

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, 2020
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
(480) 821-5000
(Address of principal executive offices and zip 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.

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, 2020, based upon the closing price of the common stock as reported by the NASDAQ Global Select Market on that date, was approximately \$1,222 million.

The number of shares outstanding of each of the issuer's classes of common equity, as of February 12, 2021, was as follows: 243,341,709 shares of Common Stock, \$0.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant's Proxy Statement relating to its 2021 Annual Meeting of Stockholders, to be filed subsequently, are incorporated by reference into Part III of this Report where indicated.

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All references in this Annual Report on Form 10-K to “Amkor,” “we,” “us,” “our” or the “company” 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”. All references to “J-Devices” are to Amkor Technology Japan, Inc., formerly known as J-Devices Corporation, our wholly owned subsidiary in Japan. Amounts preceded by ¥ are in Japanese yen. Amkor®, Amkor Technology®, ChipArray®, FusionQuad®, J-Devices™, MicroLeadFrame®, TMV®, 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 report may occur without the respective superscript symbol (® and ™) in order to facilitate the readability of the report and are not a waiver of any rights that may be associated with the relevant trademarks.

This report 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 2021 including expenditures in support of advanced packaging and test equipment, (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 costs attributable to compliance with environmental laws and regulations or green initiatives, (5) the impact of the novel coronavirus disease, or Covid-19, pandemic on our operations and financial results, (6) the focus of our research and development activities, (7) the anticipated impact of the Tax Cuts and Jobs Act (the “Tax Act”) and tax law changes in the jurisdictions in which we operate, (8) the grant and expiration of tax holidays in jurisdictions in which we operate and expectations regarding our effective tax rate and the availability of tax incentives, (9) the creation or release of valuation allowances related to taxes in the future, (10) our repurchase or repayment of outstanding debt, (11) payment of dividends, (12) compliance with our covenants, (13) expected contributions to foreign pension plans and potential future conversion of our unfunded severance plan in Korea to a defined contribution plan, (14) liability for unrecognized tax benefits and the potential impact of our unrecognized tax benefits on our effective tax rate, (15) expected timing of and charges related to restructuring activities, (16) the effect of foreign currency exchange rate exposure on our financial results, (17) the volatility of the trading price of our common stock, (18) changes to our internal controls related to integration of acquired operations and implementation of an enterprise resource planning system, (19) our efforts to enlarge our customer base in certain geographic areas and markets, (20) demand for advanced packages in mobile and automotive devices and our technology leadership and potential growth in this market, (21) our expected forfeiture rate for outstanding stock options and restricted shares, (22) our expected rate of return for pension plan assets, (23) projects to install or integrate new information technology systems or upgrade our existing systems and (24) other statements that are not historical facts. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” “intend” or the negative of these terms or other comparable terminology. 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 the following report as well as in Part I, Item 1A of this Annual Report on Form 10-K.

PART I

Item 1. *Business*

OVERVIEW

Amkor is one of the world's leading providers of outsourced semiconductor packaging and test services. Amkor pioneered the outsourcing of semiconductor packaging and test services through a predecessor corporation in 1968, and over the years we have built a leading position by:

- Designing and developing innovative packaging and test technologies;
- Offering a broad portfolio of cost-effective solutions and services;
- Focusing on strategic end markets that offer solid growth potential;
- Cultivating long-standing relationships with our customers, which include many of the world's leading semiconductor companies;
- Collaborating with customers, original equipment manufacturers ("OEMs") and equipment and material suppliers;
- Developing a competitive cost structure with disciplined capital investment;
- Building expertise in high-volume manufacturing processes and developing a reputation for high quality and solid execution; and
- Providing a geographically diverse operating base, with research and development, engineering support and production capabilities at various facilities in China, Japan, Korea, Malaysia, the Philippines, Portugal and Taiwan.

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. Fabless semiconductor companies do not have factories and focus exclusively on the semiconductor design process and outsource virtually every step of the manufacturing process. Fabless semiconductor companies utilize 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.

AVAILABLE INFORMATION

Amkor files annual, quarterly and current reports, proxy statements and other information with the U.S. Securities and Exchange Commission (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 <http://www.sec.gov>.

Amkor's website is <http://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 report.

INDUSTRY BACKGROUND

Semiconductor devices are the 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:

- An increasing 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 mobility and connectivity capabilities and growing digital content driving demand for new broadband wired and wireless networking equipment.
- The proliferation of semiconductor devices into well-established end products such as automotive systems due to increased use of electronics for safety, navigation, fuel efficiency, emission reduction and entertainment systems.
- An overall increase in the semiconductor content within electronic products to provide greater functionality and higher levels of performance.
- The emergence of specialized chips designed to collect, analyze and store the digital content driven by the growth of cloud computing. These chips, sometimes referred to as “chiplets,” include data accelerators, artificial intelligence and machine learning devices. The semiconductor industry is adopting a chiplet based approach to reduce the overall cost, improve the individual yields and deliver required performance. In this type of packaging, diverse dies of different geometries are positioned close to each other within the same package.
- The growth of advanced System-in-Package (“SiP”) modules where multiple semiconductor and other electronic components with different functionalities are combined into a single package. The increasing demand for miniaturization and higher functionality at competitive cost is driving the adoption of advanced SiP in new products. Advanced SiPs are the primary vehicle for package-level integration, which allow customers to combine integrated circuits (“ICs”) from different silicon nodes and different foundries.

As a supplier in the semiconductor industry, our business is cyclical by nature and impacted by broad economic factors, such as worldwide gross domestic product and consumer spending. Historical trends indicate there has 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 and customized. This trend has led many semiconductor companies and OEMs to view packaging and test as enabling technologies requiring the kind of leading-edge expertise for technological innovation found in the leading outsourced assembly and test companies. At the same time, these companies are often looking to reduce the internal manufacturing and research and development costs in 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 offer a cost-effective solution in a highly 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 cyclical nature 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 integrated semiconductor companies 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.

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 their new products and that having an effective 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 their capabilities and implement new packaging technology in volume. For this reason, semiconductor companies and OEMs are leveraging the capabilities of packaging and test service providers to deliver their new 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 and can now be several billions of dollars. 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 packaging and test solutions.

STRATEGY AND COMPETITIVE STRENGTHS

Strategy

Our financial goals are sales growth and improved profitability, and we are focusing on the following strategies to achieve these goals:

Leverage Our Investment in Services for Advanced Technologies

We are an industry leader in developing and commercializing cost-effective advanced packaging and test technologies. We believe these advanced technology solutions provide increased value to our customers. An important factor for success in the advanced packaging and test area is to generate reasonably quick returns on investments made in support of customers seeking leading-edge technologies.

In recent years we have made significant investments in state-of-the-art facilities and equipment to provide services for the industry’s most complex devices. With approximately 650 employees engaged in research and development and manufacturing process engineering 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 and advanced SiPs. During 2020, we had success capitalizing on our advanced technology to achieve design wins and new product introductions in areas such as: chips fabricated at 5, 7, 10, 14 and 16 nanometer geometries; advanced SiP products including radio frequency (“RF”), front end modules and micro-electro-mechanical systems (“MEMS”) devices; optical sensors and cavity MEMS; advanced Flip Chip with Through Silicon Via (“TSV”) technology; wafer-level Chip Scale Packaging (“CSP”); and wafer-level fan-out packages.

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, Silicon Wafer Integrated Fan-out

Technology (“SWIFT”), High Density Fan-Out (“HDFO”) and redistribution layer (“RDL”) solutions which enable very thin, very small products combining application processors, memory, baseband and other peripheral integrated circuits (“ICs”). They also include packages utilizing 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. Our approach is to work with lead customers to develop processes that will enable volume manufacturing with high yields and reliability.

