authorities or that we determine to be in the best interests of our employees, customers and suppliers. There is no certainty that such measures will be sufficient to mitigate the future impact of the Covid-19 pandemic, and our ability to perform critical functions could be harmed.

At this time, we are unable to predict the nature or duration of future actions that may be taken by governmental authorities and other businesses in response to the Covid-19 pandemic (including any emergence of new variants).

Our substantial indebtedness could have a material adverse effect on our financial condition and prevent us from fulfilling our obligations.

We have a substantial amount of debt, and the terms of the agreements governing our indebtedness allow us and our subsidiaries to incur more debt, subject to certain limitations. As of December 31, 2022, our total debt balance was \$1,232.3 million, of which \$143.8 million was classified as a current liability and \$681.0 million was collateralized indebtedness at our subsidiaries. We may consider investments in joint ventures, increased capital expenditures, refinancings or acquisitions which may increase our indebtedness. If new debt is added to our consolidated debt level, the related risks that we face could increase.

Our substantial indebtedness could:

- make it more difficult for us to satisfy our obligations with respect to our indebtedness, including our obligations under our indentures to purchase notes tendered as a result of a change in control of Amkor;
- increase our vulnerability to general adverse economic and industry conditions;
- limit our ability to fund future working capital, capital expenditures, research and development and other business opportunities, including joint ventures and acquisitions;
- require us to dedicate a substantial portion of our cash flow from operations to service payments of interest and principal on our debt, thereby reducing the availability of our cash flow to fund future working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- increase the volatility of the price of our common stock;
- limit our flexibility to react to changes in our business and the industry in which we operate;
- place us at a competitive disadvantage to any of our competitors that have less debt;
- limit, along with the financial and other covenants in our indebtedness, our ability to borrow additional funds;
- limit our ability to refinance our existing indebtedness, particularly during periods of adverse credit market conditions when refinancing indebtedness may not be available under interest rates and other terms acceptable to us or at all; and
- increase our cost of borrowing.

We are exposed to fluctuations in interest rates and changes in credit risk, which could have a material adverse impact on our earnings as it relates to the market value of our investment portfolio.

We maintain an investment portfolio of various holdings, types and maturities. Our portfolio includes available-for-sale debt investments, the values of which are subject to market price volatility resulting from interest rate movements, changes in credit risk and financial market conditions. If such investments suffer market price declines, we may recognize in earnings the decline in the fair value of our investments below their cost basis when the decline is judged to be an impairment, including an allowance for credit loss.

We may have difficulty funding liquidity needs.

We assess our liquidity based on our current expectations regarding sales and operating expenses, capital spending, dividend payments, stock repurchases, debt service requirements and other funding needs. We fund our operations, including capital expenditures and other investments and servicing principal and interest obligations with respect to our debt, from cash flows from our operations, existing cash and cash equivalents, borrowings under available debt facilities, or proceeds from any additional debt or equity financing. Our liquidity is affected by, among other factors, volatility in the global economy and credit markets, the performance of our business, our capital expenditures and other investment levels, other uses of our cash, including any payments of dividends and purchases of stock under any stock repurchase program, any acquisitions or investments in joint ventures and any decisions we might make to either repay debt and other long-term obligations out of our operating cash flows or refinance debt at or prior to maturity with the proceeds of debt or equity financings.

Servicing our current and future customers requires that we incur significant operating expenses and continue to make significant capital expenditures and other investments, and the amount of our capital expenditures for 2023 and thereafter may vary materially and will depend on several factors. These factors include, among others, the amount, timing and implementation of our capital projects, the performance of our business, economic and market conditions, advances in technology, the cash needs and investment opportunities for the business, the need for additional capacity and facilities and the availability of cash flows from operations or financing.

The health of the worldwide banking system and capital markets also affects our liquidity. If financial institutions that have extended credit commitments to us are adversely affected by the conditions of the U.S., foreign or international banking system and capital markets (including as a result of rising interest rates, economic downturns or other developments), they may refuse or be unable to fund borrowings under their credit commitments to us. The U.S. Federal Reserve raised interest rates several times during 2022 and has signaled further rate increases in the near term. Volatility in the banking system and capital markets, as well as any further increase in interest rates or adverse economic, political, public health or other global conditions, could also make it difficult or more expensive for us to maintain our existing credit facilities or refinance our debt.

The trading price of our common stock has been, and is likely to continue to be, highly volatile and could be subject to wide fluctuations. Such fluctuations could impact our decision or ability to utilize the equity markets as a potential source of our funding needs in the future.

In addition, there is a risk that we could fail to generate the necessary net income or operating cash flows to meet the funding needs of our business due to a variety of factors, including the other factors discussed in this “Risk Factors” section. If we fail to generate the necessary cash flows or we are unable to access the capital markets when needed, our liquidity could be materially and adversely impacted.

The loss of certain customers or reduced orders or pricing from existing customers may have a material adverse effect on our operations and financial results.

We have derived and expect to continue to derive a large portion of our revenues from a small group of customers during any particular period due in part to the concentration of market share in the semiconductor industry. Our ten largest customers accounted for, in the aggregate, 65% of our net sales for the year ended December 31, 2022. In addition, we have significant customer concentration within our end markets. The loss of a significant customer, a business combination among our customers, a reduction in orders or decrease in price from a significant customer or disruption in any of our significant commercial arrangements may result in a decline in our sales and profitability and could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows.

The demand for our services from each customer is directly dependent upon that customer's financial health, level of business activity and purchasing decisions, the quality and price of our services, our cycle time and delivery performance, the customer's qualification of additional competitors on products we package or test and a number of other factors. Each of these factors could vary significantly from time to time resulting in the loss or reduction of customer orders, and we cannot be sure that our key customers or any other customers will continue to place orders with us in the future at the same levels as in past periods.

For example, as seen in the automotive end market in 2020, the Covid-19 pandemic and restrictions imposed by governmental authorities to mitigate the spread of Covid-19 in our customers' end markets may decrease demand for our customers' products and services, thereby adversely impacting their demand for our services.

In addition, from time to time, we may acquire or build new facilities or migrate existing business among our facilities. In connection with these facility changes or new facility constructions, our customers require us to qualify the new facilities even though we have already qualified to perform the services at our other facilities. We cannot assure that we will successfully qualify facility changes, that we will complete construction of new facilities in a timely manner or that our customers will not qualify our competitors and move the business for such services.

We face risks trying to attract, retain or replace qualified employees to support our operations.

Our success depends to a significant extent upon the continued service of our key senior management, sales and technical personnel, any of whom may be difficult to replace. Competition for qualified employees is intensifying, accelerated by increasing competition in the semiconductor industry for talent to meet strong demand, and our business could be materially and adversely affected by the loss of the services of any of our existing key personnel, including senior management and technical talent, as a result of competition or for any other reason. Labor shortages could also result in higher wages that would increase our labor costs, which could reduce our profits. Although we have entered into agreements with our Chief Executive Officer and certain other executives that would prevent them from working for, or impose financial penalties for doing business with, our competitors in the event they cease working for us, we cannot assure you that we will be successful in our efforts to retain or replace key employees or in hiring and properly training sufficient numbers of qualified personnel and in effectively managing our growth. Our inability to attract, retain, motivate and train qualified new personnel could have a material adverse effect on our business.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report financial results or prevent fraud.

Our internal controls over financial reporting may not prevent or detect misstatements because of their inherent limitations, including the possibility of human error, the circumvention or overriding of controls, fraud or corruption. Therefore, even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. In addition, projections concerning the effectiveness of internal controls in future periods are subject to the risk that our internal controls may become inadequate because of changes in conditions, or that the degree of compliance with our policies or procedures may deteriorate.

We assess our internal controls and systems on an ongoing basis, and from time-to-time, we update and make modifications to our global enterprise resource planning system. We have implemented several significant enterprise resource planning modules and expect to implement additional enterprise resource planning modules in the future. In addition, we have implemented new shop floor management systems in certain of our factories. There is a risk that deficiencies may occur that could constitute significant deficiencies or, in the aggregate, a material weakness.

If we fail to remedy any deficiencies or maintain the adequacy of our internal controls, we could be subject to regulatory scrutiny, civil or criminal penalties or shareholder litigation. In addition, failure to maintain adequate internal controls could result in financial statements that do not accurately reflect our operating results or financial condition.

We face risks in connection with the continuing development and implementation of changes to, and maintenance and security of, our information technology systems.

We depend on our information technology systems for many aspects of our business. Our systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading, replacing or maintaining software, databases or components thereof, power outages, hardware failures, interruption or failures of third-party provider systems, computer viruses, attacks by computer hackers, ransomware attacks, telecommunication failures, user errors,

malfeasance or catastrophic events. Such events have occurred in the past and may occur in the future. Cybersecurity breaches could result in unauthorized disclosure of confidential information or disruptions to our operations. While we have not experienced a material information security breach, we cannot be sure that such a breach will not occur in the future. The IT systems in our factories are at varying levels of sophistication and maturity as the factories have different sets of products, processes and customer expectations. Some of our key software has been developed by our own programmers, and this software may not be easily integrated with other software and systems. From time to time, we make additions or changes to our information technology systems. For example, we continue to further integrate our Japan operations' information technology systems into our existing systems and processes. We face risks in connection with current and future projects to install or integrate new information technology systems or upgrade our existing systems. These risks include:

- delays in the design and implementation of the system;
- costs may exceed our plans and expectations; and
- disruptions resulting from the implementation, integration or cybersecurity breach of the systems may impact our ability to process transactions and delay shipments to customers, impact our results of operations or financial condition or harm our control environment.

Our business could be materially and adversely affected if our information technology systems are disrupted or if we are unable to successfully install new systems or improve, upgrade, integrate or expand upon our existing systems. We maintain insurance policies for various types of information security risks, including network security and privacy liability for third party claims, and business interruption and system failure reimbursement coverage, but we do not carry insurance for all the above referred risks. With regard to the insurance we do maintain, we cannot assure you that it would be sufficient to cover all of our potential losses. As a result, our business, financial condition, results of operations and cash flows could be materially and adversely affected by a disruption, failure or breach of our information technology systems.

We face challenges as we integrate diverse operations.

We have experienced, and expect to continue to experience, change in the scope and complexity of our operations resulting primarily from existing and future facility and operational consolidations, facility and operational expansions, strategic acquisitions, joint ventures and other partnering arrangements. Some of the risks from these activities include those associated with the following:

- increasing the scope, geographic diversity and complexity of our operations;
- conforming an acquired company's standards, practices, systems and controls with our operations;
- increasing complexity from combining recent acquisitions of an acquired business;
- unexpected losses of key employees or customers of an acquired business;
- difficulties in the assimilation of acquired operations, technologies or products; and
- diversion of management and other resources from other parts of our operations and adverse effects on existing business relationships with customers.

In connection with these activities, we may:

- incur costs associated with personnel reductions and voluntary retirement programs;
- record restructuring charges to cover costs associated with facility consolidations and related cost reduction initiatives;
- use a significant portion of our available cash;
- incur substantial debt;
- issue equity securities, which may dilute the ownership of current stockholders;

- incur or assume known or unknown contingent liabilities; and
- incur large, immediate accounting write offs and face antitrust or other regulatory inquiries or actions.

For example, the businesses we have acquired had, at the time of acquisition, multiple systems for managing their own production, sales, inventory and other operations. Migrating these businesses to our systems typically is a slow, expensive process requiring us to divert significant resources from other parts of our operations. We may continue to face these challenges in the future. As a result of the risks discussed above, the anticipated benefits of these or other future acquisitions, consolidations and partnering arrangements may not be fully realized, if at all, and these activities could have a material adverse effect on our business, financial condition and results of operations.

We could suffer adverse tax and other financial consequences if there are changes in tax laws or taxing authorities do not agree with our interpretation of applicable tax laws, including whether we continue to qualify for conditional reduced tax rates, or if we are required to establish or adjust valuation allowances on deferred tax assets.

We earn a substantial portion of our income in foreign countries, and our operations are subject to tax in multiple jurisdictions with complicated and varied tax regimes. Tax laws and income tax rates in these jurisdictions are subject to change due to economic and political conditions. Changes in the tax laws of foreign jurisdictions could arise as a result of the base erosion and profit shifting project that was undertaken by the Organization for Economic Cooperation and Development (“OECD”). The OECD, which represents a coalition of member countries, recommended changes to long-standing tax principles related to transfer pricing and has developed model rules including establishing a global minimum corporate income tax tested on a jurisdictional basis (the “Pillar Two Model Rules”). Some countries have already started to implement laws based on the Pillar Two Model Rules. Changes in U.S. or foreign tax laws, including new or modified guidance with respect to existing tax laws, could have a material adverse impact on our liquidity, results of operations, financial condition and cash flows.

Our tax liabilities are based, in part, on our corporate structure, interpretations of various U.S. and foreign tax laws, including withholding tax, compliance with conditional reduced tax rate requirements, application of changes in tax law to our operations and other relevant laws of applicable taxing jurisdictions. From time to time, taxing authorities may conduct examinations of our income tax returns and other regulatory filings. We cannot assure you that the taxing authorities will agree with our interpretations, including whether we continue to qualify for conditional reduced tax rates. If they do not agree, we may seek to enter into settlements with the taxing authorities. We may also appeal a taxing authority’s determination to the appropriate governmental authorities, but we cannot be sure we will prevail. If we do not prevail or if we enter into settlements with taxing authorities, we may have to make significant payments or otherwise record charges (or reduce tax assets) that materially and adversely affect our results of operations, financial condition and cash flows. Additionally, certain of our subsidiaries operate under conditional reduced tax rates, which will expire in whole or in part at various dates in the future. As those conditional reduced tax rates expire, we expect that our tax expense will increase as income from those jurisdictions becomes subject to higher statutory income tax rates, thereby reducing our liquidity and cash flow.

We monitor on an ongoing basis our ability to utilize our deferred tax assets and whether there is a need for a related valuation allowance. In evaluating our ability to recover our deferred tax assets, in the jurisdiction from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies and results of recent operations. For most of our foreign deferred tax assets, we believe that we will have sufficient taxable income to allow us to realize these deferred tax assets. In the event taxable income falls short of current expectations, we may need to establish a valuation allowance against such deferred tax assets that, if required, could materially and adversely affect our results of operations.

Environmental, health and safety liabilities and expenditures could have a material adverse effect on our business, results of operation and financial condition.

Environmental, health and safety laws and regulations in places we do business impose various controls on the use, storage, handling, discharge and disposal of chemicals used or generated in, or emitted by, our production processes, on the factories we occupy and on the materials contained in semiconductor products. For example, at our foreign facilities we produce liquid waste when semiconductor wafers are diced into chips with the aid of diamond saws, then cooled with running water. In addition, semiconductor packages have historically utilized metallic alloys containing lead within the interconnect terminals typically referred to as leads, pins or balls, and the European Union’s Restriction of Hazardous

Substances in Electrical and Electronic Equipment directive and similar laws in other jurisdictions, including China, impose strict restrictions on the placement into the market of electrical and electronic equipment containing lead and certain other hazardous substances. We may become liable under these and other environmental, health and safety laws and regulations, including for the cost of compliance and cleanup of any disposal or release of hazardous materials arising out of our former or current operations, or otherwise as a result of the emission of GHGs or other chemicals, the existence of hazardous materials on our properties or the existence of hazardous substances in the products for which we perform our services. We could also be held liable for damages, including fines, penalties and the cost of investigations and remedial actions, we could be subject to revocation of permits, which may materially and adversely affect our ability to maintain or expand our operations. Additionally, if Amkor is unable to align its environmental, health and safety practices with shifting customer preferences, we could suffer reputational harm, which could have a material and adverse effect on our business, results of operations, liquidity and cash flows.

There has also been an increase in public attention and industry and customer focus on the materials contained in semiconductor products, the environmental impact of semiconductor operations and the risk of chemical releases from such operations, climate change, sustainability and related environmental concerns. This increased focus on sustainability and the environmental impact of semiconductor operations and products has caused industry groups and customers to impose additional requirements on us and our suppliers, sometimes exceeding regulatory standards. These industry and customer requirements include increased tracking and reporting of GHG emissions, reductions in waste and wastewater from operations, additional reporting on the materials and components used in the products for which we perform our services, and the use of renewable energy sources in our factory operations. To comply with these additional requirements, we may need to procure additional equipment or make factory or process changes and our operating costs may increase.

Our business and financial condition has been adversely affected, and could be adversely affected in the future, by natural disasters and other calamities, health conditions or pandemics, political instability, hostilities or other disruptions.

We have significant packaging and test services and other operations in China, Japan, Korea, Malaysia, the Philippines, Portugal, Singapore and Taiwan, and we have a new factory under construction in Vietnam. Such operations are or could be subject to: natural disasters, such as earthquakes, tsunamis, typhoons, floods, droughts, volcanoes and other severe weather and geological events, and other calamities, such as fire; the outbreak of infectious diseases (such as Covid-19 and other coronaviruses, Ebola or flu); industrial strikes; government-imposed travel restrictions or quarantines; breakdowns of equipment; difficulties or delays in obtaining materials, equipment, utilities and services; political events or instability; acts of war or armed conflict (such as the ongoing conflict in Ukraine); terrorist incidents and other hostilities in regions where we have facilities; and industrial accidents and other events, that could disrupt or even shutdown our operations. While our global manufacturing footprint allows us to shift production to other factories without substantial cost or production delays, certain of our services are currently performed using equipment located in one or a subset of our factories. A major disruption or shutdown of any such factory could completely impair our ability to perform those services or require us to shift them to another location. As a result, our ability to fulfill customer orders may be impaired or delayed, and we could incur significant losses.

For example, in April 2016, our Kumamoto factory was damaged by earthquakes in Japan. As a result of these earthquakes, our sales were reduced due to the temporary disruption in operations, and we incurred earthquake-related costs for damaged inventory, buildings and equipment. Our suppliers and customers also have significant operations in such locations, and this could compound the effect of any such disruption. In the event of such a disruption or shutdown, we may be unable to reallocate production to other facilities in a timely or cost-effective manner (if at all), and we may not have sufficient capacity, or customer approval, to service customer demands in our other facilities. A natural disaster or other calamity, political instability, the occurrence of hostilities or other event that results in a prolonged disruption to our operations, or the operations of our customers or suppliers, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

In addition, some of the processes that we utilize in our operations place us at risk of fire and other damage. For example, highly flammable gases are used in the preparation of wafers holding semiconductor devices for flip chip packaging.

We maintain insurance policies for various types of property, casualty and other risks, but we do not carry insurance for all the above referred risks. With regard to the insurance we do maintain, we cannot assure you that it would be

sufficient to cover all of our potential losses. As a result, our business, financial condition, results of operations and cash flows could be materially and adversely affected by natural disasters and other calamities.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

The location and size of our manufacturing and research and development facilities are set forth in the table below. All facilities are owned unless otherwise specified. Generally, our facilities are collateral for indebtedness incurred by our subsidiary for the jurisdiction in which the facilities are located.

	Approximate Facility Size (Square Feet)		
	Owned	Leased	Total
China (1)	1,398,000	—	1,398,000
Japan	1,488,000	330,000	1,818,000
Korea	4,439,000	—	4,439,000
Malaysia (1)	386,000	—	386,000
Philippines (2)	765,000	557,000	1,322,000
Portugal	519,000	—	519,000
Taiwan (1)	1,100,000	16,000	1,116,000
Total all facilities	10,095,000	903,000	10,998,000

(1) Land is leased.

(2) As a result of foreign ownership restrictions in the Philippines, the land is leased. A portion of the land we lease is owned by realty companies in which we own a 40% interest.

During 2022, we began construction for the first phase of a new manufacturing facility in Bac Ninh, Vietnam, which will have approximately 1.9 million square feet of space. High-volume manufacturing is expected to begin in the fourth quarter of 2023.

Our executive offices, which are leased, are located in Tempe, Arizona and Singapore. We believe that our existing properties are in good condition and suitable for the conduct of our business and that the productive capacity of such properties is substantially being utilized or we have plans to utilize it.