We believe that 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.

Improve Utilization of Existing Assets and Broaden Our Customer Base

Another key to our success is to improve 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 more effectively utilize these assets over a longer period of time. We are building and utilizing manufacturing lines which support multiple customers and increasing factory utilization through more sophisticated planning processes and more intensive efficiency improvement activities.

Balanced Growth

Revenue growth is a significant objective for Amkor. We strive to grow in a balanced way and avoid over-reliance on any single market or customer. Our goal is to achieve more consistent financial performance through all phases of the business cycle. Our balanced growth strategy consists of the following two components:

- First, we are increasing our revenue in markets beyond communications, including consumer, computing and automotive and industrial end markets. As computing power increases in additional applications, these additional markets are requiring more advanced packaging technology. Revenue from these markets tends to be more stable, with less pronounced seasonality tied to the launch of flagship phones.
- Second, we continue to focus on share gains in the iOS and high-end Android ecosystems, leveraging our expertise in advanced SiP, MEMS and other advanced packages to expand our content in next generation 5G phones.

Selectively Grow Our Scale and Scope through Strategic Investments

From time to time we see attractive opportunities to grow our customer base and expand markets through strategic investments. For example, in 2017 we completed the acquisition of Nanium, S.A. (“Nanium”), a provider of wafer-level fan-out semiconductor packaging solutions. We believe that this acquisition has strengthened our position in the market for wafer-level packaging.

We believe that selective growth through joint ventures, acquisitions and other strategic investments can help diversify our revenue streams, improve our profits and maintain our technological leadership.

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 allow us to build upon our industry position and to remain one of the preferred providers of semiconductor packaging and test services.

Leading Technology Innovator

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 Package-on-Package (“PoP”) platform with Through Mold Via (“TMV”) technology, molded embedded packages, FusionQuad, flip chip ball grid array, multi-chip modules with a silicon interposer placed between the module chips and substrate, copper pillar bumping and fine pitch copper pillar flip chip packaging technologies. 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 CSP, wafer-level fan-out, SWIFT and flip chip interconnect solutions and advanced SiP products.

We continue to invest in developing the key processes and packaging and test technologies required for our customers to deliver advanced integrated and modular solutions to market. We are a leader in wafer thinning, micro-bumping, die stacking, hybrid packaging and TSV-based flip chip innovation. We are also a developer of environmentally friendly IC packaging, which involves the elimination of lead and certain other materials.

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 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, increase 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 designs 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 and OEM electronic companies, we gain access to technology roadmaps that allow us to focus resources on developing new packages that satisfy their future requirements.

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 for a wide variety of products. 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 attributes. Our solutions enable our customers to focus on semiconductor design and wafer fabrication while utilizing Amkor as their turnkey design, packaging and test services provider and, in many cases, their packaging technology innovator.

We also offer an extensive line of advanced probe and final test services for analog, digital, logic, mixed signal and RF 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 Operating Base

We have a broad and geographically diversified operating footprint strategically located in seven countries in many 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:

- Offering capacity to absorb large orders and accommodate quick turn-around times;
- Obtaining favorable pricing on materials and equipment, where possible, by using our purchasing power and leading industry position;
- Qualifying production of customer devices at multiple manufacturing sites to mitigate the risks of supply disruptions; and
- Providing capabilities and solutions for customer-specific requirements.

Competitive Cost Structure and Disciplined Capital Investment

There is a continuous push throughout the entire semiconductor supply chain for lower cost solutions. We work to maintain a competitive cost structure and make disciplined capital investment decisions so that we can provide cost-competitive solutions to our customers and achieve sustainable profitability and cash flow. Some of our cost control efforts have been directed at: (1) improving the utilization of our existing assets; (2) developing new manufacturing

methods to reduce processing costs; (3) utilizing flexible manufacturing lines that can accommodate a variety of products and customers; (4) increasing test densities to drive higher throughput; (5) implementing more cost-effective materials; (6) utilizing our scale to drive worldwide purchasing leverage; and (7) increasing labor productivity.

We operate in a cyclical industry. During an industry downturn we seek to reduce our costs and drive greater factory and administrative efficiencies. Cost control efforts can include reducing labor costs by temporarily lowering compensation, reducing employee and contractor headcount, shortening work weeks and obtaining labor-related foreign government subsidies where available.

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. The wafers that we receive from our customers are generally consigned to us; we do not own the consigned wafers or record their value in our financial statements.

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 our wirebond packaging and related test services as “Mainstream Products”. The following table sets forth, for the periods indicated, the amount of advanced and mainstream packaging and test net sales and the percentage of such net sales:

	For the Year Ended December 31,					
	2020		2019		2018	
	(In millions, except percentage of net sales)					
Advanced Products	\$ 3,202	63.4 %	\$ 2,111	52.1 %	\$ 2,118	49.1 %
Mainstream Products	1,849	36.6 %	1,942	47.9 %	2,198	50.9 %
Total net sales	\$ 5,051	100.0 %	\$ 4,053	100.0 %	\$ 4,316	100.0 %

Advanced Products

Our Advanced Products include flip chip chip scale packages, wafer-level packages and flip chip ball grid array 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.

Flip Chip Chip Scale Package (“FC CSP”) Products: FC CSP packages are small form factor packages where the substrate size is not much larger than the die itself. 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 it 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 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.

Flip Chip Ball Grid Array (“FC BGA”) Products: FC BGA packages are large form factor substrate-based packages which are used where processing power and speed are needed and small form factors are not required. Our FC BGA packages are assembled around state-of-the-art substrates. Utilizing multiple high density routing layers, laser drilled vias, and ultra-fine line and space metallization, FC BGA substrates have the highest routing density available. The variety of FC BGA package options allows package selection to be tailored to the specific thermal needs of the end

product. We offer FC BGA packaging in a variety of product formats to fit a wide range of end application requirements, including networking, storage, computing and consumer applications.

Wafer-level Package Products: We offer three types of wafer-level packages: Wafer-level CSP; wafer-level fan-out; and SWIFT.

- 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. We have seen consistent content gains in our wafer-level CSP business, driven largely by mobile communications. Applications for wafer-level CSP include power management, transceivers, sensors, wireless charging, codecs and specialty silicon for new or unique functionality.
- Wafer-level fan-out 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 bond pads. The fan-out package enlarges the bondable surface area by building a border around the die using low-cost molding compound. Wafer-level CSP and wafer-level fan-out are complementary technologies. Customers can choose between the two package types as their die sizes shrink or grow. With the acquisition of Nanium, we became a leader in low-density fan-out technology.
- Silicon Wafer Integrated Fan-out Technology (“SWIFT”, also known as high-density fan-out) replaces a laminate substrate with a thinner structure. SWIFT solutions enable very thin, very small products combining application processors, memory, baseband and other peripheral ICs.

Mainstream Products

Our Mainstream Products include leadframe packages, substrate-based wirebond packages and 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 interconnect 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 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.

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.

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. 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 integrated circuits, 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 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 2020, 2019 and 2018, we had net sales of approximately \$1,885 million, \$1,075 million and \$990 million, respectively, from our advanced SiP modules which are included in either Advanced Products or Mainstream Products depending upon the interconnect technology used in the module.

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.

	2020	2019	2018
End Market Distribution Data (an approximation including representative devices and applications based on a sampling of our largest customers):			
Communications (handheld devices, smart phones, tablets)	41 %	38 %	44 %
Consumer (connected home, set-top boxes, televisions, visual imaging, wearables)	24 %	18 %	12 %
Automotive, industrial and other (driver assist, infotainment, performance, safety)	20 %	27 %	26 %
Computing (datacenter, infrastructure, PC/laptops, storage)	15 %	17 %	18 %
Total net sales	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

RESEARCH AND DEVELOPMENT

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. We believe that technology development is one of the keys to success in the semiconductor packaging and test industry. By concentrating our research and development on our

customers' needs for innovative packages, increased performance and lower cost, we gain opportunities to enter markets early, capture market share and promote our new package offerings as industry standards.

One of our top priorities is developing highly integrated modules for the next generation of mobile devices, which reduce material and processing costs and minimize form factor. This development effort is particularly important for customers requiring miniaturization of high performance functionality in the mobile phone and consumer markets. Another important focus area is the development of wafer-level packages for larger chips. These wafer-level chip-scale packages and wafer-level fan-out (low density) packages are increasingly the preferred package type for many chips used in mobile devices. They provide a very low-profile product at a competitive cost. We are also developing new applications for the automotive market using existing and new package technologies as higher performance compute and sensor content are used to support new automotive features including ADAS, infotainment and electric vehicles.

Another focus for development is in the area of integrated multi-die solutions, including higher density MCMs and wafer-level fan-out solutions which enable package level integration of different types and levels of silicon technologies. This is accomplished by combining application processors and other chiplets into one packaged module. Through the use of die partitioning and heterogeneous die 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 throughout other parts of Asia. In 2020, we had approximately 650 employees engaged in research and development activities. In 2020, 2019 and 2018, we incurred \$140.7 million, \$137.6 million and \$157.2 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 the effect of 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

In 2020, we had approximately 250 customers, including many of the largest semiconductor companies in the world. Our ten largest customers accounted for 65% of our net sales in 2020. Direct sales to Apple Inc., our largest customer, increased during 2020 and accounted for 14.5% of our net revenue for the year ended December 31, 2020.

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 leadframes, laminate substrates, gold and copper wire, mold compound, epoxy, tubes and trays. 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. We purchase

materials based on customer forecasts, and our customers are generally responsible for any unused materials which we purchased based on such forecasts.

We obtain the materials required for packaging services from various suppliers. We 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 in an effort 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 and die bonders. In addition, we maintain a variety of other packaging equipment, including mold, singulation, die attach, 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 through the use of relatively low cost tooling, although equipment used in advanced packaging can be more difficult to redeploy than equipment used in traditional wirebond packaging.

We also purchase wafer bumping equipment to facilitate our flip chip and wafer level packaging services. Wafer bump 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 portion of the process and tends to have longer delivery lead times than most types of packaging equipment. We focus our capital expenditures on standardized tester platforms in order to maximize test equipment utilization where possible. In some cases, our customers will consign test equipment to us. In those cases, we operate the equipment on their behalf but do not own it.

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 those related to financial and other disclosures, accounting standards, environmental, corporate governance, intellectual property, tax, trade, antitrust, employment, immigration and travel regulations, privacy, and anti-corruption. 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. Scraps from metal lead-frame or substrate 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 ("Pb"), a naturally occurring element that can be toxic. The use of Pb in our packages has decreased over time due to the use of Pb-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 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 (“GHG”) generated by our factories worldwide. Once collected, our GHG data is submitted to, and disclosed publicly by, the 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 lighting based on 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. 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 only test services and not packaging.

The principal elements of competition in the semiconductor packaging and test services market include:

- technical competence;
- quality;
- price;
- breadth of packaging and test services offered, including turnkey services;
- new package and test design, technology innovation and implementation;
- cycle times;
- customer service;
- available capacity; and
- 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 abroad, 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 as a whole, 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 assure you that we will receive patents from pending or future applications. In addition, any patents we obtain may be challenged, invalidated or circumvented and may not provide meaningful protection or other commercial advantage to us.

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 14 days of employment, after which recurring mandatory training is required on an annual basis. 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.

HUMAN CAPITAL RESOURCES

Employees

As of December 31, 2020, Amkor employed 29,050 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 11 countries, reflecting various cultures, backgrounds, ages, genders and ethnicities. Of our global employee base, 91% are employed in manufacturing roles. Our employees in the Philippines, Singapore, Taiwan 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 comprehensive benefit options that are intended to allow our employees and their families to live healthier and more secure lives. Additionally, Amkor has implemented various retention programs at factory locations to incentivize and retain high-performing employees. 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. We believe that our efforts to motivate and retain qualified employees is reflected in the long average tenure of our key employees. Additionally, we strive to promote our management-level employees from within Amkor and believe that we have been successful in this effort.

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 all of our full-time employees. Our focus on health and safety is further evident in our response to the Covid-19 pandemic around the globe. Because our business involves the manufacturing and testing of physical products, many of our employees are unable to work from home. In an effort to keep our employees safe and to maintain operations during the Covid-19 pandemic, we implemented a number of new health and safety-related measures during 2020.

Actions taken at Amkor's facilities during the pandemic include:

- Establishing a response team with executive sponsors;
- Adopting a "no factory visit" policy;

- Implementing a work from home environment in all U.S. locations, and certain international locations;
- Implementing extraordinary travel restrictions across the Company, including 14-day waiting periods for entry to Amkor factories after international travel;
- Communicating with employees about health and safety measures and educating employees about the outbreak;
- Arranging for alternative housing for employees in China who traveled;
- Screening everyone at campus entrances for fever and signs of illness;
- Increasing hygiene measures at dormitories, canteens and shuttles;
- Requiring masks to be worn and the use of disinfectants for hand washing;
- Implementing protocols to address actual and suspected Covid-19 cases and potential exposure; and
- Restricting domestic and international non-essential travel for all employees.

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 report. For more information regarding the forward-looking statements contained in this report, see the Table of Contents of this Annual Report on Form 10-K. You should carefully consider the risks and uncertainties described below, together with all of the other information included in this report, in considering our business and prospects. Many of the following risks and uncertainties are, and will be, exacerbated by the Covid-19 pandemic and any worsening of the global business and economic environment as a result. The risks and uncertainties described below are not the only ones facing Amkor. Additional risks and uncertainties not presently known to us may also adversely affect our business operations. The occurrence of any of the risks and uncertainties described below could 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 Annual Report on Form 10-K under the caption “Risk Factors” (not just those discussed under “Summary of Risk Factors”) in considering our business and prospects. The following is a list of some of these risks:

Company-Specific Risk Factors

- dependence on the highly cyclical, volatile semiconductor industry and vulnerability to industry downturns and declines in global economic and financial conditions;
- 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 integrated device manufacturers, and new competitors, including foundries;
- decisions by our integrated device manufacturer and foundry customers to curtail outsourcing;
- changes in costs, quality, availability and delivery times of raw materials, components and equipment;
- 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;
- fluctuations in interest rates and changes in credit risk;
- the possibility that we may decrease or suspend our quarterly dividend;
- our 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 Covid-19, impacting labor availability and operating capacity, capital availability, the supply chain and consumer demand for our customers' products and services;
- 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;
- our substantial indebtedness;
- 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 (including with respect to the Tax Act), taxing authorities not agreeing with our interpretation of applicable tax laws, including whether we continue to qualify for tax holidays, or any requirements to establish or adjust valuation allowances on deferred tax assets;
- laws, rules, regulations and policies imposed by U.S. or other governments, such as tariffs, customs, duties and other restrictive trade barriers, national security, data privacy and cybersecurity, antitrust and competition, tax, currency and banking, labor, environmental, health and safety; and
- natural disasters and other calamities, health conditions or pandemics, political instability, hostilities or other disruptions.