Item 3. *Legal Proceedings*

From time to time, we may become involved in various disputes and litigation matters that arise in the ordinary course of our business. These include disputes and lawsuits related to intellectual property, acquisitions, licensing, contracts, tax, regulatory compliance, employee relations and other matters. For a discussion of our material legal proceedings, see Note 17 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

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*

LISTING ON THE NASDAQ GLOBAL SELECT MARKET

Our common stock is traded on the Nasdaq Global Select Market under the symbol "AMKR." There were approximately 79 holders of record of our common stock as of February 17, 2023.

DIVIDEND POLICY

In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. Each quarter since the adoption of this dividend policy, the Company has declared and paid a quarterly dividend. In November 2022, our Board of Directors approved a quarterly dividend of \$0.075 per share, a 50% increase from the rate set in November 2021.

We currently anticipate that we will continue to pay quarterly cash dividends in the future. However, the payment, amount and timing of future dividends remain within the discretion of our Board of Directors and will depend upon our results of operations, financial condition, cash requirements, debt restrictions and other factors. Refer to the "Liquidity" section in Item 7 of this Form 10-K for additional information.

RECENT SALES OF UNREGISTERED SECURITIES

None.

EQUITY COMPENSATION PLANS

The information required by this item regarding equity compensation plans is set forth in Part III, Item 12 of this Form 10-K.

PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

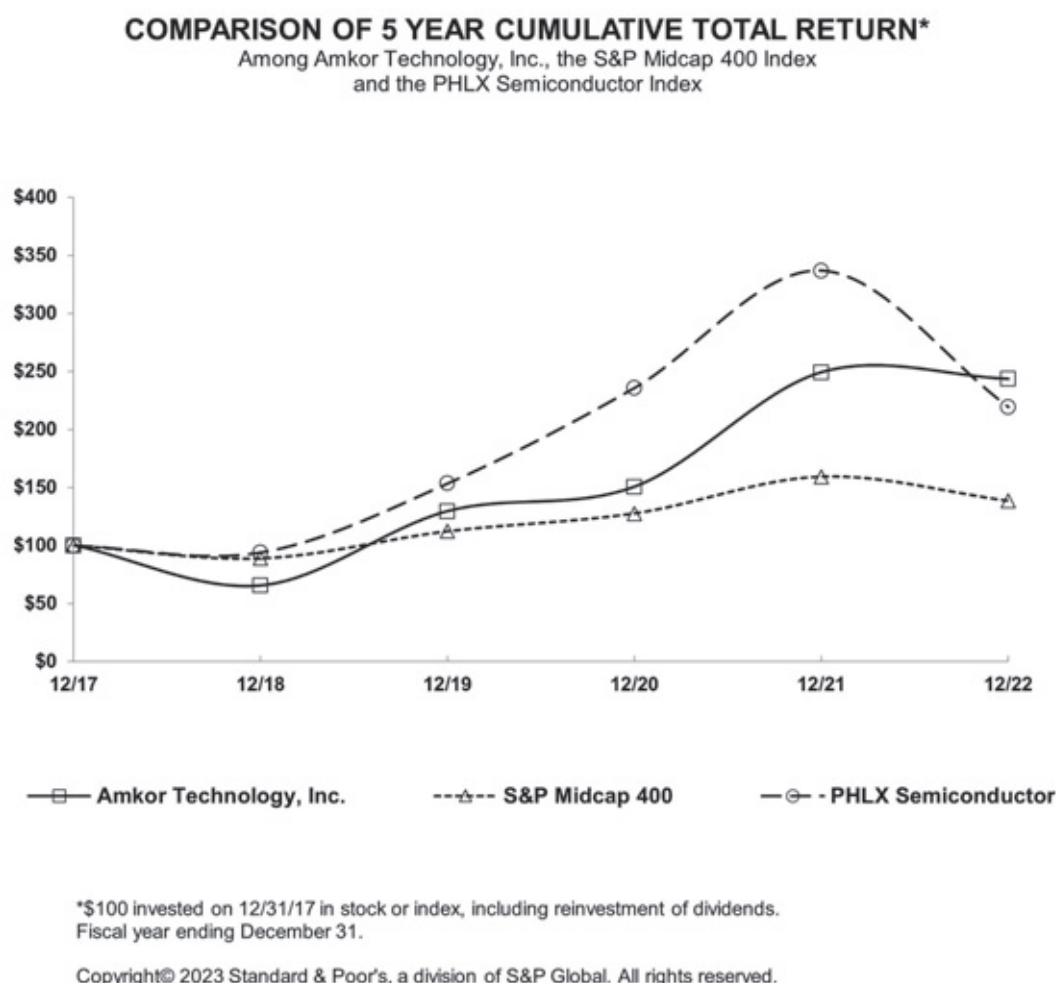
The following table provides information regarding repurchases of our common stock during the three months ended December 31, 2022:

Period	Total Number of Shares Purchased (a)	Average Price Paid Per Share (\$)	Total Number of Shares Purchased as part of Publicly Announced Plans or Programs (b)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (\$ (b)
October 1 - October 31	—	\$ —	—	\$ 91,586,032
November 1 - November 30	—	—	—	91,586,032
December 1 - December 31	2,843	27.56	—	91,586,032
Total	2,843	\$ 27.56	—	

- (a) Represents shares of common stock surrendered to us to satisfy tax withholding obligations associated with share-based compensation awards issued to employees.
- (b) On August 30, 2011, we announced that our Board of Directors had authorized the repurchase of up to \$150.0 million of our common stock, exclusive of any fees, commissions or other expenses, under the Stock Repurchase Program. On February 1, 2012, we announced that the Board of Directors had authorized an additional \$150.0 million for the repurchase of our common stock under the Stock Repurchase Program, resulting in a total repurchase authorization under the Stock Repurchase Program of \$300.0 million. Pursuant to

the Stock Repurchase Program, we made no common stock purchases for the three months ended December 31, 2022, and at December 31, 2022, approximately \$91.6 million was available for repurchase. Repurchases of our common stock under the Stock Repurchase Program are funded with available cash, and the Stock Repurchase Program may be suspended or discontinued at any time.

PERFORMANCE GRAPH ⁽¹⁾



- (1) The preceding Stock Performance Graph is not deemed filed with the SEC and shall not be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock performance shown on the performance graph above is not necessarily indicative of future performance. We will not make or endorse any predictions as to Amkor's future stock performance.

The following table sets forth the cumulative total returns included in the preceding Stock Performance Graph for the years ended December 31, 2017 through 2022:

	For the Year Ended December 31,					
	2017	2018	2019	2020	2021	2022
Amkor Technology, Inc.	\$ 100.00	\$ 65.27	\$ 129.35	\$ 150.44	\$ 249.06	\$ 243.35
S&P Midcap 400	100.00	88.92	112.21	127.54	159.12	138.34
PHLX Semiconductor	100.00	93.95	153.39	235.71	336.71	219.26

Item 6. <Reserved>

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

This section includes comparisons of certain 2022 financial information to the same information for 2021. For discussion of 2021 results in comparison with 2020 results refer to “Management’s Discussion and Analysis of Financial Conditions and Results of Operations” in our Annual Report on Form 10-K filed with the SEC on February 18, 2022.

Overview

Amkor is one of the world’s leading providers of outsourced semiconductor packaging and test services. Our financial goal is profitable sales growth. To achieve this goal, we are focused on leveraging our leadership position in services for advanced technologies, growing within the industry megatrend markets of 5G, automotive, IoT and HPC, optimizing utilization of existing assets, and selectively growing our scale and scope through strategic investments.

We are an industry leader in developing and commercializing advanced packaging and test technologies, which we believe provide substantial value to our customers. Advanced packages, which account for a significant portion of mobile phone semiconductor value, are the preferred choice in the high-end smartphone market. The use of advanced packages in automotive applications is also growing, largely due to new, data-intensive applications which require increased pin count and performance. In consumer devices, further miniaturization and the integration of new functionality within IoT devices also require advanced packaging. With the continuing trend towards cloud-based computing, innovative advanced packaging solutions are needed to achieve the increased speed, performance and power requirements for this market. We believe that demand for advanced packaging services will continue to grow as our customers and leading electronics OEMs strive for smaller device geometries, higher levels of integration and performance and lower power consumption. We intend to continue to leverage our investment in advanced technology to meet the demand for these services in high growth markets.

Another key to our success is to optimize the utilization of our assets. We build and utilize manufacturing lines which support multiple customers and increase factory utilization through sophisticated planning processes and intensive efficiency improvement activities.

From time to time, we identify attractive opportunities to strengthen our leadership position and market share through expansion of our operations, joint ventures, acquisitions and other strategic investments. For example, we are making preparations to deliver advanced SiP modules and other packaging solutions from a new factory in Bac Ninh, Vietnam. We believe that the Bac Ninh facility, the first phase of which is expected to begin production in the fourth quarter of 2023, will provide customers with a cost-competitive high-volume manufacturing location that offers supply chain diversification. In addition, our broad geographic footprint, including our manufacturing presence in Portugal, and our headquarters in the United States are key differentiators for us and position us to participate in initiatives to regionalize supply chains. We believe that selective growth through these strategic actions can further strengthen customer relationships, help to maintain and enhance our technological leadership, diversify our revenue streams and improve our profits.

As a supplier in the semiconductor industry, our business is cyclical and impacted by broad economic factors. Historical trends indicate there has been a strong correlation between worldwide gross domestic product levels, consumer spending and semiconductor industry cycles. We believe that the general semiconductor market is currently going through a cyclical correction. The semiconductor industry has experienced significant and sometimes prolonged cyclical upturns and downturns in the past. We cannot predict the timing, strength or duration of any correction, economic slowdown, recession or subsequent economic recovery.

In March 2022, as part of a broad effort to mitigate a rising number of Covid-19 cases in Shanghai, the Chinese government mandated a temporary lockdown of our Shanghai factory. The Shanghai facility reopened during the second quarter and returned to normal operating levels in late June 2022, which resulted in higher than seasonal growth in net sales for the third quarter compared to the second quarter. Additionally, other national, regional and local governments have implemented, and may implement in the future, restrictions to mitigate the spread of Covid-19, the emergence of new variants or the re-emergence of Covid-19 in jurisdictions in which we, our customers and our suppliers operate, and

such restrictions may materially and adversely impact our operations and the operations of our customers and suppliers. We also remain subject to industry-wide supply constraints and inflationary price pressures, which have resulted in long lead times, rising prices and supply chain disruptions. For additional information regarding the potential impact of macroeconomic factors, the Covid-19 pandemic and other risks on our business, results of operations and financial condition, please refer to the “Risk Factors” section in Part I, Item 1A of this Form 10-K.

We operate in a capital-intensive industry. Servicing our current and future customers requires that we incur significant operating expenses and continue to make significant capital expenditures, which are generally made in advance of the related revenues and without firm customer commitments. We fund our operations, including capital expenditures and debt service requirements, with cash flows from operations, existing cash and cash equivalents, short-term investments, borrowings under available credit facilities and proceeds from any additional financing. Maintaining an appropriate level of liquidity is important to our business and depends on, among other considerations, the performance of our business, our capital expenditure levels, our ability to repay debt out of our operating cash flows or proceeds from debt or equity financings and our investment strategy. As of December 31, 2022, we had cash and cash equivalents and short-term investments of \$959.1 million and \$282.0 million, respectively.

Our net sales, gross profit, operating income, cash flows, liquidity and capital resources have historically fluctuated significantly from quarter to quarter due to many factors, including the seasonality of our business, the cyclical nature of the semiconductor industry and other factors discussed in Part 1, Item 1A of this Form 10-K. We expect macroeconomic conditions to be weak in 2023. To prepare for future growth, we will continue to make prudent investments, including construction in Vietnam, but we will limit capacity expansion generally and control costs in response to changing market conditions.

2022 Financial Summary

Our net sales increased \$953.3 million or 15.5% to \$7,091.6 million in 2022 from \$6,138.3 million in 2021. The increase was primarily due to higher sales of advanced products across all end markets, partially offset by unfavorable foreign currency exchange rate movements.

Gross margin decreased to 18.8% in 2022 compared to 20.0% in 2021. The decrease in gross margin was primarily due to an increase in the mix of products sold with higher material content and the government-mandated lockdown and related underutilization of our Shanghai factory during the second quarter of 2022. The decrease was partially offset by an increase in net sales and net favorable foreign currency exchange rate movements.

Operating income margin expanded 30 basis points to 12.7% in 2022 from 12.4% in 2021. The increase in our operating income margin was primarily due to favorable foreign currency exchange rate movements in operating expenses, partially offset by a decrease in our gross margin discussed above.

In 2022, our capital expenditures totaled \$908.3 million, or 12.8% of net sales, compared to \$779.8 million, or 12.7% of net sales in 2021. Our spending was primarily focused on investments in advanced packaging and test equipment and a new manufacturing facility in Bac Ninh, Vietnam.

Net cash provided by operating activities was \$1,098.8 million for the year ended December 31, 2022, compared to \$1,121.3 million for the year ended December 31, 2021. This decrease was primarily due to changes in working capital and changes in advanced payments to our vendors and from our customers, partially offset by higher net sales and operating profits.

In November 2022, our Board of Directors approved a quarterly dividend of \$0.075 per share, a 50% increase from the rate set in November 2021. In 2022, we paid total quarterly cash dividends of \$55.1 million.

Results of Operations

The following table sets forth certain operating data as a percentage of net sales for the periods indicated:

	For the Year Ended December 31		
	2022	2021	2020
Net sales	100.0 %	100.0 %	100.0 %
Materials	51.4 %	46.1 %	45.5 %
Labor	10.0 %	12.3 %	13.4 %
Other manufacturing costs	19.8 %	21.6 %	23.3 %
Gross margin	18.8 %	20.0 %	17.8 %
Operating income	12.7 %	12.4 %	9.1 %
Net income attributable to Amkor	10.8 %	10.5 %	6.7 %

Net Sales

				Change			
	2022	2021	2020	2022 over 2021		2021 over 2020	
	(In thousands, except percentages)						
Net sales	\$ 7,091,585	\$ 6,138,329	\$ 5,050,589	\$ 953,256	15.5 %	\$ 1,087,740	21.5 %

The \$953.3 million increase in net sales in 2022 compared to 2021 was primarily due to higher sales of advanced products across all end markets, partially offset by unfavorable foreign currency exchange rate movements. Sales in the communications end market represented 61% of the increase, driven primarily by content and market share gains within premium tier 5G smartphones. The automotive and industrial end market represented 18% of the increase, driven by the increase of silicon content within vehicles for advanced features, including ADAS, infotainment and telematics. Sales in the computing end market accounted for 16% of the increase, driven primarily by a shift to cloud-based services.

Gross Profit and Gross Margin

				Change	
	2022	2021	2020	2022 over 2021	2021 over 2020
	(In thousands, except percentages)				
Gross profit	\$1,329,987	\$1,225,554	\$ 900,814	\$ 104,433	\$ 324,740
Gross margin	18.8 %	20.0 %	17.8 %	(1.2)%	2.2 %

Our cost of sales consists principally of materials, labor, depreciation and manufacturing overhead. Since a substantial portion of the costs at our factories is fixed, there tends to be a strong relationship between our revenue levels and gross margin. Accordingly, relatively modest increases or decreases in revenue can have a significant effect on margin and on labor and other manufacturing costs as a percentage of revenue, depending on product mix, utilization, foreign currency exchange rate movements and seasonality. We have expanded our business in advanced SiP modules, which tend to have higher material costs than our other products. As we continue to increase production of these higher material cost modules, there could be an impact on our profitability, depending on overall utilization.

While gross profit increased for 2022 compared to 2021, gross margin decreased primarily due to an increase in the mix of products sold with higher material content and the government-mandated lockdown and related underutilization of our Shanghai factory during the second quarter of 2022. The decrease was partially offset by an increase in net sales and net favorable foreign currency exchange rate movements.

Selling, General and Administrative

				Change			
	2022	2021	2020	2022 over 2021		2021 over 2020	
	(In thousands, except percentages)						
Selling, general and administrative	\$ 283,372	\$ 296,084	\$ 302,842	\$ (12,712)	(4.3)%	\$ (6,758)	(2.2)%

Selling, general and administrative expenses decreased in 2022 compared to 2021. The decrease was primarily due to favorable foreign currency exchange rate movements and costs incurred for factory consolidation efforts in Japan in the prior year.

Research and Development

				Change			
	2022	2021	2020	2022 over 2021		2021 over 2020	
	(In thousands, except percentages)						
Research and development	\$ 149,429	\$ 166,037	\$ 140,727	\$ (16,608)	(10.0)%	\$ 25,310	18.0 %

Research and development activities are focused on developing new packaging and test services and improving the efficiency and capabilities of our existing production processes. The costs related to our technology and product development projects are included in research and development expense until the project moves into production. Once production begins, the costs relating to production become part of the cost of sales, including ongoing depreciation for the equipment previously held for research and development activities. Research and development expenses in 2022 decreased compared to 2021 due to favorable foreign currency exchange rate movements and projects that moved into production, partially offset by new development projects in advanced packaging technologies.

Other Income and Expense

	Change						
	2022	2021	2020	2022 over 2021		2021 over 2020	
	(In thousands, except percentages)						
Interest expense	\$ 58,563	\$ 51,508	\$ 64,168	\$ 7,055	13.7 %	\$ (12,660)	(19.7)%
Interest income	(12,762)	(1,065)	(5,449)	(11,697)	>100%	4,384	(80.5)%
Foreign currency (gain) loss, net	(1,572)	723	9,608	(2,295)	>(100)%	(8,885)	(92.5)%
Loss on debt retirement	464	—	3,042	464	100 %	(3,042)	(100.0)%
Other	(4,439)	(2,799)	(806)	(1,640)	58.6 %	(1,993)	>100%
Total other expense, net	\$ 40,254	\$ 48,367	\$ 70,563	\$ (8,113)	(16.8)%	\$ (22,196)	(31.5)%

Interest expense increased in 2022 compared to 2021, primarily due to an increase in our finance lease obligation balance, an increase in our average outstanding debt and an increase in interest rates throughout the year.

Interest income increased in 2022 compared to 2021, primarily due to higher interest rates on our available-for-sale debt investments.

Income Tax Expense

				Change	
	2022	2021	2020	2022 over 2021	2021 over 2020
	(In thousands, except percentages)				
Income tax expense	\$ 89,890	\$ 69,459	\$ 46,183	\$ 20,431	\$ 23,276
Effective tax rate	10.5 %	9.7 %	11.9 %		

Income tax expense, which includes foreign withholding taxes and minimum taxes, reflects the applicable tax rates in effect in the various countries where our income is earned and is subject to volatility depending on the relative mix of earnings in each location.

The effective tax rate is below the U.S. statutory rate of 21% primarily due to lower tax rates applicable to our operations in some foreign jurisdictions where we earn income. The effective tax rates in 2022 and 2020 include a \$17.8 million and \$20.2 million income tax benefit, respectively, from the recognition of deferred tax assets we expect to utilize in future years.

During 2022, 2021 and 2020, our subsidiaries in Korea and Singapore operated under various conditional reduced tax rates. The conditional reduced tax rates granted to certain operations in the Philippines expired during 2020 and 2021. As these conditional reduced tax rates expire, income earned in these jurisdictions will be subject to higher statutory income tax rates, which may cause our effective tax rate to increase.

See Note 4 to our Consolidated Financial Statements included in Part II, Item 8 of this Form 10-K for additional information about our income tax expense.

Liquidity

We assess our liquidity based on our current expectations regarding sales and operating expenses, capital spending, dividend payments, stock and debt repurchases, debt service requirements and other funding needs. Based on this assessment, we believe that our cash flow from operating activities, together with existing cash and cash equivalents, short-term investments and availability under our credit facilities, will be sufficient to fund our working capital, capital expenditures, dividend payments, debt service, debt repurchases and other financial requirements for at least the next twelve months.