Company-Specific Risk Factors

Dependence on the Highly Cyclical Semiconductor Industry - 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. The semiconductor industry has experienced significant and sometimes sudden and prolonged downturns in the past. If the industry or

markets we compete in experience slower, or even negative growth, our business and results of operations may be 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 has currently disrupted demand in the automotive end market, 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 adversely affect our business. The Covid-19 pandemic and the effects of governmental initiatives to control the pandemic have adversely affected and may continue to adversely affect the economies and financial markets of many countries, resulting in an economic downturn that may affect demand for our services and our operating results. Although the magnitude of any potential future impact of the Covid-19 pandemic on our business and operations remains uncertain, the continued spread or potential re-emergence of Covid-19 or the occurrence of other epidemics or pandemics, and the imposition of related public health measures and travel and business restrictions may adversely impact our business, financial condition, operating results and cash flows. In addition, we have experienced and will continue to experience 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. It is difficult to predict the timing, strength or duration of any economic slowdown 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 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, which could materially impact our business, liquidity, results of operations, financial condition and cash flows.

Fluctuations in Operating Results and Cash Flows - 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;
- our ability to achieve our major growth objectives, including transitioning second-wave customers to advanced packages and increasing our share of the automotive end market;
- changes in our capacity and capacity utilization rates;
- 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;

- 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;
- changes in costs, quality, availability and delivery times of raw materials, components, equipment and labor;
- wage inflation and fluctuations in commodity prices, including gold, copper and other precious metals;
- 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 and government shutdowns, civil disturbances or international events, such as the United Kingdom's departure from the European Union;
- environmental or natural disasters such as earthquakes, typhoons and volcanic eruptions;
- pandemics or other 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;
- fluctuations in interest rates and currency exchange rates, including the potential impact of the phase-out of LIBOR on our variable rate debt;
- 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.

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 variability of quarterly or annual operating results. In addition, these factors may adversely affect our credit ratings, which could make it more difficult and expensive for us to raise capital and could adversely affect the price of our securities.

Risks Associated with International Operations - We Depend on Our Factories and Operations in China, Japan, Korea, Malaysia, the Philippines, Portugal, Singapore and Taiwan. 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. Substantially all of our property, plant and equipment is located outside of the United States. Moreover, many of our customers and the vendors in our supply chain are located outside the U.S. The following are some of the risks we face in doing business internationally:

- health and safety concerns, including widespread outbreak of infectious diseases, such as Covid-19;
- changes in consumer demand resulting from 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, and environmental;
- 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;
- 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;
- 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 dollar/yen exchange rate for our operations in Japan;
- political and social conditions, and the potential for civil unrest, terrorism or other hostilities;
- 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 Foreign Corrupt Practices Act and other anti-corruption laws and regulations.

We have significant facilities and other investments in South 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.

In addition, the Covid-19 pandemic has impacted and may continue to impact 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 affected, and may in the future affect, our operations, in the Philippines and Malaysia. Other national, regional and local governments have implemented and may continue to implement similar restrictions to mitigate the spread of Covid-19 in jurisdictions in which we, our customers and our suppliers operate, and such restrictions may 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 adversely affect demand for our services, our operating results and financial condition.

Competition - We Compete Against Established Competitors in the Packaging and Test Business as Well as Internal Capabilities of Integrated Device Manufacturers and Face Competition from New Competitors, Including Foundries.

The outsourced semiconductor packaging and test 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. We also may face increased competition from domestic companies located in China, where there are government-supported efforts to promote 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.

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 reduced 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 or 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 and cash flows will not be adversely affected by such increased competition.

Decisions by Our Integrated Device Manufacturer and Foundry Customers to Curtail Outsourcing May Adversely Affect Our Business.

Historically, we have 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.

In addition, 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.

Dependence on Materials and Equipment Suppliers - 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 have a negative impact on our business. For example, the actions that government authorities and businesses worldwide have taken in response to Covid-19 have resulted in, to date, limited business disruption, including delays in shipments of equipment, supplies and other materials. To the extent the impact of Covid-19 continues or worsens, we may have greater difficulty obtaining the equipment, supplies and other materials necessary for performance of our services. Furthermore, severe earthquakes, flooding and tsunamis in the past have significantly and adversely affected the electronics industry supply chain by impacting 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. 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 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, it could adversely affect our business as some customers may move their business to other suppliers, and our reputation could also be 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. For example, in the past, increased demand for equipment caused some equipment suppliers to only partially satisfy our equipment orders in the normal time frame or to increase prices during market upturns for the semiconductor industry. 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 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.

Capital Expenditures - We Make Substantial Investments in Equipment and Facilities to Support the Demand of Our Customers, Which May 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 short-term asset balances, 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 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.

High Fixed Costs - Due to Our High Percentage of Fixed Costs, We Will 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 will 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 adversely impact our business, liquidity, results of operations, financial condition and cash flows.

Absence of Backlog - The Lack of Contractually Committed Customer Demand May 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, none of our customers have committed 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 would be adversely affected.

Declining Average Selling Prices - 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 are unable to offset a decline in average selling prices 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 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 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.

Intellectual Property - 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 adversely affect our ability to meet customer orders 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, may be challenged, invalidated or circumvented and may not provide us meaningful protection or other commercial advantage.

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 and 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 Annual Report on Form 10-K on our results of operations, financial condition and cash flows could change in the future.

We Face Warranty Claims, Product Return and Liability Risks, the Risk of Economic Damage Claims and the Risk of Negative Publicity if Our Packages Fail.

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

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 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, and debt we may incur in the future, contain, or 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.

We currently anticipate the payment of a regular quarterly cash dividend of \$0.04 per share 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 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 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 \$98.0 million as of December 31, 2020. 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. From time to time, we may offer some or all of the covered employees the option to convert from the severance plan to the defined contribution plan, which could impact the timing of future payments, reducing our cash flow and negatively affecting our financial condition. As recently as October 2020, some employees accepted our offer to convert their Korean severance plan participation to a defined contribution plan.

Mr. 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, 2020, Mr. James J. Kim, the Executive Chairman of our Board of Directors, Ms. Susan Y. Kim, the Vice Chairman of our Board of Directors, and members of the Kim family and affiliates owned approximately 141.9 million shares, or approximately 58%, of our outstanding common stock. The Kim family also has options to acquire approximately 0.5 million shares. If the options are exercised, the Kim family's total ownership would be an aggregate of approximately 142.4 million shares of our outstanding common stock 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. James J. 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 adversely affect the market price of our stock.

General Risk Factors

The Covid-19 Outbreak Has Impacted and May Continue to Impact the Supply Chain and Consumer Demand for Our Customers' Products and Services, Which May Adversely Affect Our Business, Results of Operations, and Financial Condition.

Our business has been and may continue to be adversely impacted by the effects of the Covid-19 outbreak. The impacts have varied, and likely will continue to vary, by location, by industry and by end market. We, our suppliers and our customers have been and may continue to be 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. There is considerable uncertainty regarding such restrictions and potential future governmental 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 continue to cause 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 Covid-19 on our suppliers or customers or both.

The Covid-19 pandemic has adversely affected and may continue to adversely affect the economies and financial markets of many countries, resulting in an economic downturn that may cause a decrease in short-term and long-term consumer demand for our customers' products and services and impact our operating results. Demand for our products

and services for the automotive end market has experienced the most significant impact to date, and there is no certainty as to when demand in that market will return to pre-Covid-19 levels.

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 we may take further actions 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 current or future impacts of Covid-19, and our ability to perform critical functions could be harmed.

At this time, we are unable to predict the future impacts that Covid-19 will have on our business, financial condition or results of operations due to various uncertainties, including the duration of the outbreak and the actions that may be taken by governmental authorities and other businesses in response to the Covid-19 pandemic.

Our Substantial Indebtedness Could Adversely Affect Our Financial Condition and Prevent Us from Fulfilling Our Obligations.