Our liquidity is affected by, among other factors, volatility in the global economy and credit markets, the performance of our business, our capital expenditure levels, other uses of our cash including any dividends and purchases of stock or debt under any repurchase program, any acquisitions, joint ventures or other investments and our ability to either repay debt out of operating cash flow or refinance it at or prior to maturity with the proceeds from debt or equity offerings. There can be no assurance that we will generate the necessary net income or operating cash flows, or be able to borrow sufficient funds, to meet the funding needs of our business beyond the next twelve months due to a variety of factors, including the cyclical nature of the semiconductor industry and other factors discussed in Part I, Item 1A of this Form 10-K.

Our primary source of cash and the source of funds for our operations are cash flows from operations, current cash and cash equivalents, short-term investments, borrowings under available credit facilities and proceeds from any additional debt or equity financings. Please refer to Note 6 and Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K for additional information on our investments and borrowings, respectively.

As of December 31, 2022, we had cash and cash equivalents and short-term investments of \$1,241.0 million. Included in our cash and short-term investments balances as of December 31, 2022, is \$1,090.4 million held offshore by our foreign subsidiaries. We have the ability to access cash held offshore by our foreign subsidiaries primarily through the repayment of intercompany debt obligations. If we were to distribute this offshore cash to the U.S. as dividends from our foreign subsidiaries, the dividends generally would not be subject to U.S. federal income tax, but the distributions may be subject to foreign withholding and state income taxes. For the year ended December 31, 2022, we estimate that repatriation of this foreign cash and short-term investments would generate withholding taxes and state income taxes of approximately \$36 million.

As of December 31, 2022, our net liability associated with unrecognized tax benefits is \$29.6 million. Due to the uncertainty regarding the amount and timing of any future cash outflows associated with our unrecognized tax benefits, we are unable to reasonably estimate the amount and period of ultimate settlement, if any, with the various taxing authorities.

For certain accounts receivable, we use non-recourse factoring arrangements with third party financial institutions to manage our working capital and cash flows. Under these arrangements, we sell receivables to a financial institution for

cash at a discount to the face amount. Available capacity under these arrangements is dependent on the level of our trade accounts receivable eligible to be sold, the financial institutions' willingness to purchase such receivables and the limits provided by the financial institutions. These factoring arrangements can be reduced or eliminated at any time due to market conditions and changes in the credit worthiness of customers. For the year ended December 31, 2022 and 2021, we sold accounts receivable totaling \$386.5 million and \$464.4 million, net of discounts and fees of \$1.1 million and \$1.2 million, respectively.

We operate in a capital-intensive industry. Servicing our current and future customers may require that we incur significant operating expenses and make significant investments in equipment and facilities, which are generally made in advance of the related revenues and without firm customer commitments.

The maximum borrowing capacity under our \$600.0 million senior secured revolving credit facility ("2022 Singapore Revolver") is limited to a base amount equal to the lesser of: (1) \$600.0 million; or (2) \$250 million plus a variable amount equal to 37.5% of our consolidated accounts receivable balance. As of December 31, 2022, we had availability of \$600.0 million. As of December 31, 2022, our foreign subsidiaries had \$615.0 million available for future borrowings under revolving credit facilities, including the 2022 Singapore Revolver, and \$70.3 million available to be borrowed under term loan credit facilities for working capital purposes and capital expenditures. For additional information regarding the 2022 Singapore Revolver, please refer to Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

As of December 31, 2022, we had debt of \$1,232.3 million, with \$143.8 million payable within 12 months. As of December 31, 2022, the interest payment obligations, based on stated coupon rates for fixed rate debt and interest rates applicable at December 31, 2022 for variable rate debt, were \$219.6 million during the remaining term of the debt. Interest payment obligations payable within 12 months is \$51.4 million. We were in compliance with all debt covenants as of December 31, 2022, and we expect to remain in compliance with these covenants for at least the next twelve months. For additional information regarding our debt arrangements, please refer to Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Certain of our debt agreements have restrictions on dividend payments and the repurchase of stock and subordinated securities. These restrictions are determined in part by our covenant compliance and on calculations based upon cumulative net income and do not currently have a material impact on our ability to make dividend payments or stock repurchases.

The debt of Amkor Technology, Inc. is structurally subordinated in right of payment to all existing and future debt and other liabilities of our subsidiaries. From time to time, Amkor Technology, Inc., Amkor Technology Taiwan Ltd. ("ATT"), Amkor Advanced Technology Taiwan, Inc. ("AATT") and Amkor Technology Singapore Holding Pte. Ltd. ("ATSH") guarantee certain debt of our subsidiaries.

In order to reduce our debt and future cash interest payments, we may from time to time repurchase or redeem our outstanding senior notes for cash or exchange shares of our common stock for our outstanding senior notes. Any such transaction may be made in the open market, through privately negotiated transactions or otherwise, and would be subject to the terms of our indentures and other debt agreements, market conditions and other factors.

Our subsidiary in Korea maintains an unfunded severance plan that covers certain employees who were employed prior to August 1, 2015. As of December 31, 2022, the severance liability was \$56.2 million, with \$7.4 million payable within 12 months. Accrued severance benefits are estimated assuming all eligible employees were to terminate their employment at the balance sheet date. For service periods subsequent to August 1, 2015, employees participate in either a defined benefit pension plan or a defined contribution pension plan. From time to time, we may offer employees the option to convert from the severance plan to the defined contribution plan which would require us to fund the converted portion of the liability. In addition, as of December 31, 2022, we had foreign pension plan obligations of \$44.7 million, for which the timing and actual amount of impact on our future cash flow is uncertain. For additional information regarding our pension and severance plans, please refer to Note 12 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

We lease certain machinery and equipment, office space and manufacturing facilities. As of December 31, 2022, our total remaining operating lease obligations and finance lease obligations were \$161.4 million and \$117.6 million, respectively, with \$75.8 million and \$60.1 million payable within 12 months, respectively. The lease obligations

represent our future minimum lease payments including interest payments. For additional information regarding our leases, please refer to Note 9 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

We had off-balance sheet purchase obligations for capital expenditures, long-term supply contracts and other contractual commitments. As of December 31, 2022, the purchase obligations were \$582.8 million, with \$564.8 million payable within 12 months.

Capital Returns

In 2022, we paid total quarterly cash dividends of \$55.1 million, and we currently anticipate that we will continue to pay quarterly cash dividends in the future. However, the payment, amount and timing of future dividends remain within the discretion of our Board of Directors and will depend upon our results of operations, financial condition, cash requirements, debt restrictions and other factors.

Our Board of Directors previously adopted a stock repurchase program (the “Stock Repurchase Program”) authorizing the repurchase of up to \$300.0 million of our common stock, exclusive of any fees, commissions or other expenses. Under the Stock Repurchase Program, the purchase of stock may be made in the open market or through privately negotiated transactions. The timing, manner, price and amount of any repurchases will be determined by us at our discretion and will depend upon a variety of factors including economic and market conditions, the cash needs and investment opportunities for the business, the current market price of our stock, applicable legal requirements and other factors. We have not purchased any stock under the Stock Repurchase Program since 2012. At December 31, 2022, approximately \$91.6 million was available to repurchase common stock pursuant to the Stock Repurchase Program.

Capital Resources

We make significant capital expenditures in order to service the demand of our customers, which are primarily focused on investments in advanced packaging and test equipment and a new manufacturing facility in Bac Ninh, Vietnam. In 2022, our capital expenditures totaled \$908.3 million or approximately 12.8% of net sales.

We expect that our 2023 capital expenditures will be approximately \$800 million. Ultimately, the amount of our 2023 capital expenditures will depend on several factors including, among others, the timing and implementation of any capital projects under review, the performance of our business, economic and market conditions, the cash needs and investment opportunities for the business, the need for additional capacity to service anticipated customer demand, equipment lead times and the availability of cash flows from operations or financing.

In addition, we are subject to risks associated with our capital expenditures, including those discussed in Part I, Item 1A of this Form 10-K under the caption “We make substantial investments in equipment and facilities to support the demand of our customers, which may materially and adversely affect our business if the demand of our customers does not develop as we expect or is adversely affected.”

Cash Flows

Net cash provided by (used in) operating, investing and financing activities for each of the three years ended December 31, 2022 was as follows:

	For the Year Ended December 31		
	2022	2021	2020
	(In thousands)		
Operating activities	\$ 1,098,756	\$ 1,121,295	\$ 770,033
Investing activities	(1,007,169)	(943,879)	(638,705)
Financing activities	55,597	(30,102)	(333,719)

Operating activities: Our cash flow provided by operating activities for the year ended December 31, 2022 decreased by \$22.5 million compared to the year ended December 31, 2021, primarily due to changes in working capital and changes in advanced payments to our vendors and from our customers, partially offset by higher net sales and operating profits.

Investing activities: Our cash flow used in investing activities for the year ended December 31, 2022 increased by \$63.3 million compared to the year ended December 31, 2021, primarily due to increased payments related to property, plant and equipment and increased net payments for foreign exchange forward contracts, partially offset by higher net proceeds from short-term investments. Payments for property, plant and equipment can fluctuate based on the timing of purchase, receipt and acceptance of equipment.

Financing activities: The net cash provided by financing activities for the year ended December 31, 2022 was primarily due to net debt borrowings in China and Korea, offset by the payments of our quarterly dividends and finance lease obligations. The net cash used in financing activities for the year ended December 31, 2021 was primarily due to dividend payments, partially offset by net debt borrowing in Korea.

We provide the following supplemental data to assist our investors and analysts in understanding our liquidity and capital resources. We define “free cash flow” as net cash provided by operating activities less payments for property, plant and equipment, plus proceeds from the sale of and insurance recovery for property, plant and equipment, if applicable. Free cash flow is not defined by U.S. GAAP. We believe free cash flow to be relevant and useful information to our investors because it provides them with additional information in assessing our liquidity, capital resources and financial operating results. Our management uses free cash flow in evaluating our liquidity, our ability to service debt, our ability to fund capital expenditures and our ability to pay dividends and the amount of dividends to be paid. However, free cash flow has certain limitations, including that it does not represent the residual cash flow available for discretionary expenditures since other, non-discretionary expenditures, such as mandatory debt service, are not deducted from the measure. The amount of mandatory versus discretionary expenditures can vary significantly between periods. This measure should be considered in addition to, and not as a substitute for, or superior to, other measures of liquidity or financial performance prepared in accordance with U.S. GAAP, such as net cash provided by operating activities. Furthermore, our definition of free cash flow may not be comparable to similarly titled measures reported by other companies.

	For the Year Ended December 31		
	2022	2021	2020
	(In thousands)		
Net cash provided by operating activities	\$ 1,098,756	\$ 1,121,295	\$ 770,033
Payments for property, plant and equipment	(908,294)	(779,779)	(553,021)
Proceeds from sale of and insurance recovery for property, plant and equipment	3,148	3,261	3,819
Free cash flow	<u>\$ 193,610</u>	<u>\$ 344,777</u>	<u>\$ 220,831</u>

Contingencies, Indemnifications and Guarantees

Please refer to Note 17 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K for a discussion of contingencies related to litigation and other legal matters.

Critical Accounting Policies and Use of Estimates

We have identified the policies below as critical to our business operations and the understanding of our results of operations. A summary of our significant accounting policies used in the preparation of our Consolidated Financial Statements appears in Note 1 to our Consolidated Financial Statements included in Part II, Item 8 of this Form 10-K. Our preparation of this Form 10-K requires us to make estimates and assumptions that affect the reported amount of assets and liabilities, disclosure of contingent assets and liabilities at the date of our financial statements and the reported amounts of revenue and expenses during the reporting period. There can be no assurance that actual results will not differ from those estimates, including the impact of Covid-19 and any deterioration in the global business and economic environment.

We believe the following critical accounting estimates and policies, which have been reviewed with the Audit Committee of our Board of Directors, affect our more significant judgments and estimates used in the preparation of our Consolidated Financial Statements.

Revenue Recognition. We recognize revenue, net of sales, use, value-added and other similar taxes, as a performance obligation is satisfied in an amount reflecting the consideration to which we expect to be entitled. We apply a five-step approach in determining the amount and timing of revenue to be recognized: (1) identifying the contract with a customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to the performance obligations in the contract; and (5) recognizing revenue when the performance obligation is satisfied. Substantially all of our revenue is recognized as services are rendered.

Our packaging and test services are our performance obligations to our customers. Our packaging services include wafer bump, probe and assembly. We provide packaging and test services to our customers either individually or as part of a combined offering. In a combined offering, we account for the individual services separately if they are determined to be distinct. We determine a service to be distinct if it is separately identifiable from other services in the combined offering and if a customer can benefit from the unique service on its own or with other resources that are readily available to the customer.

The consideration, including variable consideration, is allocated between the distinct services in a combined offering based upon the stand-alone selling prices of the individual services. Our services involve a high degree of specialization which are unique based on the design and purpose of the customer's wafers. Accordingly, our negotiated pricing reflects the customized nature of our services and represents a customer-specific stand-alone selling price. We recognize revenue as services are rendered, which generally occurs over the course of two to three weeks. Services are generally billed at completion of each individual packaging or test service or in some instances at the completion of all services in a combined offering.

We recognize revenue over time as services are rendered because our services create or enhance the customer's wafer. We utilize an input method (cost incurred plus estimated margin) to determine the amount of revenue to recognize for in-process, but incomplete, customer orders at a reporting date. During the period of providing our services, we generally do not control or take ownership of customers' wafers, nor do we include the cost of the wafer in our cost calculations. We believe that a cost-based input method is the most appropriate manner to measure how we satisfy our performance obligations to customers because the effort and costs incurred to package and/or test customer wafers are not linear over the duration of these services.

Shipping and handling costs are accounted for as a cost to fulfill our performance obligations to customers. Accordingly, we record customer payments of shipping and handling costs as a component of net sales, and the costs incurred for shipping and handling are then charged to cost of sales.

Income Taxes. We operate in and file income tax returns in various U.S. and non-U.S. jurisdictions which are subject to examination by tax authorities. The tax returns for years where the statute of limitations remains open in all jurisdictions in which we do business are subject to change upon examination. We believe that we have estimated and provided adequate accruals for potential additional taxes and related interest expense that may ultimately result from such examinations. We believe that any additional taxes or related interest over the amounts accrued will not have a material effect on our financial condition, results of operations or cash flows. However, resolution of these matters involves uncertainties, and there can be no assurance that the outcomes will be favorable. In addition, changes in the mix of income from our foreign subsidiaries, expiration of conditional reduced tax rates or changes in tax laws or regulations could result in increased tax expense and effective tax rates in the future.

Additionally, we monitor on an ongoing basis our ability to utilize our deferred tax assets and whether there is a need for a related valuation allowance. In evaluating our ability to recover our deferred tax assets in the jurisdictions from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and results of recent operations. With the exception of a certain foreign jurisdiction and select U.S. and foreign carryforwards, we consider it more likely than not that we will have sufficient taxable income to allow us to realize these deferred tax assets. However, in the event taxable income falls short of current expectations, we may need to establish a valuation allowance against such deferred tax assets. We have valuation allowances on certain U.S. federal net operating losses and U.S. foreign tax credit carryforwards expected to expire unused and on select deferred tax assets in certain foreign jurisdictions. Such valuation allowances are released as the related tax benefits are realized or when sufficient evidence exists to conclude that it is more likely than not that the deferred tax assets will be realized.

Valuation of Inventory. We order raw materials based on customers' forecasted demand. If our customers change their forecasted requirements and we are unable to cancel our raw materials order, or if our vendors require that we order a minimum quantity that exceeds the current forecasted demand, we will experience a build-up in raw material inventory. We will either seek to recover the cost of the materials from our customers or utilize the inventory in production. However, we may not be successful in recovering the cost from our customers or be able to use the inventory in production and, accordingly, if we believe that it is probable that we will not be able to recover such costs, we reduce the carrying value of our inventory. Additionally, we reduce the carrying value of our inventories by the cost of inventory we estimate is excess and obsolete based on the age of our inventories. When a determination is made that the inventory will not be utilized in production or is not saleable, it is written off. The forecast of demand and the evaluation of inventory recoverability require estimates and judgment. Although we make an effort to ensure forecasted demand and estimates of inventory are accurate, any unanticipated changes could have a material effect on our financial condition and result of operations.

Inventories consist of raw materials and purchased components and are stated at the lower of cost and net realizable value. Cost is principally determined by standard cost or the weighted moving average method, both of which approximate actual cost. For inventory valued using the standard cost method, we review and set our standard costs as needed, but at a minimum on a quarterly basis.

Valuation of Long-lived Assets. We review long-lived assets, which include property, plant and equipment and goodwill, for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Factors we consider important which could trigger an impairment review include the following:

- significant under-performance relative to expected historical or projected future operating results;
- significant changes in the manner of our use of the asset;
- significant negative industry or economic trends; and
- our market capitalization relative to net book value.

Recoverability of a long-lived asset group to be held and used in operations is measured by a comparison of the carrying amount to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset group. If such asset group is considered to be impaired, the impairment loss is measured as the amount by which the carrying amount of the asset group exceeds its fair value. Long-lived assets to be disposed of are carried at the lower of cost or fair value less the costs of disposal.

We review goodwill for impairment annually during the fourth quarter of each year and whenever events or changes in circumstances indicate that an impairment may exist. Impairment losses are recorded when the carrying amount of the reporting unit exceeds its fair value.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

Market Risk Sensitivity

We are exposed to market risks, primarily related to foreign currency and interest rate fluctuations. In the normal course of business, we employ established policies and procedures to manage the exposure to fluctuations in foreign currency values and changes in interest rates.

Foreign Currency Risk

The U.S. dollar is our reporting and functional currency for our subsidiaries, except for our Japan operations, where the Japanese yen is the functional currency. In order to reduce our exposure to foreign currency gains and losses, we use natural hedging techniques and forward contracts to mitigate foreign currency risk.

We have foreign currency exchange rate risk associated with the remeasurement of monetary assets and liabilities on our Consolidated Balance Sheets that are denominated in currencies other than the functional currency. We performed a sensitivity analysis of our foreign currency exposure as of December 31, 2022, to assess the potential impact of

fluctuations in exchange rates for all foreign denominated assets and liabilities. Assuming that all foreign currencies appreciated 10% against the U.S. dollar and taking into account our foreign currency forward contracts, our income before taxes as of December 31, 2022 would have been approximately \$11 million lower, due to the remeasurement of monetary assets and liabilities.

In addition, we have foreign currency exchange rate exposure on our results of operations. For the year ended December 31, 2022, approximately 90% of our net sales were denominated in U.S. dollars. Our remaining net sales were principally denominated in Japanese yen. For the year ended December 31, 2022, approximately 55% of our cost of sales and operating expenses were denominated in U.S. dollars and were largely for raw materials and costs associated with property, plant and equipment. The remaining portion of our cost of sales and operating expenses was principally denominated in the Asian currencies where our production facilities are located and largely consisted of labor. To the extent that the U.S. dollar weakens against these Asian-based currencies, similar foreign currency denominated income and expenses in the future will result in higher sales, higher cost of sales and operating expenses, with cost of sales and operating expenses having the greater impact on our financial results. Similarly, our sales, cost of sales and operating expenses will decrease if the U.S. dollar strengthens against these foreign currencies. We performed a sensitivity analysis of our foreign currency exposure as of December 31, 2022 to assess the potential impact of fluctuations in exchange rates for all foreign denominated sales and operating expenses. Assuming that all foreign currencies appreciated 10% against the U.S. dollar, our operating income for the year ended December 31, 2022 would have been approximately \$133 million lower.

There are inherent limitations in the sensitivity analysis presented, primarily the assumption that foreign exchange rate movements across multiple jurisdictions would change instantaneously in an equal fashion. As a result, the analysis is unable to reflect the potential effects of more complex market or other changes that could arise which may positively or negatively affect our results of operations.

Our Consolidated Financial Statements are impacted by changes in exchange rates at the entity where the local currency is the functional currency. The effect of foreign exchange rate translation for these entities was a loss of \$10.7 million and \$16.8 million for the years ended December 31, 2022 and 2021, respectively, and was recognized as an adjustment to equity through other comprehensive income (loss).

Interest Rate Risk

We have interest rate risk with respect to our available-for-sale debt investments. Our investment portfolio consists of various security types and maturities, with a significant portion of our portfolio having maturity of one year or less. Our primary objective with our investment portfolio is to invest available cash while preserving capital and meeting liquidity needs. These securities are subject to interest rate risk and will decrease in value if market interest rates increase. Due to the relatively short-term nature of our investment portfolio, we believe that an immediate increase in interest rates will not have a material impact on the fair value of our available-for-sale debt investments. For information regarding our available-for-sale debt investments, see Note 6 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

In addition, we have interest rate risk with respect to our debt. Our fixed and variable rate debt includes foreign borrowings, revolving credit facilities and senior notes. Changes in interest rates have different impacts on the fixed and variable rate portions of our debt portfolio. A change in interest rates on the fixed portion of the debt portfolio impacts the fair value of the debt instrument but has no impact on interest expense or cash flows. A change in interest rates on the variable portion of the debt portfolio impacts the interest incurred and cash flows but does not generally impact the fair value of the instrument.

The table below presents the interest rates, maturities and fair value of our fixed and variable rate debt as of December 31, 2022:

	2023	2024	2025	2026	2027	Thereafter	Total	Fair Value
	(\$ in thousands)							
Fixed rate debt	\$133,771	\$104,027	\$110,555	\$93,929	\$598,948	\$50,000	\$1,091,230	\$1,062,185
Average interest rate . .	1.3 %	1.4 %	1.7 %	1.8 %	6.0 %	2.1 %	4.0 %	
Variable rate debt	10,042	48,000	90,500	—	—	—	148,542	147,559
Average interest rate . .	3.5 %	5.8 %	5.5 %	— %	— %	— %	5.5 %	
Total debt maturities . . .	<u>\$143,813</u>	<u>\$152,027</u>	<u>\$201,055</u>	<u>\$93,929</u>	<u>\$598,948</u>	<u>\$50,000</u>	<u>\$1,239,772</u>	<u>\$1,209,744</u>

For information regarding the fair value of our long-term debt, see Note 16 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Item 8. *Financial Statements and Supplementary Data*

We present the information required by Item 8 of Form 10-K here in the following order:

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Consolidated Statements of Income — Years ended December 31, 2022, 2021 and 2020	52
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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Amkor Technology, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Amkor Technology, Inc. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of income, of comprehensive income, of stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2022 appearing under Item 8 (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for Income Taxes

As described in Notes 1 and 4 to the consolidated financial statements, the Company recorded income tax expense of \$89.9 million for the year ended December 31, 2022, and net deferred tax assets of \$78.2 million and unrecognized tax benefits of \$33.3 million as of December 31, 2022. Income taxes are accounted for using the asset and liability method. Under this method, deferred income tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis as well as for net operating loss and tax credit carryforwards. Management monitors on an ongoing basis its ability to utilize deferred tax assets and whether there is a need for a related valuation allowance. In evaluating the ability to recover deferred tax assets in the jurisdictions from which they arise, management considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies and recent results of operations. The Company operates in and files income tax returns in various U.S. and foreign jurisdictions, which are subject to examination by tax authorities. Years open to examination contain matters that could be subject to differing interpretations of applicable tax laws and regulations related to the amount and/or timing of income, deductions and tax credits.

The principal considerations for our determination that performing procedures relating to accounting for income taxes is a critical audit matter are the significant judgment by management in determining the income tax provision and other tax positions. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating audit evidence relating to income taxes. The audit effort involved the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to accounting for income taxes, including the controls addressing the completeness and accuracy of the data utilized. These procedures also included, among others (i) testing the income tax provision calculation and underlying data, including the effective tax rate reconciliation, significant return to provision adjustments, and permanent and temporary differences, (ii) evaluating management's assessment of the realizability of deferred tax assets on a jurisdictional basis, (iii) evaluating the identification of reserves for unrecognized tax benefits and the reasonableness of the "more likely than not" determination considering the jurisdictions, court decisions, legislative actions, statute of limitations, and developments in tax examinations, and (iv) using professionals with specialized skill and knowledge to assist in evaluating the reasonableness of management's judgment and estimates, including application of foreign and domestic tax laws and regulations.

/s/ PricewaterhouseCoopers LLP

Phoenix, Arizona
February 22, 2023

We have served as the Company's auditor since 2000.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF INCOME

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands, except per share data)		
Net sales	\$ 7,091,585	\$ 6,138,329	\$ 5,050,589
Cost of sales	5,761,598	4,912,775	4,149,775
Gross profit	1,329,987	1,225,554	900,814
Selling, general and administrative	283,372	296,084	302,842
Research and development	149,429	166,037	140,727
Total operating expenses	432,801	462,121	443,569
Operating income	897,186	763,433	457,245
Interest expense	58,563	51,508	64,168
Other (income) expense, net	(18,309)	(3,141)	6,395
Total other expense, net	40,254	48,367	70,563
Income before taxes	856,932	715,066	386,682
Income tax expense	89,890	69,459	46,183
Net income	767,042	645,607	340,499
Net income attributable to noncontrolling interests	(1,219)	(2,612)	(2,361)
Net income attributable to Amkor	<u>\$ 765,823</u>	<u>\$ 642,995</u>	<u>\$ 338,138</u>
Net income attributable to Amkor per common share:			
Basic	<u>\$ 3.13</u>	<u>\$ 2.64</u>	<u>\$ 1.40</u>
Diluted	<u>\$ 3.11</u>	<u>\$ 2.62</u>	<u>\$ 1.40</u>
Shares used in computing per common share amounts:			
Basic	244,676	243,878	241,509
Diluted	246,205	245,704	242,248

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Net income	\$ 767,042	\$ 645,607	\$ 340,499
Other comprehensive income (loss), net of tax:			
Adjustments to net unrealized gains (losses) on available-for-sale debt investments	(1,225)	(369)	21
Adjustments to unrealized components of defined benefit pension plans	8,604	9,834	602
Foreign currency translation	(10,658)	(16,757)	7,532
Total other comprehensive income (loss)	(3,279)	(7,292)	8,155
Comprehensive income	763,763	638,315	348,654
Comprehensive income attributable to noncontrolling interests	(1,219)	(2,612)	(2,361)
Comprehensive income attributable to Amkor	<u>\$ 762,544</u>	<u>\$ 635,703</u>	<u>\$ 346,293</u>

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2022	2021
	(In thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 959,072	\$ 826,744
Restricted cash	—	962
Short-term investments (amortized cost of \$283,641 and \$251,959, respectively)	281,964	251,530
Accounts receivable, net of allowances of \$365 and \$440, respectively	1,365,504	1,258,767
Inventories	629,576	484,959
Other current assets	65,123	33,601
Total current assets	3,301,239	2,856,563
Property, plant and equipment, net	3,135,614	2,871,058
Operating lease right of use assets	171,163	159,742
Goodwill	21,517	24,516
Restricted cash	3,334	3,815
Other assets	188,890	122,860
Total assets	\$ 6,821,757	\$ 6,038,554
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings and current portion of long-term debt	\$ 143,813	\$ 153,008
Trade accounts payable	899,164	828,727
Capital expenditures payable	146,602	210,875
Short-term operating lease liability	70,991	64,233
Accrued expenses	401,841	422,892
Total current liabilities	1,662,411	1,679,735
Long-term debt	1,088,521	984,988
Pension and severance obligations	93,540	120,472
Long-term operating lease liabilities	75,745	83,937
Other non-current liabilities	201,839	196,876
Total liabilities	3,122,056	3,066,008
Commitments and contingencies (Note 17)		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 10,000 shares authorized, designated Series A, none issued	—	—
Common stock, \$0.001 par value, 500,000 shares authorized, 291,249 and 290,466 shares issued, and 245,091 and 244,315 shares outstanding, respectively	291	290
Additional paid-in capital	1,996,344	1,977,134
Retained earnings	1,874,644	1,163,939
Accumulated other comprehensive income (loss)	16,699	19,978
Treasury stock, at cost, 46,158 and 46,151 shares, respectively	(219,226)	(219,065)
Total Amkor stockholders' equity	3,668,752	2,942,276
Noncontrolling interests in subsidiaries	30,949	30,270
Total equity	3,699,701	2,972,546
Total liabilities and equity	\$ 6,821,757	\$ 6,038,554

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid- In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total Amkor Stockholders' Equity	Noncontrolling Interest in Subsidiaries	Total Equity
	Shares	Par Value				Shares	Cost			
	(In thousands)									
Balance at December 31, 2019	286,877	\$ 287	\$ 1,927,739	\$ 234,077	\$ 19,115	(46,072)	\$(217,479)	\$ 1,963,739	\$ 26,500	\$ 1,990,239
Net income	—	—	—	338,138	—	—	—	338,138	2,361	340,499
Other comprehensive income (loss)	—	—	—	—	8,155	—	—	8,155	—	8,155
Treasury stock acquired through surrender of shares for tax withholding	—	—	—	—	—	(22)	(261)	(261)	—	(261)
Issuance of stock through share-based compensation plans	2,046	2	17,609	—	—	—	—	17,611	—	17,611
Share-based compensation	—	—	8,030	—	—	—	—	8,030	—	8,030
Cash dividends declared (\$0.04 per common share)	—	—	—	(9,713)	—	—	—	(9,713)	—	(9,713)
Subsidiary dividends to noncontrolling interests	—	—	—	—	—	—	—	—	(601)	(601)
Balance at December 31, 2020	288,923	\$ 289	\$ 1,953,378	\$ 562,502	\$ 27,270	(46,094)	\$(217,740)	\$ 2,325,699	\$ 28,260	\$ 2,353,959
Net income	—	—	—	642,995	—	—	—	642,995	2,612	645,607
Other comprehensive income (loss)	—	—	—	—	(7,292)	—	—	(7,292)	—	(7,292)
Treasury stock acquired through surrender of shares for tax withholding	—	—	—	—	—	(57)	(1,325)	(1,325)	—	(1,325)
Issuance of stock through share-based compensation plans	1,543	1	12,786	—	—	—	—	12,787	—	12,787
Share-based compensation	—	—	10,970	—	—	—	—	10,970	—	10,970
Cash dividends declared (\$0.17 per common share)	—	—	—	(41,558)	—	—	—	(41,558)	—	(41,558)
Subsidiary dividends to noncontrolling interests	—	—	—	—	—	—	—	—	(602)	(602)
Balance at December 31, 2021	290,466	\$ 290	\$ 1,977,134	\$ 1,163,939	\$ 19,978	(46,151)	\$(219,065)	\$ 2,942,276	\$ 30,270	\$ 2,972,546
Net income	—	—	—	765,823	—	—	—	765,823	1,219	767,042
Other comprehensive income (loss)	—	—	—	—	(3,279)	—	—	(3,279)	—	(3,279)
Treasury stock acquired through surrender of shares for tax withholding	—	—	—	—	—	(7)	(161)	(161)	—	(161)
Issuance of stock through share-based compensation plans	783	1	5,648	—	—	—	—	5,649	—	5,649
Share-based compensation	—	—	13,562	—	—	—	—	13,562	—	13,562
Cash dividends declared (\$0.225 per common share)	—	—	—	(55,118)	—	—	—	(55,118)	—	(55,118)
Subsidiary dividends to noncontrolling interests	—	—	—	—	—	—	—	—	(540)	(540)
Balance at December 31, 2022	291,249	\$ 291	\$ 1,996,344	\$ 1,874,644	\$ 16,699	(46,158)	\$(219,226)	\$ 3,668,752	\$ 30,949	\$ 3,699,701

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Cash flows from operating activities:			
Net income	\$ 767,042	\$ 645,607	\$ 340,499
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	612,702	563,582	510,396
Amortization of deferred debt issuance costs and premiums	3,247	2,508	1,979
Deferred income taxes	(11,623)	10,676	3,143
Loss on debt retirement	464	—	3,042
Gain on disposal of fixed assets, net	(2,807)	(1,446)	(2,821)
Share-based compensation	13,562	10,970	8,030
Other, net	(2,421)	13,752	(779)
Changes in assets and liabilities:			
Accounts receivable	(103,990)	(298,854)	(106,693)
Inventories	(148,137)	(190,555)	(75,499)
Other current assets	(23,802)	5,335	(12,348)
Other assets	(34,835)	14,746	(22,614)
Trade accounts payable	86,574	215,646	48,786
Accrued expenses	(40,637)	108,283	69,151
Pension and severance obligations	(10,547)	(30,013)	(21,535)
Net operating lease ROU asset	(14,483)	(14,781)	871
Operating lease liabilities	1,574	16,293	2,537
Other non-current liabilities	6,873	49,546	23,888
Net cash provided by operating activities	1,098,756	1,121,295	770,033
Cash flows from investing activities:			
Payments for property, plant and equipment	(908,294)	(779,779)	(553,021)
Proceeds from sale of property, plant and equipment	3,148	3,157	3,819
Proceeds from insurance recovery for property, plant and equipment	—	104	—
Proceeds from foreign exchange forward contracts	33,578	16,608	49,226
Payments for foreign exchange forward contracts	(104,703)	(69,835)	(14,031)
Payments for short-term investments	(438,803)	(414,208)	(535,368)
Proceeds from sale of short-term investments	33,972	87,273	247,081
Proceeds from maturities of short-term investments	370,924	204,679	159,015
Other investing activities	3,009	8,122	4,574
Net cash used in investing activities	(1,007,169)	(943,879)	(638,705)
Cash flows from financing activities:			
Proceeds from revolving credit facilities	80,000	—	312,000
Payments of revolving credit facilities	(80,000)	—	(332,000)
Proceeds from short-term debt	29,711	15,514	86,769
Payments of short-term debt	(27,187)	(19,927)	(87,353)
Proceeds from issuance of long-term debt	366,386	353,587	331,033
Payments of long-term debt	(214,290)	(316,635)	(648,514)
Payments for debt issuance costs	(7,297)	(1,294)	(1,644)
Payments of finance lease obligations	(40,673)	(20,373)	(9,851)
Proceeds from issuance of stock through share-based compensation plans	5,635	12,787	17,611
Payment of dividends	(55,116)	(51,213)	—
Other financing activities	(1,572)	(2,548)	(1,770)
Net cash provided by (used in) financing activities	55,597	(30,102)	(333,719)
Effect of exchange rate fluctuations on cash, cash equivalents and restricted cash	(16,299)	(17,990)	6,056
Net increase (decrease) in cash, cash equivalents and restricted cash	130,885	129,324	(196,335)
Cash, cash equivalents and restricted cash, beginning of period	831,521	702,197	898,532
Cash, cash equivalents and restricted cash, end of period	\$ 962,406	\$ 831,521	\$ 702,197

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Supplemental disclosures of cash flow information:			
Cash paid during the period for:			
Interest	\$ 54,355	\$ 46,932	\$ 61,295
Income taxes	97,333	24,011	43,404
Non-cash investing and financing activities:			
Property, plant and equipment included in capital expenditures payable	142,160	211,421	181,376
Right of use assets acquired through operating lease liabilities	64,849	63,314	41,672
Right of use assets acquired through finance lease liabilities	58,166	73,894	10,517
Dividends declared and unpaid	25	58	9,713

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Amkor is one of the world's leading providers of outsourced semiconductor packaging and test services. Amkor was a pioneer in the outsourcing of semiconductor packaging and test services, and over the years we have built a leading position by:

- Designing and developing innovative packaging and test technologies;
- Building expertise in high-volume manufacturing processes and developing a reputation for high quality and solid execution;
- Cultivating long-standing relationships with our customers, which include many of the world's leading semiconductor companies;
- Collaborating with customers, foundries, OEMs and equipment and material suppliers;
- Focusing on strategic end markets that offer solid growth potential;
- Providing a geographically diverse operating base; and
- Developing a competitive cost structure through disciplined capital investment.

Basis of Presentation

Our Consolidated Financial Statements include the accounts of Amkor Technology, Inc. and its subsidiaries. Our Consolidated Financial Statements reflect the elimination of all significant inter-company accounts and transactions. Our investments in variable interest entities in which we are the primary beneficiary are consolidated. We reflect the remaining portion of variable interest entities and foreign subsidiaries that are not wholly owned as noncontrolling interests.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, income taxes, inventory and long-lived assets. These estimates are based on management's best knowledge of current events, historical experience, actions that we may undertake in the future and on various other assumptions that are believed to be reasonable under the circumstances. As a result, actual results could differ materially from these estimates and assumptions, including the impact of Covid-19 and any deterioration in the global business and economic environment.

Consolidation of Variable Interest Entities

We have variable interests in certain Philippine realty corporations in which we have a 40% ownership. We lease land and buildings in the Philippines from these entities and we are the primary beneficiary of these arrangements. As of December 31, 2022, the combined book value of the assets and liabilities associated with these Philippine realty corporations included in our Consolidated Balance Sheet was \$17.2 million and \$0.1 million, respectively. The impact of consolidating these variable interest entities on our Consolidated Statements of Income was not significant, and other than our lease payments, we have not provided any significant assistance or other financial support to these variable interest entities for the years ended December 31, 2022, 2021 or 2020. The creditors of the Philippine realty corporations have no recourse to our general credit.

Notes to Consolidated Financial Statements — (Continued)***Foreign Currency Translation***

The U.S. dollar is the functional currency of our subsidiaries other than our Japan operations. The foreign currency asset and liability amounts at these subsidiaries are remeasured into U.S. dollars at end-of-period exchange rates, except for nonmonetary items which are remeasured at historical rates. Foreign currency income and expenses are remeasured at daily exchange rates, except for expenses related to balance sheet amounts which are remeasured at historical exchange rates. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in other (income) expense, net in the period in which they occur.

The Japanese yen is the functional currency of our Japan operations. The asset and liability amounts of our Japan operations are translated into U.S. dollars at end-of-period exchange rates. Income and expenses are translated into U.S. dollars at the daily exchange rate. The resulting translation adjustments are reported as a component of accumulated other comprehensive income in the stockholders' equity section of the balance sheet. Assets and liabilities denominated in a currency other than the functional currency are remeasured into the functional currency prior to translation into U.S. dollars, and the resulting transaction exchange gains or losses are included in other (income) expense, net in the period in which they occur.

Risks and Concentrations

The semiconductor industry is characterized by rapid technological change, competitive pricing pressures and cyclical market patterns. Our financial results are affected by a wide variety of factors, including general economic conditions worldwide, economic conditions specific to the semiconductor industry, the timely implementation of new package and test technologies, the ability to safeguard patents and intellectual property in a rapidly evolving market and reliance on materials and equipment suppliers. In addition, the semiconductor market has historically been cyclical and subject to significant economic downturns at various times. Our profitability and ability to generate cash from operations is principally dependent upon demand for semiconductors, the utilization of our capacity, semiconductor package mix, the average selling price of our services, our ability to manage our capital expenditures and our ability to control our costs including labor, material, overhead and financing costs.

A significant portion of our revenues is concentrated with a small group of customers (Note 18). Direct sales to our two largest customers accounted for 20.6% and 10.1% of our net sales for the year ended December 31, 2022. The loss of a significant customer, a business combination among customers, a reduction in orders or decrease in price from a significant customer or disruption in any of our significant strategic partnerships or other commercial arrangements could have a material adverse effect on our business, liquidity, results of operations, financial condition and cash flows.

Financial instruments, for which we are subject to credit risk, consist principally of accounts receivable and cash, cash equivalents and short-term investments. With respect to accounts receivable, we mitigate our credit risk by selling primarily to well-established companies, performing ongoing credit evaluations and making frequent contact with customers. In addition, we may utilize non-recourse factoring to mitigate credit risk when considered appropriate. We have historically mitigated our credit risk with respect to cash and cash equivalents through diversification of our holdings into various high quality money market funds and bank deposit accounts. Our short-term investments are principally investments in debt securities with maximum duration of twenty-four months and range from AAA- to BBB-rated financial instruments. Our short-term investments are primarily in direct obligations of the U.S. Government or its agencies, corporate bonds, asset backed securities, commercial paper, municipal bonds, and other foreign government obligations and funds. At December 31, 2022, our cash and cash equivalents were primarily maintained in various U.S. and foreign bank operating and time deposit accounts and invested in U.S. money market funds and commercial paper.