We have a significant amount of indebtedness, 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, 2020, our total debt balance was \$1,154.3 million, of which \$149.0 million was classified as a current liability and \$474.2 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 intensify.

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.

In addition, certain of our credit agreements use LIBOR or other reference rates to determine the rate of interest payable on our borrowings. As such, our financial position may be adversely affected by fluctuations in such reference rates based on economic and market factors beyond our control. Any significant increase in such reference rates would result in a significant increase in interest expense on our debt, which could negatively impact our results of operations and cash flows. The United Kingdom's Financial Conduct Authority intends to phase out LIBOR by July 2023. Plans for alternative reference rates have also been announced. At this time, we cannot predict how markets will respond to proposed alternative rates or the effect of any changes to, or discontinuation of, LIBOR. If reference rates under our

credit agreements are no longer available or if our lenders have increased costs due to changes in reference rates, we may experience increases in interest rates on our variable rate debt, which could adversely impact our interest expense, results of operations and cash flows.

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 and 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 expenditure 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 our ability 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 2021 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, they may refuse or be unable to fund borrowings under their credit commitments to us. Volatility in the banking system and capital markets, as well as any 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 would be adversely impacted.

Customer Concentration and Loss of Customers - The Loss of Certain Customers or Reduced Orders or Pricing from Existing Customers May Have a Significant 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 together accounted for 65% of our net sales for the year ended December 31, 2020. 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 assure 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, 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, 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, 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 new facilities 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 intense, and our business could be adversely affected by the loss of the services of any of our existing key personnel, including senior management, as a result of competition or for any other reason. Other than the agreement with our Chief Executive Officer, we do not have employment agreements with our key employees, including senior management, or other contracts that would prevent our key employees from working for 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 any of the following events: 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, 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 in the past, we cannot assure you 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 are integrating our Japan operations' information technology systems with our existing systems and processes, and such integration has inherent risks to existing operations. In addition, in May 2017, we completed our acquisition of Nanium and continue to integrate its 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 adversely affected by a disruption, failure or breach of our information technology systems.

Difficulties Consolidating and Integrating Our Operations - 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 Tax Holidays, 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 U.S. or foreign tax laws, including new or modified guidance with respect to existing tax laws (particularly the Tax Act, which made significant changes to the U.S. tax code with respect to which there remains uncertainty), 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 tax holiday 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 tax holidays. 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 adversely affect our results of operations, financial condition and cash flows. Additionally, certain of our subsidiaries operate under tax holidays, which will expire in whole or in part at various dates in the future. As those tax holidays 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 affect our results of operations.

Environmental, Health & Safety Laws and Industry and Customer Initiatives - Future Environmental, Health & Safety Laws and Industry and Customer Sustainability Initiatives Could Place Additional Burdens on Our Manufacturing Operations.

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 (Pb) 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 greenhouse gasses 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 negatively affecting our ability to maintain or expand our operations, and we could suffer reputational harm.

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 greenhouse gas 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 Could be Adversely Affected by Natural Disasters and Other Calamities, Health Conditions or Pandemics, Political Instability, Hostilities, or Other Disruptions.

We have significant packaging and test and other operations in China, Japan, Korea, Malaysia, the Philippines, Portugal, Singapore and Taiwan which 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, armed conflict, 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.

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 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)	1,325,000	—	1,325,000
Japan	1,689,000	329,000	2,018,000
Korea	4,085,000	—	4,085,000
Malaysia (1)	386,000	—	386,000
Philippines (2)	765,000	557,000	1,322,000
Portugal	519,000	—	519,000
Taiwan (1)	1,098,000	16,000	1,114,000
Total all facilities	9,867,000	902,000	10,769,000

(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.

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, employee relations and other matters. For a discussion of “Legal Proceedings,” see Note 17 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on 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 126 holders of record of our common stock as of February 12, 2021.

DIVIDEND POLICY

In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. The first quarterly dividend of \$0.04 per share was paid on January 7, 2021 to stockholders of record as of December 18, 2020.

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 Annual Report on 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 Annual Report on 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, 2020.

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	5,425	14.64	—	91,586,032
December 1 - December 31	—	—	—	91,586,032
Total	5,425	\$ 14.64	—	—

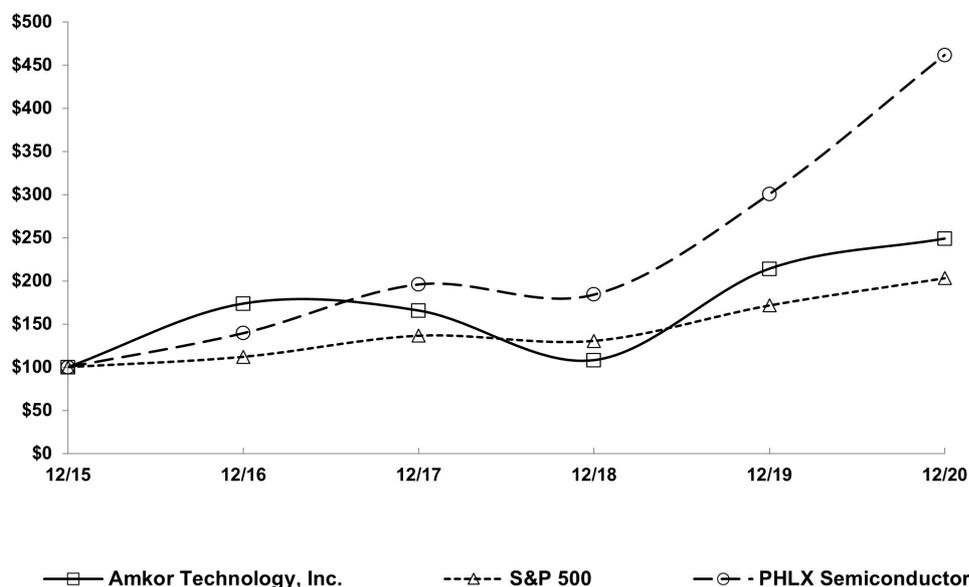
(a) Represents shares of common stock surrendered to us to satisfy tax withholding obligations associated with the vesting of restricted shares issued to employees.

(b) Our Board of Directors previously authorized the repurchase of up to \$300.0 million of our common stock, \$150.0 million in August 2011 and \$150.0 million in February 2012, exclusive of any fees, commissions or other expenses. During 2020 and 2019, we made no common stock purchases, and at December 31, 2020, approximately \$91.6 million was available pursuant to the stock repurchase program.

PERFORMANCE GRAPH (1)

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Amkor Technology, Inc., the S&P 500 Index
and the PHLX Semiconductor Index



*\$100 invested on 12/31/15 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

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(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 following table sets forth the cumulative total returns included in the preceding Stock Performance Graph for the years ended December 31, 2015 through 2020.

	For the Year Ended December 31,					
	2015	2016	2017	2018	2019	2020
Amkor Technology, Inc.	\$ 100.00	\$ 173.52	\$ 165.30	\$ 107.89	\$ 213.82	\$ 248.67
S&P 500	100.00	111.96	136.40	130.42	171.49	203.04
PHLX Semiconductor	100.00	139.32	195.80	183.97	300.35	461.53

Item 6. Selected Financial Data

The following selected financial data should be read in conjunction with Management’s Discussion and Analysis of Financial Condition and Results of Operations and our Consolidated Financial Statements in Part II, Item 7 and Item 8, respectively, of this Annual Report on Form 10-K.