Contingencies and Litigation

We may be subject to certain legal proceedings, lawsuits and other claims, as discussed in Note 17. We accrue for a loss contingency, including legal proceedings, lawsuits, pending claims and other legal matters, when we conclude that the likelihood of a loss is probable and the amount of the loss can be reasonably estimated. When the reasonable estimate of the loss is within a range of amounts, and no amount in the range constitutes a better estimate than any other amount, we

Notes to Consolidated Financial Statements — (Continued)

accrue for the amount at the low end of the range. We adjust our accruals from time to time as we receive additional information, but the loss we incur may be significantly greater than or less than the amount we have accrued. We disclose loss contingencies if we believe they are material and there is at least a reasonable possibility that a loss has been incurred. Attorney fees related to legal matters are expensed as incurred.

Cash and Cash Equivalents

We consider all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. Our cash and cash equivalents are primarily maintained in various U.S. and foreign bank operating and time deposit accounts and invested in U.S. money market funds and commercial paper.

Restricted Cash

Restricted cash, current, consists of short-term cash equivalents used to collateralize our daily banking services. Restricted cash, non-current, mainly consists of collateral to fulfill foreign trade compliance requirements.

Investments

Generally, we classify our short-term investments in fixed income securities as available-for-sale debt investments. All of our available-for-sale debt investments as of December 31, 2022 are available to fund current operations and are recorded at fair value (Note 6). Unrealized gains and losses on our available-for-sale debt investments are included as a separate component of accumulated other comprehensive income (loss), net of tax. Realized gains and losses on our available-for-sale debt investments and declines in value judged to be an impairment are included in other (income) expense, net. The cost of short-term investments matured or sold is based on the average cost method.

We evaluate on an ongoing basis the market conditions, trends of earnings, financial condition, credit ratings, any underlying collateral and other key measures for our short-term investments in determining if and when a decline in value below the adjusted cost of our available-for-sale debt investments is an impairment. An impairment is considered if (i) we have the intent to sell the security, (ii) it is more likely than not that we will be required to sell the security before recovery of the entire amortized cost basis or (iii) we do not expect to recover the entire amortized cost basis of the security. If impairment is considered on condition (i) or (ii) above, the entire difference between the amortized cost and the fair value of the debt security is recognized in earnings. If impairment is considered based on condition (iii), the amount representing credit losses will be recognized in earnings and as an allowance for credit losses. The amount relating to all other factors will be recognized in other comprehensive income.

Inventories

Inventories consist of raw materials and purchased components and are stated at the lower of cost and net realizable value. Cost is principally determined by standard cost or the weighted moving average method, both of which approximate actual cost. We review and set our standard costs as needed, but at a minimum on a quarterly basis. We reduce the carrying value of our inventories for the cost of inventory we estimate is excess and obsolete based on the age of our inventories. When a determination is made that the inventory will not be utilized in production or is not saleable, it is written-off.

Other Current Assets

Other current assets consist principally of prepaid assets.

Notes to Consolidated Financial Statements — (Continued)

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is calculated by the straight-line method over the estimated useful lives of depreciable assets which are as follows:

Buildings and improvements	10 to 40 years
Machinery and equipment	2 to 7 years
Software and computer equipment	3 to 5 years
Furniture, fixtures and other equipment	4 to 10 years

Cost and accumulated depreciation for property retired or disposed of are removed from the accounts, and any resulting gain or loss is included in earnings. Expenditures for maintenance and repairs are charged to expense as incurred.

We review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Recoverability of a long-lived asset group to be held and used in operations is measured by a comparison of the carrying amount to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset group. If such asset group is considered to be impaired, the impairment loss is measured as the amount by which the carrying amount of the asset group exceeds its fair value. Long-lived assets to be disposed of are carried at the lower of cost or fair value less the costs of disposal.

Leases

We lease certain machinery and equipment, office space, and manufacturing facilities. Leases with an initial term of 12 months or less are not recorded on the balance sheet, and we recognize lease expense for these leases on a straight-line basis over the lease term. We combine lease components (e.g., fixed payments including rent, real estate taxes and insurance costs) with the non-lease components (e.g., common-area maintenance costs) for all asset classes. We use our incremental borrowing rate based on the information available at the lease commencement date to determine the lease liability. Our leases have remaining lease terms ranging from less than one year to 83 years. For purposes of calculating our lease liabilities, our lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise those options. Certain leases also include options to purchase the leased property.

Goodwill

Goodwill is recorded when the cost of an acquisition exceeds the fair value of the net tangible and identifiable intangible assets acquired. We review goodwill for impairment annually during the fourth quarter of each year and whenever events or changes in circumstances indicate that an impairment may exist. Impairment losses are recorded when the carrying amount of the reporting unit exceeds its fair value. The balance of goodwill in our Consolidated Balance Sheets reflects adjustments for foreign currency translation.

Other Assets

Other assets consist principally of deferred tax assets, refundable security deposits and advanced payments to vendors.

Derivatives

We use foreign exchange forward contracts, generally settled monthly, to manage a portion of our exposure to foreign exchange risk. The derivatives are recorded at the fair value either in other current assets or accrued expenses, with the associated gains and losses charged to other (income) expense, net in the period in which they occur. We do not apply hedge accounting to the derivatives. See Note 15 for further discussion about the derivatives.

Notes to Consolidated Financial Statements — (Continued)

Fair Value Measurements

We apply fair value accounting for assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring or nonrecurring basis. We define fair value as the price that would be received from selling an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. See Note 16 for further discussion of fair value measurements.

Revenue Recognition

We recognize revenue, net of sales, use, value-added and other similar taxes, as a performance obligation is satisfied in an amount reflecting the consideration to which we expect to be entitled. We apply a five-step approach in determining the amount and timing of revenue to be recognized: (1) identifying the contract with a customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to the performance obligations in the contract; and (5) recognizing revenue when the performance obligation is satisfied. Substantially all of our revenue is recognized as services are rendered.

Our packaging and test services are our performance obligations to our customers. Our packaging services include wafer bump, probe and assembly. We provide packaging and test services to our customers either individually or as part of a combined offering. In a combined offering, we account for the individual services separately if they are determined to be distinct. We determine a service to be distinct if it is separately identifiable from other services in the combined offering and if a customer can benefit from the unique service on its own or with other resources that are readily available to the customer.

The consideration, including variable consideration, is allocated between the distinct services in a combined offering based upon the stand-alone selling prices of the individual services. Our services involve a high degree of specialization which are unique based on the design and purpose of the customer's wafers. Accordingly, our negotiated pricing reflects the customized nature of our services and represents a customer-specific stand-alone selling price. We recognize revenue as services are rendered, which generally occurs over the course of two to three weeks. Services are generally billed at completion of each individual packaging or test service or in some instances at the completion of all services in a combined offering.

We recognize revenue over time as services are rendered because our services create or enhance the customer's wafer. We utilize an input method (cost incurred plus estimated margin) to determine the amount of revenue to recognize for in-process, but incomplete, customer orders at a reporting date. During the period of providing our services, we generally do not control or take ownership of customers' wafers, nor do we include the cost of the wafer in our cost calculations. We believe that a cost-based input method is the most appropriate manner to measure how we satisfy our performance obligations to customers because the effort and costs incurred to package and/or test customer wafers are not linear over the duration of these services.

Shipping and handling costs are accounted for as a cost to fulfill our performance obligations to customers. Accordingly, we record customer payments of shipping and handling costs as a component of net sales, and the costs incurred for shipping and handling are then charged to cost of sales.

Unbilled receivables are revenues that have been recognized for performance obligations that have been satisfied, or partially satisfied, in advance of billing the customer. Revenue may be recognized in advance of billing as our contracts provide us with an unconditional right to consideration for work that is performed. Total unbilled receivables as of December 31, 2022 and 2021 were \$301.7 million and \$224.7 million, respectively. These amounts are included in accounts receivable, net of allowances in our Consolidated Balance Sheets.

At times, the company receives cash payments from customers in advance of the company's performance. In such cases, we record deferred revenue until the performance obligation is satisfied, which represents a contract liability and is included in accrued expenses and other non-current liabilities in the consolidated balance sheets. These contract liabilities are classified as either current or long-term based on the timing of when the company expects to recognize

Notes to Consolidated Financial Statements — (Continued)

revenue. Contract liabilities were \$170.6 million and \$187.2 million as of December 31, 2022 and December 31, 2021, respectively. As of December 31, 2022 and December 31, 2021, the short-term portion of the liability was \$81.5 million and \$117.7 million, respectively. The remainder of the December 31, 2022 contract liability balance is expected to be recognized in revenue over the next 1-5 years. Revenue recognized during the year that was included in the contract liability balance at the beginning of the period was \$101.2 million, \$29.0 million, and \$14.1 million, for 2022, 2021 and 2020, respectively.

Research and Development Costs

Research and development expenses include costs attributable to the conduct of research and development programs primarily related to the development of new package designs or technologies and improving the efficiency and capabilities of our existing production processes. Such costs include labor, materials, supplies, depreciation and maintenance of research equipment, services provided by outside contractors and the allocable portions of facility costs such as rent, utilities, insurance, repairs and maintenance, depreciation and general support services. Costs associated with research and development are expensed as incurred.

Income Taxes

Income taxes are accounted for using the asset and liability method. Under this method, deferred income tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis as well as for net operating loss carryforwards (“NOLs”) and tax credit carryforwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which these temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for those deferred tax assets for which it is more likely than not that the related tax benefits will not be realized.

We monitor on an ongoing basis our ability to utilize our deferred tax assets and whether there is a need for a related valuation allowance. In evaluating our ability to recover our deferred tax assets in the jurisdictions from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies and recent results of operations. With exception of a certain foreign jurisdiction and select U.S. and foreign carryforwards, we consider it more likely than not that we will have sufficient taxable income to allow us to realize these deferred tax assets. However, in the event taxable income falls short of current expectations, we may need to establish a valuation allowance against such deferred tax assets.

We recognize in our Consolidated Financial Statements the impact of an income tax position, if that position is more likely than not of being sustained on audit, based on the technical merits of the position. Related interest and penalties are classified as income taxes in the financial statements. See Note 4 for further discussion regarding unrecognized income tax benefits.

2. Share-Based Compensation Plans

For the years ended December 31, 2022, 2021 and 2020, we recognized share-based compensation of \$13.6 million, \$11.0 million and \$8.0 million, respectively, primarily in selling, general and administrative expenses. The amount of compensation expense to be recognized is adjusted for an estimated forfeiture rate which is based on historical data. The corresponding deferred income tax benefits are \$1.7 million, \$1.4 million and \$1.3 million for 2022, 2021 and 2020, respectively.

Equity Incentive Plans

Second Amended and Restated 2007 Equity Incentive Plan. The Second Amended and Restated 2007 Equity Incentive Plan (as amended, the “2007 Plan”) provided for the grant of the following types of incentive awards: (i) stock options; (ii) restricted stock; (iii) restricted stock units; (iv) stock appreciation rights; (v) performance units and performance

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

shares; and (vi) other stock or cash awards. Those eligible for awards included employees, directors and consultants who provide services to Amkor and its subsidiaries. There were originally 17.0 million shares of our common stock reserved for issuance under the 2007 Plan. No awards have been or will be granted under the 2007 Plan after the effective date of the 2021 Plan (as defined below), but all outstanding awards under the 2007 Plan will continue in full force and effect, subject to their original terms.

2021 Equity Incentive Plan. On May 18, 2021, at our 2021 Annual Meeting of Stockholders (the “2021 Annual Meeting”), our stockholders approved the Amkor Technology, Inc. 2021 Equity Incentive Plan (as amended, the “2021 Plan”) to replace the 2007 Plan. The 2021 Plan provides for the grant of the following types of incentive awards: (i) stock options; (ii) restricted stock; (iii) restricted stock units; (iv) stock appreciation rights; (v) performance units and performance shares; and (vi) other stock or cash awards. Those eligible for awards include employees, directors and consultants who provide services to Amkor and its subsidiaries. The number of shares authorized and available for issuance under the 2021 Plan is 23,100,000 shares, reduced for certain awards granted under the 2007 Plan after December 31, 2020, but before May 18, 2021. There were originally 22.8 million shares of our common stock reserved for issuance under the 2021 Plan, and at December 31, 2022, there were 21.9 million shares available for grant under the 2021 Plan.

Stock options

Stock options are generally granted with an exercise price equal to the market price of the stock at the date of grant. Substantially all of the options granted are exercisable pursuant to a one to four year vesting schedule, and the term of the options granted is no longer than ten years. Upon option exercise, we may issue new shares of common or treasury stock.

In order to calculate the fair value of stock options at the date of grant, we use the Black-Scholes option pricing model. Expected volatilities are based on historical performance of our stock. We also use historical data to estimate the timing and amount of option exercises and forfeitures within the valuation model. The expected term of the options is based on evaluations of historical and expected future employee exercise behavior and represents the period of time that options granted are expected to be outstanding. The risk-free interest rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The dividend yield is based on the annualized declared quarterly dividend rate divided by our closing stock price at the date of the grant.

The following table summarizes our stock option activity for the year ended December 31, 2022:

	Number of Shares (In thousands)	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In thousands)
Outstanding at December 31, 2021	3,026	\$ 10.34		
Granted	—	—		
Exercised	(587)	9.60		
Forfeited or expired	(63)	9.48		
Outstanding at December 31, 2022	2,376	\$ 10.54	5.86 years	\$ 31,929
Fully vested at December 31, 2022 and expected to vest thereafter	2,365	\$ 10.53	5.85 years	\$ 31,800
Exercisable at December 31, 2022	2,064	\$ 10.31	5.66 years	\$ 28,219

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Notes to Consolidated Financial Statements — (Continued)

The following assumptions were used to calculate the weighted-average fair values of the options granted:

	For the Year Ended December 31,	
	2021	2020
Expected life (in years)	6.7	5.6
Risk-free interest rate	1.3 %	0.3 %
Volatility	54 %	52 %
Dividend yield	0.8%	0.3%
Weighted-average grant date fair value per option granted	\$ 9.54	\$ 5.79

Total unrecognized compensation expense from stock options was \$1.2 million as of December 31, 2022, which is expected to be recognized over a weighted-average period of approximately 0.9 years beginning January 1, 2023. The total intrinsic value of options exercised during fiscal years 2022, 2021, and 2020 was \$8.0 million, \$17.7 million, and \$8.2 million, respectively.

Restricted shares

Restricted shares granted to our non-employee directors vest on the earlier of the one year anniversary of the grant date or the date of the annual meeting of stockholders immediately following the grant date, subject to the recipient's continued service as a director of Amkor on the applicable vesting date. Generally, other restricted shares vest ratably over three years, with 8.33% of the shares vesting in equal quarterly installments such that 100% of the shares will become vested on the third anniversary of the award, subject to the recipient's continued employment with us on the applicable vesting date. In addition, provided that the restricted shares have not been forfeited earlier, under the terms and conditions of the applicable award agreements for certain grants, the restricted shares will vest upon the recipient's death or disability, or upon a change in control of Amkor. The value of the restricted shares is determined based on the fair market value of the underlying shares on the date of the grant and is recognized ratably over the vesting period.

The following table summarizes our restricted share activity for the year ended December 31, 2022:

	Number of Shares (In thousands)	Weighted- average Grant Date Fair Value (Per Share)
Non-vested at December 31, 2021	283	\$ 15.79
Awards granted	—	—
Awards vested	(174)	16.03
Awards forfeited	—	—
Non-vested at December 31, 2022	<u>109</u>	<u>\$ 15.38</u>

Total unrecognized compensation expense from restricted shares was \$1.3 million as of December 31, 2022, which is expected to be recognized over a weighted-average period of approximately 0.6 years beginning January 1, 2023.

Restricted stock units

From time to time, and pursuant to the 2021 Plan, we grant time-vested restricted stock units ("RSUs") to our non-employee directors and certain employees and performance-vested restricted stock units ("PSUs") to certain employees. RSUs generally vest in four equal installments over a four-year period such that 100% of the RSUs will become vested on the fourth anniversary of the award, subject to the recipient's continued employment with us on the applicable vesting dates. In addition, provided that the RSUs have not been forfeited earlier, they will generally vest upon the recipient's retirement, death or disability, or upon a change in control of Amkor, in accordance with the terms and conditions of the applicable award agreement. The value of the RSUs is determined based on the fair market value of the underlying shares on the date of the grant, reduced by the present value of dividends or dividend equivalent rights expected to be paid on our common stock prior to vesting, and is recognized ratably over the vesting period.

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Notes to Consolidated Financial Statements — (Continued)

PSUs generally vest in one installment after a two-year period such that any earned PSUs will become vested within 90 days of the second anniversary of the award, subject to the recipient's continued employment with us on the applicable vesting date. Generally for PSUs, the number of shares of our common stock to be received at vesting will range from 0% to 200% of the target grant amount based on Cumulative Basic EPS (as defined in the applicable award agreement) over a two-year performance measurement period. In addition, provided the PSUs have not been forfeited earlier, the PSUs will generally vest upon the recipient's retirement, death or disability, or upon a change of control of Amkor, in accordance with the terms and conditions of the applicable award agreement. The value of the PSUs is initially determined based on the fair market value of the underlying shares on the date of the grant, reduced by the present value of dividends expected to be paid on our common stock prior to vesting, and is recognized over the vesting period.

The following table summarizes our RSU and PSU activity for the year ended December 31, 2022:

	Number of Shares (In thousands)	Weighted- average Grant Date Fair Value (Per Share)
Non-vested at December 31, 2021	286	\$ 22.48
Awards granted	531	22.29
Awards vested	(22)	22.23
Awards forfeited	(57)	22.63
Non-vested at December 31, 2022	<u>738</u>	<u>\$ 22.34</u>

Total unrecognized compensation expense from RSUs and PSUs was \$6.4 million as of December 31, 2022, which is expected to be recognized over a weighted-average period of approximately 1.6 years beginning January 1, 2023.

3. Other Income and Expense

Other income and expense consists of the following:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Interest income	\$ (12,762)	\$ (1,065)	\$ (5,449)
Foreign currency (gain) loss, net	(1,572)	723	9,608
Loss on debt retirement	464	—	3,042
Other	(4,439)	(2,799)	(806)
Total other (income) expense, net	<u>\$ (18,309)</u>	<u>\$ (3,141)</u>	<u>\$ 6,395</u>

4. Income Taxes

Geographic sources of income (loss) before taxes are as follows:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
United States	\$ 81,488	\$ 81,994	\$ 38,719
Foreign	775,444	633,072	347,963
Income before taxes	<u>\$ 856,932</u>	<u>\$ 715,066</u>	<u>\$ 386,682</u>

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Notes to Consolidated Financial Statements — (Continued)

The components of the provision (benefit) for income taxes are as follows:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Current:			
Federal	\$ 40,063	\$ 9,649	\$ 4,608
State	150	198	134
Foreign	61,300	48,936	38,298
	<u>101,513</u>	<u>58,783</u>	<u>43,040</u>
Deferred:			
Federal	(10,156)	20,478	(7,877)
State	1,458	361	(535)
Foreign	(2,925)	(10,163)	11,555
	<u>(11,623)</u>	<u>10,676</u>	<u>3,143</u>
Income tax expense	<u>\$ 89,890</u>	<u>\$ 69,459</u>	<u>\$ 46,183</u>

The reconciliation between the U.S. federal statutory income tax rate of 21% and our effective tax rate is as follows:

	For the Year Ended December 31,		
	2022	2021 (1)	2020 (1)
U.S. federal statutory income tax rate	21.0 %	21.0 %	21.0 %
Foreign income taxed at different rates	(12.0)	(9.5)	(7.2)
Foreign exchange (loss) gain	2.2	(2.3)	1.7
Change in valuation allowance	(2.4)	0.1	(4.0)
Income tax credits generated	(6.1)	(5.1)	(5.6)
Foreign earnings and profits	9.0	5.7	6.2
Foreign derived intangible income	(0.9)	(1.1)	(1.6)
Settlements and changes in uncertain tax positions	(0.2)	0.8	1.8
Other	(0.1)	0.1	(0.4)
Income tax expense	<u>10.5 %</u>	<u>9.7 %</u>	<u>11.9 %</u>

(1) Prior year amounts were reclassified and presented to conform with current year presentation.