SELECTED HISTORICAL CONSOLIDATED FINANCIAL DATA

	For the Year Ended December 31,				
	2020	2019	2018	2017 (f) (g)	2016
(In thousands, except per share data)					
Income Statement Data:					
Net sales	\$ 5,050,589	\$ 4,052,650	\$ 4,316,466	\$ 4,207,031	\$ 3,927,849
Gross profit	900,814	649,439	710,565	761,079	709,891
Operating income	457,245	233,170	258,144	405,540	308,587
Loss on debt retirement (a)	3,042	8,536	1,512	4,835	—
Income tax expense (b)	46,183	37,182	56,250	39,791	51,042
Net income	340,499	122,628	129,565	267,705	178,653
Net income attributable to Amkor	338,138	120,888	127,092	263,550	175,530
Net income attributable to Amkor per common share:					
Basic	\$ 1.40	\$ 0.50	\$ 0.53	\$ 1.10	\$ 0.74
Diluted	\$ 1.40	\$ 0.50	\$ 0.53	\$ 1.10	\$ 0.74
Other Financial Data:					
Depreciation and amortization	\$ 510,396	\$ 524,177	\$ 571,961	\$ 581,940	\$ 555,186
Payments for property, plant and equipment	553,021	472,433	547,122	550,943	650,038
Dividends declared per common share (c)	0.04	—	—	—	—
Balance Sheet Data (d):					
Cash and cash equivalents	\$ 698,002	\$ 894,948	\$ 681,569	\$ 596,364	\$ 549,518
Working capital	816,945	941,730	512,785	325,945	404,035
Total assets (e)	5,022,311	4,695,615	4,495,447	4,508,388	4,092,086
Non-current liabilities, including debt (e)	1,352,365	1,645,573	1,481,124	1,470,620	1,683,021
Total Amkor stockholders’ equity	2,325,699	1,963,739	1,830,540	1,696,276	1,383,588

- (a) In April 2019, we recorded an \$8.4 million loss on extinguishment related to the call premium paid and other debt related costs associated with redemption of the outstanding \$525.0 million aggregate principal amount of 6.375% Senior Notes due 2022. In July 2017, we recorded a loss on debt retirement of \$4.4 million relating to the partial early repayment of our 6.625% Senior Notes due 2021.
- (b) In 2020, income tax expense includes a \$20.2 million discrete tax benefit from the recognition of deferred tax assets we expect to utilize in future years. In 2019, income tax expense includes a net \$11.1 million discrete income tax charge related to changes in the valuation of certain deferred tax assets. In 2018, we recorded a \$22.3 million income tax expense to complete the accounting for the impact of the Tax Act. This expense reduced our estimated net tax benefit of \$41.6 million recorded in 2017, primarily due to the reversal of a valuation allowance on certain U.S. deferred tax assets as a result of the enactment of the Tax Act.
- (c) In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. The first quarterly dividend of \$0.04 per share was paid on January 7, 2021 to stockholders of record as of December 18, 2020.
- (d) On January 1, 2018, we retrospectively adopted Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers (Topic 606). The selected financial data as of December 31, 2016 was not adjusted for this new accounting standard.

- (e) On January 1, 2019, we adopted ASU 2016-02, *Leases (Topic 842)*. As of December 31, 2019, there were increases to our consolidated balance sheet of approximately \$128 million for operating lease right of use assets and approximately \$132 million for operating lease liabilities.
- (f) On May 22, 2017, we completed the purchase of Nanium. Their financial results have been included in our Consolidated Financial Statements from the date of acquisition.
- (g) In May 2017, we sold the land and buildings comprising our K1 factory in Korea for \$142.4 million which resulted in a pre-tax gain of \$108.1 million.

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

This section includes comparisons of certain 2020 financial information to the same information for 2019. For discussion of 2019 results in comparison with 2018 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 Securities and Exchange Commission on February 19, 2020.

Overview

Amkor is one of the world’s leading providers of outsourced semiconductor packaging and test services. Our financial goals are sales growth and improved profitability. To achieve these goals, we are focused on generating increased value from our investments in advanced technologies, improving utilization of existing assets, executing our balanced growth strategy and selectively growing our scale and scope through strategic investments.

We are an industry leader in developing and commercializing advanced packaging and test technologies. We believe these advanced technology solutions provide substantial value to our customers, particularly in the mobile communications market, where growth generally outpaces the overall semiconductor industry. Advanced packages are now the preferred choice in both the high-end and the mid-range segments of the smartphone market, which together account for a high portion of mobile phone semiconductor value. The demand for advanced packages is also being driven by second-wave mobile device customers, who are transitioning out of wirebond into wafer-level and flip-chip packages. Interest in advanced packages for automotive applications is growing as well, largely due to new, data-intensive applications, which require increased pin count and performance. We believe that our technology leadership and this technology transition create significant growth opportunities for us.

We typically look for opportunities in the advanced packaging and test area where we can generate reasonably quick returns on investments made for customers seeking leading edge technologies. We also focus on developing a second wave of customers to fill the capacity that becomes available when leading edge customers transition to newer packaging and test equipment and platforms. In addition, we are seeking to add new customers and to deepen our engagement with existing customers. This includes an expanded emphasis on the automotive end market where semiconductor content continues to grow and in the analog area for our mainstream wirebond technologies.

From time to time, we identify attractive opportunities to grow our customer base and expand the markets we serve through joint ventures, acquisitions and other strategic investments. For example, in May 2017 we acquired Nanium, which has strengthened our position in the market for wafer-level fan-out packaging. We believe that taking advantage of these opportunities helps to diversify our revenue streams, improve our profits, broaden our portfolio of services and maintain our technological leadership.

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. 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 or subsequent economic recovery. While customer demand for our services was, overall, quite strong throughout 2020, particularly in the communications and consumer end markets, demand in automotive and industrial was lower through most of the year due to the Covid-19 pandemic. We made many adjustments to our operations during 2020 to navigate through the onset of the pandemic, and through these efforts we were able to continue serving customers and grow the business in a challenging environment.

The full potential effect of the Covid-19 pandemic is unknown, and there is significant uncertainty related to the ultimate impact that the Covid-19 pandemic will have on the global economy, our business, results of operations and financial condition. See Part I, Item 1A, including, “The Covid-19 Outbreak Has Impacted and May Continue to Impact the Supply Chain and Consumer Demand for Our Customers’ Products and Services, Which May Adversely Affect Our Business, Results of Operations, and Financial Condition” and “Dependence on the Highly Cyclical Semiconductor Industry - 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.”

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, 2020, we had cash and cash equivalents and short-term investments of \$698.0 million and \$133.8 million, respectively.

Our net sales, gross profit, operating income, cash flows, liquidity and capital resources have historically fluctuated significantly from quarter to quarter as a result of 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 Annual Report on Form 10-K.

2020 Financial Summary

Our net sales increased \$997.9 million or 24.6% to \$5,050.6 million in 2020 from \$4,052.7 million in 2019. The increase was generally attributable to higher sales of advanced products in the communications, consumer and computing end markets, partially offset by a decline in the automotive and industrial end market.

Gross profit increased \$251.4 million in 2020 compared to 2019, primarily due to the increase in net sales, partially offset by changes in the mix of products sold toward products with higher material content.

In 2020, our capital expenditures totaled \$553.0 million, or 10.9% of net sales compared to \$472.4 million, or 11.7% of net sales in 2019. Our spending was primarily focused on investments in advanced packaging and test equipment.

Net cash provided by operating activities was \$770.0 million for the year ended December 31, 2020, compared to \$563.9 million for the year ended December 31, 2019. This increase was primarily due to higher net sales, higher operating profit, and changes in working capital.

In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. The initial quarterly dividend was \$0.04 per share.

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		
	2020	2019	2018
Net sales	100.0 %	100.0 %	100.0 %
Materials	45.5 %	40.0 %	38.7 %
Labor	13.4 %	16.0 %	16.1 %
Other manufacturing costs	23.3 %	28.0 %	28.7 %
Gross margin	17.8 %	16.0 %	16.5 %
Operating income	9.1 %	5.8 %	6.0 %
Net income attributable to Amkor	6.7 %	3.0 %	2.9 %

Net Sales

	2020	2019	2018	Change			
				2020 over 2019	2019 over 2018		
(In thousands, except percentages)							
Net sales	\$ 5,050,589	\$ 4,052,650	\$ 4,316,466	\$ 997,939	24.6 %	\$ (263,816)	(6.1)%

The increase in net sales in 2020 compared to 2019 was due to higher sales of advanced products in the communications, consumer and computing end markets, partially offset by a decline in the automotive and industrial end market. The communications end market benefited from the recovery in the smartphone market from the prior year inventory correction. Sales increased in the consumer end market due to the introduction of a new high-volume consumer product. Increased demand, driven by work-from-home arrangements, drove higher sales in the computing end market. The automotive and industrial market experienced decreased demand and supply chain disruptions due to the Covid-19 pandemic.

Gross Profit and Gross Margin

	2020	2019	2018	Change			
				2020 over 2019	2019 over 2018		
(In thousands, except percentages)							
Gross profit	\$ 900,814	\$ 649,439	\$ 710,565	\$ 251,375		\$ (61,126)	
Gross margin	17.8 %	16.0 %	16.5 %	1.8 %		(0.5)%	

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 upon product mix, utilization and seasonality.

Gross profit and gross margin for 2020 increased compared to 2019, primarily due to the increase in net sales, partially offset by changes in the mix of products sold toward products with higher material content.

Selling, General and Administrative Expenses

	2020	2019	2018	Change			
				2020 over 2019	2019 over 2018		
(In thousands, except percentages)							
Selling, general and administrative	\$ 302,842	\$ 278,631	\$ 295,239	\$ 24,211	8.7 %	\$ (16,608)	(5.6)%

Selling, general and administrative expenses increased in 2020 compared to 2019 primarily due to costs incurred for our factory consolidation efforts in Japan and increased employee compensation costs. These increases were partially offset by our efforts to control expenses, particularly travel and professional fees. In addition, we had a gain from a sale of real estate in 2019 which lowered our expenses in that period.

Research and Development

	2020	2019	2018	Change	
				2020 over 2019	2019 over 2018
	(In thousands, except percentages)				
Research and development	\$ 140,727	\$ 137,638	\$ 157,182	\$ 3,089	2.2 % \$ (19,544) (12.4)%

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 related to production become part of the cost of sales, including ongoing depreciation for the equipment previously held for research and development activities.

Other Income and Expense

	2020	2019	2018	Change	
				2020 over 2019	2019 over 2018
	(In thousands, except percentages)				
Interest expense	\$ 64,168	\$ 71,587	\$ 78,946	\$ (7,419)	(10.4)% \$ (7,359) (9.3)%
Interest income	(5,449)	(6,655)	(4,133)	\$ 1,206	(18.1)% \$ (2,522) 61.0 %
Foreign currency (gain) loss, net	9,608	1,944	1,451	7,664	>100% 493 34.0 %
Loss on debt retirement	3,042	8,536	1,512	(5,494)	(64.4)% 7,024 >100%
Other	(806)	(2,052)	(5,447)	1,246	(60.7)% 3,395 (62.3)%
Total other expense, net	\$ 70,563	\$ 73,360	\$ 72,329	\$ (2,797)	(3.8)% \$ 1,031 1.4 %

Interest expense decreased in 2020 compared to 2019, primarily due to the repayment of higher interest rate debt with the proceeds from our ¥28.5 billion (\$260.6 million) fixed rate term loan agreement in December 2019 and January 2020. Interest expense has also decreased due to overall decreases in interest rates in 2020 for our variable interest rate loans.

The changes in foreign currency (gain) loss, net for 2020 compared to 2019 were due to foreign currency exchange rate movements, mainly the Korean Won, and the associated impact on our net monetary exposure at our foreign subsidiaries.

Loss on debt retirement in 2019 is primarily due to the early redemption in April 2019 of the outstanding \$525 million aggregate principal amount of our 6.375% Senior Notes due 2022.

Income Tax Expense

	2020	2019	2018	Change	
				2020 over 2019	2019 over 2018
	(In thousands, except percentages)				
Income tax expense	\$ 46,183	\$ 37,182	\$ 56,250	\$ 9,001	\$ (19,068)
Effective tax rate	11.9 %	23.3 %	30.3 %		

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 in 2020 includes a \$20.2 million income tax benefit from the recognition of deferred tax assets we expect to utilize in future years. The effective tax rate in 2018 includes a \$22.3 million income tax expense to complete the accounting for the impact of the Tax Act, reducing our estimated net tax benefit of \$41.6 million from 2017.

During 2020, 2019 and 2018, our subsidiaries in Korea, Malaysia, the Philippines, and Singapore operated under various tax holidays. The tax holidays granted to our Malaysia operations and certain operations in the Philippines expired during 2018. As these tax holidays 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 Annual Report on 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 and stock 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 expenditure, dividend payments, debt service 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 under any stock repurchase program, any acquisitions or investments in joint ventures and our ability to either repay debt out of operating cash flow or refinance it at or prior to maturity with the proceeds of 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 Annual Report on 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. We refer you to Note 6 and Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on our investments and borrowings, respectively.

As of December 31, 2020, we had cash and cash equivalents and short-term investments of \$831.8 million. Included in our cash and short-term investments balances as of December 31, 2020, is \$683.1 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. Due to the changes in the U.S. tax law under the Tax Act, distributions of cash to the U.S. as dividends generally will not be subject to U.S. federal income tax. We estimate that repatriation of this foreign cash and short-term investments would generate withholding taxes and state income taxes of approximately \$40.8 million.

For certain accounts receivable, we use non-recourse factoring arrangements with third party financial institutions to manage our working capital and cash flows. Under this program, we sell receivables to a financial institution for cash at a discount to the face amount. Available capacity under these programs 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, 2020 and 2019, we sold accounts receivable totaling \$499.3 million and \$680.4 million, net of discounts and fees of \$2.9 million and \$4.4 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 borrowing base under our \$250.0 million first lien senior secured revolving credit facility entered into by our subsidiary, Amkor Technology Singapore Holding Pte, Ltd. (“the Singapore Revolver”), is limited to the amount of eligible accounts receivable. As of December 31, 2020, we had availability of \$250.0 million and no outstanding standby letters of credit. We refer you to Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information. As of December 31, 2020, our foreign subsidiaries had \$316.0 million available to be drawn under revolving credit facilities, including the Singapore Revolver, and \$60.1 million available to be borrowed under term loan credit facilities for working capital purposes and capital expenditures.

As of December 31, 2020, we had \$1,154.3 million of debt. Our scheduled principal repayments on debt include \$149.0 million due in 2021, \$182.4 million due in 2022, \$170.8 million due in 2023, \$81.5 million due in 2024, \$27.4 million due in 2025 and \$553.3 million due thereafter. We were in compliance with all debt covenants as of December 31, 2020, and we expect to remain in compliance with these covenants for at least the next twelve months.

In December 2020, we borrowed ¥10.9 billion (US\$105 million) under a new term loan agreement due December 2025. We refer you to Note 11 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information.

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 or, in the case of our Singapore Revolver, borrowing availability. Dividend payments and stock repurchases are not currently restricted under our debt agreements.

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. and Amkor Technology Singapore Holding Pte, Ltd. also 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 notes for cash or exchange shares of our common stock for our outstanding 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 that were employed prior to August 1, 2015. As of December 31, 2020, the severance liability was \$98.0 million. 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 the company to fund the converted portion of the liability. We refer you to Note 12 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information.