In 2022, we reversed \$17.8 million of valuation allowance recorded against U.S. foreign tax credit carryforwards previously projected to expire unused due to the limitations to utilize the credits under current tax law. In 2020, we reversed \$12.4 million of valuation allowance recorded against our interest expense carryforward previously projected to expire unused due to the limitation to deduct interest expense under current tax law. Realization of these carryforwards is dependent on generating sufficient taxable income to overcome the foreign tax credit and interest limitation provisions, respectively. Although utilization of these carryforwards is not assured, in light of our current earnings and recent estimates of future taxable income, management believes sufficient positive evidence exists to conclude that the respective valuation allowances are no longer needed, resulting in the reversal of these valuation allowances.

As a result of certain capital investments, export commitments and employment levels, income from operations in Korea, the Philippines and Singapore was subject to reduced income tax rates and, in some cases, was exempt from income taxes. The most significant tax rate impact is in Singapore where we have been granted a conditional reduced tax rate that expires at the end of 2023, excluding potential renewal subject to certain conditions and commitments. We recognized \$84.5 million, \$56.7 million and \$27.6 million in tax benefits as a result of the conditional reduced tax rates

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Notes to Consolidated Financial Statements — (Continued)

in 2022, 2021 and 2020, respectively. The benefit of the conditional reduced tax rates on diluted earnings per share was approximately \$0.34, \$0.23 and \$0.11 for 2022, 2021 and 2020, respectively.

The following is a summary of the components of our deferred tax assets and liabilities:

	December 31,	
	2022	2021
	(In thousands)	
Deferred tax assets:		
NOLs	\$ 49,846	\$ 36,326
Income tax credits	92,368	93,257
Property, plant and equipment	15,328	20,181
Deferred interest expense	—	3,397
Accrued liabilities	39,929	49,554
Receivable	29,178	30,996
Unrealized foreign exchange loss	8,018	11,409
Revenue Recognition	1,564	—
Operating lease liabilities	26,955	27,446
Other	14,665	13,407
Total deferred tax assets	277,851	285,973
Valuation allowance	(101,869)	(122,357)
Total deferred tax assets net of valuation allowance	175,982	163,616
Deferred tax liabilities:		
Property, plant and equipment	50,215	40,334
Deferred gain	7,839	10,873
Unrealized foreign exchange gain	5,242	3,212
Unbilled receivables	822	5,218
Operating lease right of use assets	26,241	26,120
Other	7,433	5,241
Total deferred tax liabilities	97,792	90,998
Net deferred tax assets	\$ 78,190	\$ 72,618
Recognized as:		
Other assets	\$ 86,616	\$ 83,596
Other non-current liabilities	(8,426)	(10,978)
Total	\$ 78,190	\$ 72,618

We monitor on an ongoing basis our ability to utilize our deferred tax assets and whether there is a need for a related valuation allowance. In evaluating our ability to recover our deferred tax assets in the jurisdictions from which they arise, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies and recent results of operations.

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Notes to Consolidated Financial Statements — (Continued)

Valuation allowance against deferred tax assets consist of the following:

	December 31,	
	2022	2021
	(In thousands)	
Valuation allowance:		
U.S.	\$ 40,610	\$ 61,074
Foreign	61,259	61,283
Total valuation allowance	<u>\$ 101,869</u>	<u>\$ 122,357</u>

Our NOLs are as follows:

	December 31,		
	2022	2021	Expiration
	(In thousands)		
U.S. Federal NOLs	\$ 13,003	\$ 21,388	2023-2024
U.S. State NOLs	38,384	55,694	2023-2036
Foreign NOLs	240,740	155,323	2024-2036

At December 31, 2022 and 2021, a portion of our remaining U.S. federal NOL was reserved with a valuation allowance due to ownership change limitations from a prior year acquisition as well as certain state NOLs expected to expire unused. Also, we have a valuation allowance against a foreign NOL that we do not expect to have sufficient taxable income to realize as of December 31, 2022 and 2021.

Our tax credit carryforwards are as follows:

	December 31,		
	2022	2021	Expiration
	(In thousands)		
U.S. Foreign Tax Credits	\$ 54,130	\$ 57,247	2026-2032
U.S. Other Tax Credits	110	138	2026
Foreign Tax Credits	38,128	35,872	2023-2032

At December 31, 2022 and 2021, a portion of our U.S. and foreign tax credit carryforwards were reserved with a valuation allowance for the amount expected to expire unused.

Distributions of cash to the U.S. as dividends generally will not be subject to U.S. federal income tax. We have not provided foreign withholding taxes or state income taxes on the undistributed earnings of our foreign subsidiaries, over which we have sufficient influence to control the distribution of such earnings and have determined that substantially all such earnings have been reinvested indefinitely. These earnings could become subject to foreign withholding tax if they are remitted as dividends. For the year ended December 31, 2022, we estimate that repatriation of these foreign earnings would generate withholding taxes and state income taxes of approximately \$131.3 million.

We operate in and file income tax returns in various U.S. and foreign jurisdictions which are subject to examination by tax authorities. We have tax returns that are open to examination in various jurisdictions for tax years 2012-2022. The open years contain matters that could be subject to differing interpretations of applicable tax laws and regulations related to the amount and/or timing of income, deductions and tax credits. There can be no assurance that the outcome of examinations will be favorable. Our unrecognized tax benefits are subject to change as examinations of specific tax years are completed in the respective jurisdictions. In certain circumstances where we elect to appeal the results of an

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

examination, we may be required to make tax assessment payments to proceed with the administrative appeal process. Current examinations include 2015-2020 Malaysia income tax returns and 2021 Philippine income tax return.

A reconciliation of the beginning and ending gross amount of unrecognized tax benefits is as follows:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Balance at January 1	\$ 37,293	\$ 32,598	\$ 26,242
Additions based on tax positions related to the current year	1,519	9,562	10,427
Additions for tax positions of prior years	1,909	1,740	1,173
Reductions for tax positions of prior years	(5,755)	(66)	(280)
Reductions related to settlements with tax authorities	(988)	(1,266)	—
Reductions from lapse of statutes of limitations	(725)	(5,275)	(4,964)
Balance at December 31	<u>\$ 33,253</u>	<u>\$ 37,293</u>	<u>\$ 32,598</u>

The net decrease in our unrecognized tax benefits was \$4.0 million from December 31, 2021 to December 31, 2022. The decrease was primarily related to income attribution, settlements and the lapse of statutes of limitations. At December 31, 2022, all of our gross unrecognized tax benefits would reduce our effective tax rate, if recognized. It is reasonably possible that unrecognized tax benefits related to income attribution will decrease in the next 12 months by up to \$1.9 million due to the lapse of statutes of limitations in foreign jurisdictions.

The liability related to our unrecognized tax benefits, before interest and penalties, is \$24.7 million as of December 31, 2022 and is reported as a component of other non-current liabilities. The unrecognized tax benefits presented in the table above also include positions that have reduced deferred tax assets by \$8.6 million. The balance of accrued and unpaid interest and penalties is \$4.9 million and \$5.5 million as of December 31, 2022 and 2021, respectively, and is included as a component of other non-current liabilities in connection with our unrecognized tax benefits.

5. Earnings Per Share

Basic earnings per share (“EPS”) is computed by dividing net income attributable to Amkor common stockholders by the weighted-average number of common shares outstanding during the period. The weighted-average number of common shares outstanding is reduced for treasury stock.

Diluted EPS is computed based on the weighted-average number of common shares outstanding plus the effect of dilutive potential common shares outstanding during the period. Dilutive potential common shares include outstanding stock options, PSUs, RSUs and unvested restricted shares.

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Notes to Consolidated Financial Statements — (Continued)

The following table summarizes the computations of basic and diluted EPS:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands, except per share data)		
Net income attributable to Amkor common stockholders	\$ 765,823	\$ 642,995	\$ 338,138
Weighted-average number of common shares outstanding — basic . .	244,676	243,878	241,509
Effect of dilutive securities:			
Share-based awards	1,529	1,826	739
Weighted-average number of common shares outstanding — diluted	246,205	245,704	242,248
Net income attributable to Amkor per common share:			
Basic	\$ 3.13	\$ 2.64	\$ 1.40
Diluted	\$ 3.11	\$ 2.62	\$ 1.40

The following table summarizes the potential shares of common stock that were excluded from diluted EPS, because the effect of including these potential shares was anti-dilutive:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Share-based awards	180	112	2,412

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Notes to Consolidated Financial Statements — (Continued)

6. Investments

The following table summarizes our cash equivalents and available-for-sale debt investments:

	December 31, 2022					
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses (1)	Total Fair Value	Fair Value Level	
					Level 1	Level 2
	(In thousands)					
Cash equivalents						
Asset-backed securities	\$ 25	\$ —	\$ —	\$ 25	\$ —	\$ 25
Commercial paper	69,101	—	—	69,101	—	69,101
Money market funds	97,650	—	—	97,650	97,650	—
Municipal bonds	1,001	—	—	1,001	—	1,001
U.S. government bonds	10,767	1	—	10,768	10,768	—
U.S. government agency bonds	16,982	3	—	16,985	—	16,985
Total cash equivalents (2)	195,526	4	—	195,530	108,418	87,112
Short-term investments						
Asset-backed securities	25,677	7	(134)	25,550	—	25,550
Certificate of deposits	17,362	—	—	17,362	17,362	—
Commercial paper	27,866	—	—	27,866	—	27,866
Corporate bonds	198,868	7	(1,529)	197,346	—	197,346
Foreign government bonds	996	—	(4)	992	—	992
Mortgage-backed securities	696	—	(2)	694	—	694
Municipal bonds	364	—	(2)	362	—	362
U.S. government agency bonds	735	—	(1)	734	—	734
U.S. government bonds	6,704	1	(20)	6,685	6,685	—
Total short-term investments	279,268	15	(1,692)	277,591	24,047	253,544
Total	\$ 474,794	\$ 19	\$ (1,692)	\$ 473,121	\$ 132,465	\$ 340,656

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Notes to Consolidated Financial Statements — (Continued)

	December 31, 2021					
					Fair Value Level	
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses (1)	Total Fair Value	Level 1	Level 2
	(In thousands)					
Cash equivalents						
Commercial paper	\$ 5,499	\$ —	\$ —	\$ 5,499	\$ —	\$ 5,499
Corporate bonds	4,921	—	(5)	4,916	—	4,916
Money market funds	269,251	—	—	269,251	269,251	—
Municipal bonds	500	—	—	500	—	500
U.S. government bonds	4,000	—	—	4,000	4,000	—
Total cash equivalents (2)	284,171	—	(5)	284,166	273,251	10,915
Short-term investments						
Asset-backed securities	12,915	1	(11)	12,905	—	12,905
Certificate of deposits	12,076	—	—	12,076	12,076	—
Commercial paper	30,691	—	—	30,691	—	30,691
Corporate bonds	179,235	1	(410)	178,826	—	178,826
Foreign government bonds	458	—	(1)	457	—	457
Municipal bonds	8,418	1	(2)	8,417	—	8,417
U.S. government bonds	2,966	—	(8)	2,958	2,958	—
Variable rate demand notes	500	—	—	500	—	500
Total short-term investments	247,259	3	(432)	246,830	15,034	231,796
Total	\$ 531,430	\$ 3	\$ (437)	\$ 530,996	\$ 288,285	\$ 242,711

(1) All unrealized losses have been in a continuous loss position for less than 12 months. We do not intend to sell the investments in an unrealized loss position, and we do not believe it is more likely than not that we will be required to sell these investments before recovery of their amortized cost bases.

(2) During the years ended December 31, 2022, 2021, and 2020 we sold cash equivalent investments for proceeds of \$29.6 million, \$12.8 million and \$27.1 million, respectively, and realized no gain or loss on such sales.

The following table summarizes the contractual maturities of our cash equivalents and available-for-sale debt investments as of December 31, 2022:

	Amortized Cost	Fair Value
Within 1 year	\$ 415,498	\$ 414,313
After 1 year through 5 years	59,296	58,808
Total	\$ 474,794	\$ 473,121

Actual maturities can differ from contractual maturities due to various factors including whether the issuers have the right to call or prepay obligations without call or prepayment penalties, and we view our available-for-sale debt investments as available for current operations.

As of December 31, 2022, the amortized cost and fair market value of our held-to-maturity government bonds (Level 1) maturing within a year were \$4.4 million and \$4.3 million, respectively. As of December 31, 2021 the amortized cost and fair market value of our held-to-maturity government bonds (Level 1) maturing within a year were \$4.7 million.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

7. Factoring of Accounts Receivable

For certain accounts receivable, we use non-recourse factoring arrangements with third-party financial institutions to manage our working capital and cash flows. Under these arrangements, we sell receivables to a financial institution for cash at a discount to the face amount. As part of the factoring arrangements, we perform certain collection and administrative functions for the receivables sold. For the years ended December 31, 2022 and 2021, we sold accounts receivable totaling \$386.5 million and \$464.4 million, net of discounts and fees of \$1.1 million and \$1.2 million, respectively.

8. Property, Plant and Equipment

Property, plant and equipment consist of the following:

	December 31,	
	2022	2021
	(In thousands)	
Land	\$ 214,763	\$ 218,140
Buildings and improvements	1,817,135	1,711,560
Machinery and equipment	6,757,652	6,277,684
Finance lease assets	165,122	105,294
Furniture, fixtures and other equipment	23,240	22,125
Software and computer equipment	240,610	232,251
Construction in progress	152,809	74,662
Total property, plant and equipment	9,371,331	8,641,716
Less accumulated depreciation and amortization	(6,235,717)	(5,770,658)
Total property, plant and equipment, net	<u>\$ 3,135,614</u>	<u>\$ 2,871,058</u>

The following table summarizes our depreciation expense:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Depreciation expense	\$ 612,105	\$ 562,962	\$ 509,770

During 2022, we began construction of a new manufacturing facility in Bac Ninh, Vietnam and incurred costs of \$79.6 million, including capitalized interest of \$0.7 million.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

9. Leases

The components of lease expense were as follows:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Operating lease cost	\$ 81,410	\$ 64,902	\$ 52,882
Finance lease cost			
Amortization of leased assets	24,644	14,196	6,520
Interest on lease liabilities	3,891	2,768	987
Total finance lease cost	28,535	16,964	7,507
Short-term lease cost	5,749	6,264	7,188
Variable lease cost	6,592	7,409	5,307
Net lease cost	<u>\$ 122,286</u>	<u>\$ 95,539</u>	<u>\$ 72,884</u>

Other information related to leases was as follows:

	For the Year Ended December 31,		
	2022	2021	2020
Supplemental Cash Flows Information (in thousands)			
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows for operating leases	\$ 81,044	\$ 64,786	\$ 53,323
Operating cash flows for finance leases	3,933	1,745	946
Financing cash flows for finance leases	40,673	20,373	9,851
Weighted Average Remaining Lease Term (years)			
Operating leases	4.2	3.2	3.9
Finance leases	2.3	3.1	3.1
Weighted Average Discount Rate			
Operating leases	4.4 %	3.6 %	4.0 %
Finance leases	4.1 %	3.2 %	4.0 %

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

Maturities of lease liabilities were as follows:

		December 31, 2022	
		Operating Leases	Finance Leases
		(In thousands)	
2023	\$	75,795	\$ 60,090
2024		36,178	42,816
2025		16,613	9,266
2026		10,888	1,613
2027		7,452	1,519
Thereafter		14,458	2,302
Total future minimum lease payments		161,384	117,606
Less: Imputed interest		(14,648)	(6,192)
Total		\$ 146,736	\$ 111,414

As of December 31, 2022, we have entered into additional lease agreements that have not yet commenced of approximately \$14 million.

10. Accrued Expenses

Accrued expenses consist of the following:

		December 31,	
		2022	2021
		(In thousands)	
Payroll and benefits	\$	137,445	\$ 150,883
Deferred revenue and customer advances		81,459	117,741
Short-term finance lease liability		56,570	30,919
Income taxes payable		50,685	38,957
Accrued interest		10,878	10,789
Accrued severance plan obligations (Note 12)		7,422	8,194
Other accrued expenses		57,382	65,409
Total accrued expenses	\$	401,841	\$ 422,892

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

11. Debt

Short-term borrowings and long-term debt consist of the following:

	December 31,	
	2022	2021
	(In thousands)	
Debt of Amkor Technology, Inc.:		
Senior notes:		
6.625% Senior notes, due September 2027	\$ 525,000	\$ 525,000
Debt of subsidiaries:		
Amkor Technology Korea, Inc.:		
Term loan, applicable bank rate plus 1.77%, due April 2023	—	47,064
Term loan, fixed rate at 1.85%, due April 2024 (1)	—	—
Term loan, applicable bank rate plus 1.98%, due December 2028	—	50,000
Term loan, fixed rate at 2.12%, due December 2028 (2)	200,000	50,000
Amkor Technology Japan, Inc.:		
Short-term term loans, variable rate (3)	4,042	3,789
Term loan, fixed rate at 0.86%, due June 2022	—	4,345
Term loan, fixed rate at 0.60%, due July 2022	—	1,303
Term loan, fixed rate at 1.30%, due July 2023	29,744	79,075
Term loan, fixed rate at 1.35%, due December 2024	86,943	148,592
Term loan, fixed rate at 1.20%, due December 2025	49,878	75,773
Term loan, fixed rate at 1.23%, due December 2026	79,927	113,834
Term loan, fixed rate at 1.59%, due December 2027 (4)	119,738	—
Amkor Assembly & Test (Shanghai) Co., Ltd.:		
Term loan, LIBOR plus 1.10%, due March 2024	46,000	48,000
Term loans, LIBOR plus 0.80%, due June 2025 (5)	39,000	—
Term loans, LIBOR plus 0.75%, due 2025 (6)	59,500	—
Other:		
Credit facility, TAIEX plus the applicable bank rate, due December 2024 (Taiwan) (7)	—	—
\$600.0 million senior secured revolving credit facility, applicable bank rate plus 1.75%, due March 2027 (Singapore) (8)	—	—
	1,239,772	1,146,775
Less: Unamortized discount and deferred debt costs, net	(7,438)	(8,779)
Less: Short-term borrowings and current portion of long-term debt	(143,813)	(153,008)
Long-term debt	<u>\$ 1,088,521</u>	<u>\$ 984,988</u>

(1) In April 2021, we entered into a ₩80 billion term loan agreement with the option to borrow and re-borrow the funds up to six times per year through April 2024. Principal is payable at maturity, and interest is payable monthly. As of December 31, 2022, ₩80.0 billion, or approximately \$63 million, was available to be drawn.

(2) In October 2021, we entered into a term loan agreement with availability of \$200.0 million. Principal is payable in semiannual installments after a three-year grace period from the date of the first drawdown, which occurred

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

in December 2021. Interest is payable quarterly. During the year ended December 31, 2022, we borrowed \$150.0 million.

- (3) We entered into various short-term term loans which mature semiannually. Principal and interest are payable in monthly installments. As of December 31, 2022, \$6.8 million was available to be drawn.
- (4) In December 2022, we borrowed ¥15.7 billion (US\$115.9 million) under a new term loan agreement due December 2027, guaranteed by Amkor Technology, Inc. and our subsidiary, ATSH. Principal is due in 20 equal, quarterly installments plus accrued interest, through maturity.
- (5) In June 2022, we borrowed \$40.0 million under two \$20.0 million term loans. For each term loan, principal is payable in semiannual installments of \$0.5 million, with the remaining balance due at maturity. Interest is payable quarterly.
- (6) In August 2022 and September 2022, we borrowed \$60.0 million under two \$30.0 million term loans with each maturing in three years. For each term loan, principal is payable in semiannual installments of \$0.5 million, with the remaining balance due at maturity. Interest is payable quarterly.
- (7) In December 2019, ATT entered into a \$56.0 million borrowing arrangement (the “ATT Loan”). This arrangement included a \$20.0 million term loan and a \$36.0 million revolving credit facility. In March 2022, in connection with our entry into the 2022 Singapore Revolver, the ATT Loan was amended to reduce the availability of the revolving credit facility from \$36.0 million to \$15.0 million. As of December 31, 2022, \$15.0 million was available for future borrowings under such credit facility.
- (8) In July 2018, ATSH entered into a \$250.0 million senior secured revolving credit facility. In March 2022, this agreement was terminated and replaced with the 2022 Singapore Revolver. The 2022 Singapore Revolver is guaranteed by Amkor Technology, Inc., ATT and AATT. The maximum borrowing capacity under the 2022 Singapore Revolver is limited to a base amount equal to the lesser of: (1) \$600.0 million; and (2) \$250.0 million plus a variable amount equal to 37.5% of our consolidated accounts receivable balance. As of December 31, 2022, \$600.0 million was available for future borrowings under the 2022 Singapore Revolver.

Certain of our foreign debt is collateralized by the land, buildings, equipment and accounts receivable in the respective locations. As of December 31, 2022 the collateralized debt balance was \$681.0 million, of which \$376.4 million of assets were pledged as collateral.

Interest Rates

Interest is payable semiannually on our senior notes and quarterly or monthly on our other fixed- and variable-rate debt. Refer to the table above for the interest rates on our fixed-rate debt and to the table below for the interest rates on our variable-rate debt.

	December 31,	
	2022	2021
Amkor Technology Korea, Inc.:		
Term loan, applicable bank rate plus 1.77%, due April 2023	—	2.86 %
Amkor Technology Japan, Inc.:		
Short-term term loans, variable rate	0.29 %	0.29 %
Amkor Assembly & Test (Shanghai) Co., Ltd.:		
Term loan, LIBOR plus 1.10%, due March 2024	5.83 %	1.31 %
Term loans, LIBOR plus 0.80% due June 2025	5.55 %	—
Term loans, LIBOR plus 0.75%, due 2025	5.48 %	—

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

Compliance with Debt Covenants

The debt of Amkor Technology, Inc. is structurally subordinated in right of payment to all existing and future debt and other liabilities of our subsidiaries. From time to time, Amkor Technology, Inc., ATT, AATT and ATSH guarantee certain debt of our subsidiaries. The agreements governing our indebtedness contain affirmative and negative covenants which restrict our ability to pay dividends and could restrict our operations. These restrictions are determined in part by calculations based upon cumulative net income and do not currently have a material impact on our ability to make dividend payments or stock repurchases.

We were in compliance with all debt covenants at December 31, 2022 and 2021.

Maturities

	Total Debt
	(In thousands)
Payments due for the year ending December 31,	
2023	\$ 143,813
2024	152,027
2025	201,055
2026	93,929
2027	598,948
Thereafter	50,000
Total debt	<u>\$ 1,239,772</u>

12. Pension and Severance Plans

Korean Severance Plan

Our subsidiary in Korea maintains an unfunded severance plan that covers certain employees that were employed prior to August 1, 2015. To the extent eligible employees are terminated, our subsidiary in Korea would be required to make lump-sum severance payments on behalf of these eligible employees for service provided prior to August 1, 2015. Factors used to determine severance benefits include employees' length of service, seniority and rate of pay. The employees' length of service and seniority are fixed as of July 31, 2015. The employees' rate of pay is adjusted to the rate of pay at the time of termination. Accrued severance benefits are estimated assuming all eligible employees were to terminate their employment at the balance sheet date. Our contributions to the National Pension Plan of the Republic of Korea are deducted from accrued severance benefit liabilities. On August 1, 2015, our subsidiary in Korea began sponsoring a defined benefit pension plan and a defined contribution plan. Existing employees at that time were given the option of choosing either a defined benefit pension plan or a defined contribution plan for their future benefits and new employees since that date are enrolled in a defined contribution plan.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

The changes to the balance of our accrued severance plan obligations are as follows:

	For the Year Ended December 31,	
	2022	2021
	(In thousands)	
Balance at January 1	\$ 73,345	\$ 98,162
Provision of severance benefits	2,119	6,144
Severance payments	(15,295)	(22,775)
Foreign currency (gain) loss	(3,880)	(8,186)
Balance at December 31	56,289	73,345
Payments remaining with the National Pension Fund	(124)	(138)
Total accrued severance plan obligations at December 31	56,165	73,207
Less current portion of accrued severance plan obligations (Note 10)	7,422	8,194
Non-current portion of accrued severance plan obligations	<u>\$ 48,743</u>	<u>\$ 65,013</u>

Foreign Defined Benefit Pension Plans

Our subsidiaries in Japan, Korea, Malaysia, the Philippines and Taiwan sponsor defined benefit plans (the “Plans”). Charges to expense are based upon actuarial analyses. The following table summarizes the changes to the Plans’ benefit obligations, fair value of the Plans’ assets and the funded status of the Plans at December 31, 2022 and 2021:

	For the Year Ended December 31,	
	2022	2021
	(In thousands)	
Change in projected benefit obligation:		
Projected benefit obligation at January 1	\$ 200,187	\$ 222,509
Service cost	20,072	25,908
Interest cost	4,731	4,900
Benefits paid	(8,573)	(10,466)
Actuarial (gain) loss	(24,571)	(7,169)
Effects of curtailment	508	(954)
Settlement	(16,914)	(18,042)
Foreign exchange (gain) loss	(15,680)	(16,499)
Projected benefit obligation at December 31	<u>159,760</u>	<u>200,187</u>
Change in plan assets:		
Fair value of plan assets at January 1	157,012	155,211
Actual gain (loss) on plan assets	(6,528)	9,463
Employer contributions	12,946	32,354
Settlement	(16,914)	(18,042)
Benefits paid	(8,573)	(10,466)
Foreign exchange gain (loss)	(10,605)	(11,508)
Fair value of plan assets at December 31	<u>127,338</u>	<u>157,012</u>
Funded status of the Plans at December 31	<u>\$ (32,422)</u>	<u>\$ (43,175)</u>

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

	December 31,	
	2022	2021
	(In thousands)	
Amounts recognized in the Consolidated Balance Sheets consist of:		
Prepaid benefit cost (included in non-current assets)	\$ 12,308	\$ 11,982
Accrued benefit liability (included in pension and severance obligations)	(44,730)	(55,157)
Net amount recognized at year end	<u>\$ (32,422)</u>	<u>\$ (43,175)</u>

The accumulated benefit obligation as of December 31, 2022 and 2021 was \$125.6 million and \$151.7 million, respectively.

The following table summarizes, by component, the change in accumulated other comprehensive income (loss), net of tax related to our Plans:

	Prior Service Cost	Actuarial Net Gain (Loss)	Total
	(In thousands)		
Balance at December 31, 2020	\$ 602	\$ (4,820)	\$ (4,218)
Amortization and settlement gain included in net periodic pension cost ..	—	(457)	(457)
Net gain (loss) arising during period	—	10,291	10,291
Adjustments to unrealized components of defined benefit pension plan included in other comprehensive income (loss)	—	9,834	9,834
Balance at December 31, 2021	\$ 602	\$ 5,014	\$ 5,616
Amortization and settlement gain included in net periodic pension cost ..	—	(1,021)	(1,021)
Net gain (loss) arising during period	—	9,625	9,625
Adjustments to unrealized components of defined benefit pension plan included in other comprehensive income (loss)	—	8,604	8,604
Balance at December 31, 2022	<u>\$ 602</u>	<u>\$ 13,618</u>	<u>\$ 14,220</u>

Information for pension plans with benefit obligations in excess of plan assets is as follows:

	December 31,	
	2022	2021
	(In thousands)	
Plans with underfunded or non-funded projected benefit obligation:		
Aggregate projected benefit obligation	\$ 96,310	\$ 128,312
Aggregate fair value of plan assets	51,581	73,159
Plans with underfunded or non-funded accumulated benefit obligation:		
Aggregate accumulated benefit obligation	61,764	72,009
Aggregate fair value of plan assets	20,740	24,365

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

The following table summarizes total pension expense:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Components of net periodic pension cost and total pension expense:			
Service cost	\$ 20,072	\$ 25,908	\$ 29,848
Interest cost	4,731	4,900	4,980
Expected return on plan assets	(5,605)	(5,600)	(5,506)
Recognized actuarial (gain) loss	53	128	56
Net periodic pension cost	19,251	25,336	29,378
Curtailment (gain) loss	—	(954)	—
Settlement (gain) loss	(1,374)	(743)	62
Total pension expense	<u>\$ 17,877</u>	<u>\$ 23,639</u>	<u>\$ 29,440</u>

The components of net periodic pension cost other than the service cost component are included in other (income) expense, net in our Consolidated Statements of Income.

The following table summarizes the weighted-average assumptions used in computing the net periodic pension cost and projected benefit obligations:

	For the Year Ended December 31,		
	2022	2021	2020
Discount rate for determining net periodic pension cost	2.6 %	2.3 %	2.5 %
Discount rate for determining benefit obligations at December 31	4.2 %	2.6 %	2.3 %
Rate of compensation increase for determining net periodic pension cost	3.7 %	3.7 %	3.7 %
Rate of compensation increase for determining benefit obligations at December 31	3.6 %	3.7 %	3.7 %
Expected rate of return on plan assets for determining net periodic pension cost	3.8 %	3.7 %	3.8 %

The measurement date for determining the Plans' assets and benefit obligations is December 31, each year. Discount rates are generally derived from yield curves constructed from high-quality corporate or foreign government bonds, for which the timing and amount of cash outflows approximate the estimated payouts.

The expected rate of return assumption is based on weighted-average expected returns for each asset class. Expected returns reflect a combination of historical performance analysis and the forward-looking views of the financial markets and include input from our actuaries. We have no control over the direction of our investments in our defined benefit plans in Taiwan as the local Labor Standards Law Fund mandates such contributions into a cash account balance at the Bank of Taiwan. Our defined benefit pension plan in Malaysia is a non-funded plan, and as such, no asset exists related to this plan. Our investment strategies for our defined benefit plans in Japan, Korea and the Philippines are based on long-term, sustained asset growth through low to medium risk investments. The current rate of return assumption targets are based on asset allocation strategies as follows:

	Allocation		
	Debt	Equity	Other
Japan defined benefit plan	64 %	34 %	2 %
Korea defined benefit plan	30 %	20 %	50 %
Philippine defined benefit plan	50 %	45 %	5 %

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

The fair value of our pension plan assets, by asset category utilizing the fair value hierarchy as discussed in Note 16, is as follows:

	December 31, 2022			December 31, 2021		
	Level 1	Level 2	Total	Level 1	Level 2	Total
	(In thousands)			(In thousands)		
Cash and cash equivalents	\$ 1,117	\$ —	\$ 1,117	\$ 17	\$ —	\$ 17
Equity securities	13,339	—	13,339	21,450	—	21,450
Debt securities						
Government bonds	2,982	—	2,982	7,536	—	7,536
Corporate bonds	540	—	540	369	—	369
Treasury notes	11,561	—	11,561	8,559	—	8,559
Mutual and commingled funds						
Equity funds	23,931	7,157	31,088	33,619	8,270	41,889
Debt funds	11,651	13,409	25,060	12,774	15,159	27,933
Guaranteed investment contracts	—	28,340	28,340	—	37,458	37,458
Taiwan retirement fund	12,845	—	12,845	13,173	—	13,173
Other, net	(383)	849	466	(1,947)	575	(1,372)
Total fair value of pension plan assets	<u>\$ 77,583</u>	<u>\$ 49,755</u>	<u>\$ 127,338</u>	<u>\$ 95,550</u>	<u>\$ 61,462</u>	<u>\$ 157,012</u>

The Taiwan retirement fund category of our plan assets represents accounts that our subsidiaries in Taiwan have in a government labor retirement fund in the custody of the Bank of Taiwan. The accounts earn a minimum guaranteed rate of return and are invested in a mix of cash, domestic and foreign equity securities and domestic and foreign debt securities.

We expect to make contributions of approximately \$12 million during 2023. We closely monitor the funded status of the Plans with respect to legislative requirements. We intend to make at least the minimum contribution required by law each year.

The estimated future benefit payments related to our foreign defined benefit plans are as follows:

	Payments (In thousands)
2023	\$ 9,146
2024	12,138
2025	13,035
2026	14,174
2027	17,008
2028 to 2032	101,637

Defined Contribution Plans

We sponsor defined contribution plans in Korea, Malaysia, Taiwan and the U.S. Total defined contribution expense was \$24.2 million, \$21.8 million and \$16.5 million for 2022, 2021 and 2020, respectively.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

13. Dividends

In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. Each quarter since the adoption of this dividend policy, the Company has declared and paid a quarterly dividend. In November 2022, our Board of Directors approved a quarterly dividend of \$0.075 per share, a 50% increase from the rate set in November 2021.

14. Accumulated Other Comprehensive Income (Loss)

The following table reflects the changes in accumulated other comprehensive income (loss), net of tax:

	Unrealized Gain (Losses) on Available-for- Sale Debt Investments (1)	Defined Benefit Pension (2)	Foreign Currency Translation	Total
	(In thousands)			
Balance at December 31, 2020	\$ 21	\$ (4,218)	\$ 31,467	\$ 27,270
Other comprehensive income (loss) before reclassifications	(454)	10,291	(16,757)	(6,920)
Amounts reclassified from accumulated other comprehensive income (loss)	85	(457)	—	(372)
Other comprehensive income (loss)	(369)	9,834	(16,757)	(7,292)
Balance at December 31, 2021	\$ (348)	\$ 5,616	\$ 14,710	\$ 19,978
Other comprehensive income (loss) before reclassifications	(1,243)	9,625	(10,658)	(2,276)
Amounts reclassified from accumulated other comprehensive income (loss)	18	(1,021)	—	(1,003)
Other comprehensive income (loss)	(1,225)	8,604	(10,658)	(3,279)
Balance at December 31, 2022	\$ (1,573)	\$ 14,220	\$ 4,052	\$ 16,699

(1) Amounts reclassified out of accumulated other comprehensive income (loss) are included as other (income) expense, net (Note 3).

(2) Amounts reclassified out of accumulated other comprehensive income (loss) are included as a component of net periodic pension cost (Note 12) or other (income) expense, net (Note 3).

15. Derivatives

We use foreign currency forward contracts to mitigate foreign currency risk of certain assets and monetary liabilities denominated in foreign currencies. We do not enter into such contracts for trading or speculative purposes. These derivative instruments are not designated as hedging instruments.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

As of December 31, 2022 and 2021, our foreign exchange forward contracts consisted of the following:

	December 31, 2022			December 31, 2021		
	Notional Value	Fair Value (Level 2)	Balance Sheet Location	Notional Value	Fair Value (Level 2)	Balance Sheet Location
(In thousands)						
Japanese yen	\$ 330,179	\$ 6,284	Other current assets	\$ 396,946	\$ (901)	Accrued expenses
Korean won	65,927	333	Other current assets	125,321	(492)	Accrued expenses
Philippine peso	3,085	(6)	Accrued expenses	4,001	7	Other current assets
Taiwan dollar	28,763	(57)	Accrued expenses	—	—	N/A
Total forward contracts	<u>\$ 427,954</u>	<u>\$ 6,554</u>		<u>\$ 526,268</u>	<u>\$ (1,386)</u>	

For the years ended December 31, 2022 and 2021, the derivatives resulted in a net loss of \$60.2 million and \$58.8 million respectively, which were offset by the foreign currency gains associated with the underlying net assets or liabilities. For the year ended December 31, 2020, the derivatives resulted in a net gain of \$35.9 million, which was offset by the foreign currency losses associated with the underlying net liabilities.

16. Fair Value Measurements

The accounting framework for determining fair value includes a hierarchy for ranking the quality and reliability of the information used to measure fair value, which enables the reader of the financial statements to assess the inputs used to develop those measurements. The fair value hierarchy consists of three tiers as follows: Level 1, defined as quoted market prices in active markets for identical assets or liabilities; Level 2, defined as inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, model-based valuation techniques for which all significant assumptions are observable in the market or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and Level 3, defined as unobservable inputs that are not corroborated by market data. For our Level 2 short-term investments, we consider factors such as actual trade data, benchmark yields, broker/dealer quotes, and other similar data obtained from quoted market prices and independent pricing vendors to determine the fair value of these assets and liabilities.

The fair values of cash, accounts receivable, trade accounts payable, capital expenditures payable, and certain other current assets and accrued expenses approximate carrying values because of their short-term nature. The carrying value of certain other non-current assets and liabilities approximates fair value. Our assets and liabilities recorded at fair value on a recurring basis include restricted cash money market funds and short-term investments, including investments classified as cash equivalents. Cash equivalent money market funds and restricted cash money market funds are invested in U.S. money market funds and various U.S. and foreign bank operating and time deposit accounts, which are due on demand or carry a maturity date of less than three months when purchased. No restrictions have been imposed on us regarding withdrawal of balances with respect to our cash equivalents as a result of liquidity or other credit market issues affecting the money market funds we invest in or the counterparty financial institutions holding our deposits.

Our derivative financial instruments are valued using quoted market prices for similar assets. Counterparties to these derivative contracts are highly rated financial institutions.

We also measure certain assets and liabilities, including property, plant and equipment and goodwill, at fair value on a nonrecurring basis.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

We measure the fair value of our debt for disclosure purposes. The following table presents the fair value of our debt:

	December 31, 2022		December 31, 2021	
	Fair Value	Carrying Value	Fair Value	Carrying Value
	(In thousands)			
Senior notes (Level 1)	\$ 523,016	\$ 521,114	\$ 555,655	\$ 520,436
Revolving credit facilities and term loans (Level 2)	686,728	711,220	627,883	617,560
Total financial instruments	<u>\$ 1,209,744</u>	<u>\$ 1,232,334</u>	<u>\$ 1,183,538</u>	<u>\$ 1,137,996</u>

The estimated fair value of our senior notes is based primarily on quoted market prices reported on or near the respective balance sheet dates. The estimated fair value of our revolving credit facilities and term loans is calculated using a discounted cash flow analysis, which utilizes market-based assumptions including forward interest rates adjusted for credit risk.

17. Commitments and Contingencies

We generally warrant that our services will be performed in a professional and workmanlike manner and in compliance with our customers' specifications. We accrue costs for known warranty issues. Historically, our warranty costs have been immaterial.

Legal Proceedings

We are involved in claims and legal proceedings and may become involved in other legal matters arising in the ordinary course of our business. We evaluate these claims and legal matters on a case-by-case basis to make a determination as to the impact, if any, on our business, liquidity, results of operations, financial condition or cash flows. Although the outcome of these matters is uncertain, we believe that the ultimate outcome of these claims and proceedings, individually and in the aggregate, will not have a material adverse impact to us. Our evaluation of the potential impact of these claims and legal proceedings on our business, liquidity, results of operations, financial condition or cash flows could change in the future.

18. Business Segments, Customer Concentrations and Geographic Information

We operate as a single operating segment as managed by our Chief Executive Officer, who is considered our chief operating decision maker ("CODM"). The CODM bears the ultimate responsibility for, and is actively engaged in, the allocation of resources and the evaluation of our operating and financial results. We have concluded that we have a single operating segment based on the following:

- We are managed under a functionally-based organizational structure with the head of each function reporting directly to the CODM;
- We assess performance, including incentive compensation, based on consolidated operating performance and financial results;
- Our CODM allocates resources and makes other operating decisions based on specific customer business opportunities and
- We have an integrated process for the design, development and manufacturing services we provide to all of our customers. We also have centralized sales and administrative functions.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

Net sales by product group consist of the following:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Advanced Products	\$ 5,367,589	\$ 4,409,207	\$ 3,604,365
Mainstream Products	1,723,996	1,729,122	1,446,224
Total net sales	<u>\$ 7,091,585</u>	<u>\$ 6,138,329</u>	<u>\$ 5,050,589</u>

(1) Advanced Products include flip chip, memory and wafer-level processing and related test services.

(2) Mainstream Products include all other wirebond packaging and related test services.

Net sales by end market consist of the following:

	For the Year Ended December 31,		
	2022	2021	2020
Communications (smartphones, tablets)	44 %	41 %	41 %
Automotive, industrial and other (ADAS, electrification, infotainment, safety)	20 %	21 %	20 %
Consumer (AR & gaming, connected home, home electronics, wearables)	20 %	22 %	24 %
Computing (data center, infrastructure, PC/laptop, storage)	16 %	16 %	15 %
Total net sales	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

Net sales by region based on customer headquarters location consist of the following:

	For the Year Ended December 31,		
	2022	2021	2020
	(In thousands)		
Europe, Middle East and Africa	\$ 1,084,853	\$ 1,061,369	\$ 848,301
Japan	1,132,121	1,253,717	1,152,641
Asia Pacific (excluding Japan)	1,017,246	999,591	672,563
Total foreign countries	3,234,220	3,314,677	2,673,505
United States	3,857,365	2,823,652	2,377,084
Total net sales	<u>\$ 7,091,585</u>	<u>\$ 6,138,329</u>	<u>\$ 5,050,589</u>

In 2022, two customers accounted for 20.6% and 10.1% of total net sales, respectively. In 2021 and 2020, one customer accounted for 13.7% and 14.5% of total net sales, respectively.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

Property, plant and equipment, net, based on physical location, consist of the following:

	December 31,	
	2022	2021
	(In thousands)	
China	\$ 476,945	\$ 431,862
Japan	121,842	147,253
Korea	1,868,956	1,719,842
Malaysia	41,978	33,416
Philippines	195,805	189,478
Portugal	82,454	79,326
Taiwan	261,449	264,540
Vietnam	79,630	—
Other foreign countries	583	694
Total foreign countries	3,129,642	2,866,411
United States	5,972	4,647
Total property, plant and equipment, net	<u>\$ 3,135,614</u>	<u>\$ 2,871,058</u>

19. Restructuring and Other Exit Activities

As part of our ongoing efforts to improve our manufacturing operations and manage costs, we regularly evaluate our staffing levels and facility requirements compared to business needs. The following table summarizes our exit activities associated with these efforts. “Charges” represents the initial charge related to the exit activity. “Cash Payments” consists of the utilization of “Charges.” “Non-cash Amounts” consists of asset impairment and translation adjustments.

Japan Consolidation Activities

During the year ended December 31, 2021, we recorded restructuring charges of \$2.9 million associated with our Japan factory consolidation efforts. We recorded these charges to selling, general and administrative expenses within the Consolidated Statements of Income. We completed these restructuring actions in the second quarter of 2021.

	Facility Costs (1)	Employee Separation Costs	Other Exit Costs (2)	Total
	(In thousands)			
Accrual at December 31, 2019	\$ 2,196	\$ 271	\$ 174	\$ 2,641
Charges	9,679	5,548	2,779	18,006
Cash Payments	(7,536)	(4,056)	(2,731)	(14,323)
Non-cash Amounts	26	(4)	(3)	19
Accrual at December 31, 2020	\$ 4,365	\$ 1,759	\$ 219	\$ 6,343
Charges	2,077	496	360	\$ 2,933
Cash Payments	(5,733)	(2,253)	(578)	\$ (8,564)
Non-cash Amounts	(709)	(2)	(1)	(712)
Accrual at December 31, 2021	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Total cumulative charges incurred to date	\$ 16,255	\$ 8,754	\$ 3,884	\$ 28,893
Estimated additional charges to be incurred	—	—	—	\$ —

(1) Facility costs primarily consist of equipment relocation costs directly resulting from the restructuring actions.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

- (2) Other exit costs primarily consist of employee relocation and training costs directly resulting from the restructuring actions.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

	Balance at Beginning of Period	Additions (Credited) Charged to Expense	Write-offs	Balance at End of Period
	(In thousands)			
Deferred tax asset valuation allowance:				
Year ended at December 31, 2020	\$ 136,934	(15,311)	(313)	\$ 121,310
Year ended at December 31, 2021	\$ 121,310	3,653	(2,606)	\$ 122,357
Year ended at December 31, 2022	\$ 122,357	(17,762)	(2,726)	\$ 101,869

Item 9. *Changes In and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

Item 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports to the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure, based on the definition of "disclosure controls and procedures" in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. In designing and evaluating the disclosure controls and procedures, management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures.

We carried out an evaluation, under the supervision and with the participation of management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2022, and concluded those disclosure controls and procedures were effective as of that date.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Management conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2022, based on the framework established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on the results of this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022, based on criteria in Internal Control — Integrated Framework (2013) issued by the COSO.

The effectiveness of our internal control over financial reporting as of December 31, 2022, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears under Item 8 of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the three months ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *Other Information*

None.

Item 9C. *Disclosure Regarding Foreign Jurisdictions that Prevent Inspections*

Not applicable.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information required by this Item 10, with the exception of information relating to our Code of Business Conduct (the “Code of Business Conduct”) as disclosed below, is incorporated herein by reference from the material included under the captions “Proposal One: Election of Directors,” “Corporate Governance,” “Executive Officers” and “Delinquent Section 16(a) Reports” in our definitive proxy statement to be filed with the SEC pursuant to Regulation 14A within 120 days after our fiscal year ended December 31, 2022 in connection with our 2023 Annual Meeting of Stockholders (the “Proxy Statement”).

The Code of Business Conduct is written and is applicable to all employees, including our Chief Executive Officer, Chief Financial Officer and Controller. The Code of Business Conduct and our Code of Ethics for Directors, Corporate Governance Guidelines and the charters of the Audit Committee, Nominating and Governance Committee and Compensation Committee of our Board of Directors are available and maintained on our website (<http://www.amkor.com>). We intend to disclose on our website future amendments or waivers of the Code of Business Conduct required to be disclosed pursuant to applicable rules and regulations.

Item 11. *Executive Compensation*

The information required by this Item 11 is incorporated herein by reference from the material included under the captions “Director Compensation,” “Executive Compensation,” “Compensation Committee Interlocks and Insider Participation” “Pay Ratio” and “Compensation Committee Report” in the Proxy Statement.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

The information required by this Item 12, with the exception of the equity compensation plan information presented below, is incorporated herein by reference from the material included under the caption “Security Ownership of Certain Beneficial Owners and Management” in the Proxy Statement.

EQUITY COMPENSATION PLAN

The following table summarizes our equity compensation plan as of December 31, 2022:

	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (In thousands)	(b) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (1)	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a)) (In thousands)
Equity compensation plan approved by stockholders (2)	3,114 (3)	\$ 10.54	21,909 (4)
Equity compensation plans not approved by stockholders . . .	—	—	—
Total equity compensation plans	<u>3,114</u>		<u>21,909</u>

(1) Calculated without taking into account shares of common stock subject to outstanding RSUs and PSUs that will become issuable as those units vest without any cash consideration or other payment required for such shares.

(2) Consists of the 2007 Plan and the 2021 Plan.

(3) Includes 0.7 million shares of common stock subject to RSUs and PSUs, which entitle each holder to one share of common stock for each unit that vests over the holder's period of continued service or based on the achievement of certain performance criteria.

(4) Represents the number of shares of common stock available for issuance under the 2021 Plan, as adjusted to account for full-value awards, which reduce the shares of common stock available for future issuance at a fungible ratio of 1:1.5 for each full-value award previously awarded. The 2007 Plan terminated on the date of the 2021 Annual Meeting, and, accordingly, there were no shares available for future grants under the 2007 Plan as of December 31, 2022. However, if an award under the 2021 Plan or under the 2007 Plan is forfeited, terminated, canceled, expires or is paid in cash, the shares subject to such award, to the extent of the forfeiture, termination, cancellation, expiration or cash payment, may be added back to the shares available for issuance under the 2021 Plan on a 1:1 basis for options and stock appreciation rights and on a 1.5:1 basis for all other equity awards.

The 2021 Plan, which was approved by our stockholders at the 2021 Annual Meeting, superseded and replaced the 2007 Plan. As of December 31, 2022, a total of 21.9 million shares were available for issuance under the 2021 Plan. Shares available for issuance under our 2021 Plan can be granted pursuant to stock options, restricted stock, RSUs, stock appreciation rights, PSUs and performance shares. For additional information regarding the 2007 Plan and the 2021 Plan, see Note 2 to our Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information required by this Item 13 is incorporated herein by reference from the material included under the captions "Corporate Governance - Certain Relationships and Related Transactions" and "Proposal One: Election of Directors" in the Proxy Statement.

Item 14. *Principal Accountant Fees and Services*

The information required by this Item 14 is incorporated herein by reference from the material included under the caption "Proposal Three: Ratification of Appointment of Independent Registered Public Accounting Firm" in the Proxy Statement.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

(a) *Financial Statements, Financial Statement Schedules and Exhibits*

The financial statements and schedules filed as part of this Form 10-K are listed in the index under Part II, Item 8 of this Form 10-K.

The exhibits required by Item 601 of Regulation S-K that are filed with this Form 10-K or incorporated by reference herein are set forth below. Management contracts or compensatory plans or arrangements are identified by an asterisk.

Exhibit Number	Exhibit Description	Incorporated by Reference				Included Herewith
		Form	Period Ending	Exhibit	Filing Date	
2.1	Sales Contract of Commodity Premises between Shanghai Waigaoqiao Free Trade Zone Xin Development Co., Ltd. and Amkor Assembly & Test (Shanghai) Co., Ltd. dated May 7, 2004.	10-Q	6/30/04	2.3	8/6/04	
3.1	Certificate of Incorporation.	S-1		3.1	10/6/97	
3.2	Certificate of Correction to Certificate of Incorporation.	POSAM		—	8/26/98	
3.3	Restated Bylaws as amended on November 5, 2013.	10-K	12/31/13	3.3	2/28/14	
4.1	Specimen Common Stock Certificate.	S-1/A		4.1	3/31/98	
4.2	Indenture, dated March 15, 2019, by and between Amkor Technology, Inc. and U.S. Bank National Association, as trustee, regarding the 6.625% Senior Notes due 2027.	8-K		4.1	3/5/19	
4.3	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.	10-K	12/31/19	4.3	2/19/20	
10.1	Form of Indemnification Agreement for directors and officers.	S-1/A		10.1	3/31/98	
10.2	2009 Voting Agreement, dated as of March 26, 2009, between Amkor Technology, Inc., James J. Kim and 915 Investments, LP.	8-K		10.1	4/1/09	
10.3	Employment Letter Agreement, dated February 27, 2017, between Amkor Technology, Inc. and Stephen D. Kelley.*	8-K		10.1	3/3/17	
10.4	Form of Stock Option Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	3/31/17	10.2	5/5/17	
10.5	Form of Restricted Stock Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	3/31/17	10.3	5/5/17	
10.6	Form of Outside Director Stock Option Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	3/31/17	10.4	5/5/17	
10.7	Second Amended and Restated 2007 Equity Incentive Plan*	8-K		10.1	5/5/17	
10.8	Amendment One to Second Amended and Restated 2007 Equity Incentive Plan*	10-Q	6/30/19	10.3	8/1/19	

Exhibit Number	Exhibit Description	Incorporated by Reference				Included Herewith
		Form	Period Ending	Exhibit	Filing Date	
10.9	Form of Global Stock Option Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	6/30/20	10.1	7/30/20	
10.10	Form of Global Restricted Stock Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	6/30/20	10.2	7/30/20	
10.11	Form of Global Outside Director Nonstatutory Stock Option Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	9/30/20	10.1	10/30/20	
10.12	Form of Global Outside Director Restricted Stock Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	10-Q	9/30/20	10.2	10/30/20	
10.13	Form of Global Performance-Vested Restricted Stock Unit Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	8-K		10.1	2/5/21	
10.14	Form of Global Time-Vested Restricted Stock Unit Award Agreement under the Second Amended and Restated 2007 Equity Incentive Plan.*	8-K		10.2	2/5/21	
10.15	Amkor Technology, Inc. 2021 Equity Incentive Plan*	8-K		10.1	5/20/21	
10.16	Amendment One to the Amkor Technology, Inc. 2021 Equity Incentive Plan*	10-K	12/31/21	10.36	2/18/22	
10.17	Form of Global Non-Employee Director Nonstatutory Stock Option Award Agreement*	8-K		10.2	5/20/21	
10.18	Form of Global Non-Employee Director Restricted Stock Award Agreement*	8-K		10.3	5/20/21	
10.19	Form of Global Stock Option Award Agreement*	8-K		10.4	5/20/21	
10.20	Form of Global Restricted Stock Award Agreement*	8-K		10.5	5/20/21	
10.21	Form of Global Performance-Vested Restricted Stock Unit Award Agreement*	8-K		10.6	5/20/21	
10.22	Form of Global Time-Vested Restricted Stock Unit Award Agreement*	8-K		10.7	5/20/21	
10.23	Form of Global Non-Employee Director Time-Vested Restricted Stock Unit Award Agreement*	10-K	12/31/21	10.35	2/18/22	
10.24	Amended and Restated Non-Employee Director Compensation Policy	10-Q	6/30/22	10.1	8/4/22	
10.25	Second Amended and Restated Non-Employee Director Compensation Policy					X
10.26	Amended and Restated Executive Incentive Bonus Plan*	8-K		10.2	5/5/17	
10.27	Employment Letter Agreement, dated June 24, 2020, between Amkor Technology, Inc. and Guillaume Marie Jean Rutten.*	10-Q	6/30/20	10.3	7/30/20	
10.28	Separation Agreement and Release, effective July 4, 2020, between Amkor Technology, Inc. and Stephen D. Kelley.*	10-Q	6/30/20	10.4	7/30/20	
10.29	Separation and Release Agreement, dated September 27, 2021, between Amkor Technology, Inc. and John C. Stone*	10-Q	9/30/21	10.1	10/29/21	

Exhibit Number	Exhibit Description	Incorporated by Reference				Included Herewith
		Form	Period Ending	Exhibit	Filing Date	
10.30	Executive Severance Agreement, dated November 15, 2022, between Amkor Technology, Inc. and Giel Rutten*					X
10.31	Executive Severance Agreement, dated November 15, 2022, between Amkor Technology, Inc. and Megan Faust*					X
10.32	Executive Severance Agreement, dated November 15, 2022, between Amkor Technology, Inc. and Farshad Haghighi*					X
10.33	Executive Severance Agreement, dated November 15, 2022, between Amkor Technology, Inc. and Mark Rogers*					X
10.34	Executive Severance Agreement, dated February 13, 2023, between Amkor Technology, Inc. and Kevin Engel*					X
10.35	Executive Employment Agreement, effective January 1, 2023, between Amkor Technology Korea, Inc. and Steve Shin*†					X
10.36	Syndicated Loan Agreement among J-Devices Corporation, Sumitomo Mitsui Banking Corporation and other financial institutions, dated as of July 13, 2018 (English translation).	8-K		10.1	7/19/18	
10.37	Guaranty by Amkor Technology, Inc. in favor of Sumitomo Mitsui Banking Corporation and other financial institutions, dated as of July 13, 2018 (English translation).	8-K		10.2	7/19/18	
10.38	Loan and Security Agreement, dated as of July 13, 2018, by and among Amkor Technology Singapore Holding Pte, Ltd., Bank of America, N.A. and other financial institutions.	8-K		10.3	7/19/18	
10.39	Amendment to Loan and Security Agreement, dated as of July 8, 2019, by and amount Amkor Technology Singapore Holding Pte, Ltd., Bank of America, N.A. and other financial institutions.	10-Q	6/30/19	10.2	8/1/19	
10.40	Guaranty and Security Agreement, dated as of July 13, 2018, by and among Amkor Technology, Inc., and Bank of America, N.A.	8-K		10.4	7/19/18	
10.41	Syndicated Loan Agreement among J-Devices Corporation, Sumitomo Mitsui Banking Corporation and other financial institutions, dated as of December 23, 2019 (English translation)	8-K		10.1	12/26/19	
10.42	Guaranty by Amkor Technology, Inc. in favor of Sumitomo Mitsui Banking Corporation and other financial institutions, dated as of December 23, 2019 (English translation)	8-K		10.2	12/26/19	
10.43	Deed of Guaranty by Amkor Technology Singapore Holding Pte. Ltd. in favor of Sumitomo Mitsui Banking Corporation and other financial institutions, dated as of December 23, 2019 (English translation)	8-K		10.3	12/26/19	

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Period Ending	Exhibit	Filing Date
10.43	Secured Facility Agreement, dated March 28, 2022, between Amkor Technology, Inc., as parent, Amkor Technology Singapore Holding Pte. Ltd., as borrower, the subsidiaries of the borrower set forth in the schedules thereto, as original guarantors, the Hongkong and Shanghai Banking Corporation Limited, Singapore Branch (“HSBC”) and DBS Bank Ltd., each as mandated lead arranger and bookrunner, the other financial institutions party thereto, as lenders, HSBC, as agent and offshore security trustee, and CTBC Bank Co., Ltd., as onshore security agent.	8-K		10.1	3/29/22
21.1	List of subsidiaries of the Registrant.				X
23.1	Consent of PricewaterhouseCoopers LLP.				X
24.1	Power of Attorney (included on the Signatures page of this Report on Form 10-K).				X
31.1	Certification of Guillaume Marie Jean Rutten, Chief Executive Officer of Amkor Technology, Inc., Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended.				X
31.2	Certification of Megan Faust, Chief Financial Officer of Amkor Technology, Inc., Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended.				X
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**				X
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				X

* Indicates management compensatory plan, contract or arrangement.

** Furnished herewith

† Exhibit includes confidential information that has been redacted.

Item 16. *Form 10-K Summary*

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this Annual Report on Form 10-K to be signed, on its behalf by the undersigned, thereunto duly authorized.

AMKOR TECHNOLOGY, INC.

By: /s/ Guillaume Marie Jean Rutten

Guillaume Marie Jean Rutten
President and Chief Executive Officer

Date: February 22, 2023

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Guillaume Marie Jean Rutten and Megan Faust, and each of them, his or her attorneys-in-fact, and agents, each with the power of substitution, for and in the name, place and stead of such person, in any and all capacities, to sign any and all amendments to this Form 10-K, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and conforming all that said attorneys-in-fact and agents of any of them, or his, her or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Guillaume Marie Jean Rutten</u> Guillaume Marie Jean Rutten	President and Chief Executive Officer (Principal Executive Officer)	February 22, 2023
<u>/s/ Megan Faust</u> Megan Faust	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 22, 2023
<u>/s/ James J. Kim</u> James J. Kim	Executive Chairman	February 22, 2023
<u>/s/ Susan Y. Kim</u> Susan Y. Kim	Executive Vice Chairman	February 22, 2023
<u>/s/ Douglas A. Alexander</u> Douglas A. Alexander	Director	February 22, 2023
<u>/s/ Roger A. Carolin</u> Roger A. Carolin	Director	February 22, 2023

Name	Title	Date
/s/ Winston J. Churchill Winston J. Churchill	Director	February 22, 2023
/s/ Daniel Liao Daniel Liao	Director	February 22, 2023
/s/ MaryFrances McCourt MaryFrances McCourt	Director	February 22, 2023
/s/ Robert R. Morse Robert R. Morse	Director	February 22, 2023
/s/ Gil C. Tily Gil C. Tily	Director	February 22, 2023
/s/ David N. Watson David N. Watson	Director	February 22, 2023