In October 2020, our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. The first quarterly dividend of \$0.04 per share, representing an initial dividend payment of \$9.7 million in the aggregate, was paid on January 7, 2021 to stockholders of record as of December 18, 2020. 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 authorized the repurchase of up to \$300.0 million of our common stock, exclusive of any fees, commissions or other expenses. At December 31, 2020, approximately \$91.6 million was available to repurchase common stock pursuant to 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 program since 2012.

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. In 2020, our capital expenditures totaled \$553.0 million or approximately 10.9% of net sales.

We expect that our 2021 capital expenditures will be approximately \$700 million. Ultimately, the amount of our 2021 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 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 Annual Report on Form 10-K under the caption “Capital Expenditures - We Make Substantial Investments in Equipment and Facilities to Support the Demand of Our Customers, Which May 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, 2020 was as follows:

	For the Year Ended December 31		
	2020	2019	2018
	(In thousands)		
Operating activities	\$ 770,033	\$ 563,850	\$ 663,410
Investing activities	(638,705)	(462,489)	(537,383)
Financing activities	(333,719)	108,250	(40,623)

Operating activities: Our cash flow provided by operating activities for the year ended December 31, 2020 increased by \$206.2 million compared to the year ended December 31, 2019, primarily due to higher net sales, higher operating profit, and changes in working capital.

Investing activities: Our cash flow used in investing activities for the year ended December 31, 2020 increased by \$176.2 million compared to the year ended December 31, 2019, primarily due to purchases of short-term investments and an increase in payments related to property, plant and equipment. This increase was partially offset by proceeds from sales and maturities of short-term investments and an increase in proceeds received from foreign exchange forward contracts. Payments for property, plant and equipment can fluctuate based on the timing of purchase, receipt and acceptance of equipment.

Financing activities: The net cash used in financing activities for the year ended December 31, 2020 was primarily due to the net debt repayments in Korea and Taiwan. The net cash provided by financing activities for the year ended December 31, 2019 was primarily due to the issuance of the 2027 Notes and net borrowings in Japan, partially offset by the redemption of the 2022 Notes and net repayments 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 and our ability to fund capital expenditures. 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		
	2020	2019	2018
	(In thousands)		
Net cash provided by operating activities	\$ 770,033	\$ 563,850	\$ 663,410
Payments for property, plant and equipment	(553,021)	(472,433)	(547,122)
Proceeds from sale of and insurance recovery for property, plant and equipment	3,819	11,655	4,212
Free cash flow	<u>\$ 220,831</u>	<u>\$ 103,072</u>	<u>\$ 120,500</u>

Contractual Obligations

The following table summarizes our contractual obligations at December 31, 2020, and the effect such obligations are expected to have on our liquidity and cash flows in future periods.

	Total	Payments Due for Year Ending December 31,					
		2021	2022	2023	2024	2025	Thereafter
		(In thousands)					
Total debt	\$ 1,164,302	\$ 149,007	\$ 182,373	\$ 170,776	\$ 81,461	\$ 27,400	\$ 553,285
Scheduled interest payment obligations (1)	269,994	44,293	41,855	38,981	37,150	36,231	71,484
Purchase obligations (2)	234,662	224,644	5,145	1,333	1,333	655	1,552
Operating lease obligations (3)	147,413	55,196	36,850	19,974	10,213	7,925	17,255
Finance lease obligations (3)	27,687	13,409	6,395	3,777	1,063	997	2,046
Severance obligations (4)	98,004	10,837	9,647	8,575	7,622	6,788	54,535
Total contractual obligations	<u>\$ 1,942,062</u>	<u>\$ 497,386</u>	<u>\$ 282,265</u>	<u>\$ 243,416</u>	<u>\$ 138,842</u>	<u>\$ 79,996</u>	<u>\$ 700,157</u>

- (1) Represents interest payment obligations calculated using stated coupon rates for fixed rate debt and interest rates applicable at December 31, 2020, for variable rate debt.
- (2) Represents off-balance sheet purchase obligations for capital expenditures, long-term supply contracts and other contractual commitments outstanding at December 31, 2020.
- (3) Represents future minimum lease payments including interest payments.
- (4) Represents estimated benefit payments for our Korean subsidiary severance plan.

In addition to the obligations identified in the table above, other non-current liabilities recorded in our Consolidated Balance Sheet at December 31, 2020, include:

- \$72.2 million of foreign pension plan obligations, for which the timing and actual amount of impact on our future cash flow is uncertain.
- \$33.0 million net liability associated with unrecognized tax benefits. Due to the uncertainty regarding the amount and the 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.

Off-Balance Sheet Arrangements

As of December 31, 2020, we had no off-balance sheet guarantees or other off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Contingencies, Indemnifications and Guarantees

We refer you to Note 17 to our Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for a discussion of our 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 Annual Report on Form 10-K. Our preparation of this Annual Report on 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.

Acquisitions. We account for businesses we acquire using the acquisition method of accounting and record the underlying net assets at their respective acquisition-date fair values. The accounting for acquisitions requires us to make significant estimates and assumptions, including those with respect to future cash flows, discount rates and asset lives, and therefore requires considerable judgment. These determinations affect the amount of depreciation and amortization expense recognized in future periods. Our estimates of fair value are based upon assumptions believed to be reasonable; however, they are inherently uncertain and unpredictable.

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 tax holidays 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. For most of our deferred tax assets, 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 loss and U.S. foreign tax credit carryforwards expected to expire unused and 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 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.

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 an annual 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 generally use natural hedging techniques to reduce foreign currency rate risk. We also use forward contracts to mitigate foreign currency risk of certain monetary liabilities denominated in foreign currencies.

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, 2020, to assess the potential impact of fluctuations in exchange rates for all foreign denominated assets and liabilities. Assuming that all foreign currencies depreciated 10% against the U.S. dollar, taking into account our foreign currency forward contracts, our income before taxes as of December 31, 2020 would have been approximately \$3 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, 2020, approximately 85% 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, 2020, approximately 45% 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, 2020 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, 2020 would have been approximately \$125 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 gain of \$7.5 million and \$2.8 million for the years ended December 31, 2020 and 2019, 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 Annual Report on 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, 2020:

	2021	2022	2023	2024	2025	Thereafter	Total	Fair Value
	(\$ in thousands)							
Fixed rate debt	\$140,344	\$138,123	\$119,235	\$81,461	\$27,400	\$553,285	\$1,059,848	\$1,112,412
Average interest rate	1.3 %	1.4 %	1.4 %	1.5 %	1.8 %	6.5 %	4.1 %	
Variable rate debt	8,663	44,250	51,541	0	0	0	104,454	105,484
Average interest rate	0.6 %	1.8 %	2.4 %	— %	— %	— %	2.0 %	
Total debt maturities	\$149,007	\$182,373	\$170,776	\$81,461	\$27,400	\$553,285	\$1,164,302	\$1,217,896

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 Annual Report on Form 10-K.

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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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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, 2020 and 2019, 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, 2020, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2020 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, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 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, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

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 \$46.2 million for the year ended December 31, 2020, and net deferred tax assets of \$88.5 million and unrecognized tax benefits of \$32.6 million as of December 31, 2020. 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 19, 2021

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

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF INCOME

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands, except per share data)		
Net sales	\$ 5,050,589	\$ 4,052,650	\$ 4,316,466
Cost of sales	4,149,775	3,403,211	3,605,901
Gross profit	900,814	649,439	710,565
Selling, general and administrative	302,842	278,631	295,239
Research and development	140,727	137,638	157,182
Total operating expenses	443,569	416,269	452,421
Operating income	457,245	233,170	258,144
Interest expense	64,168	71,587	78,946
Other (income) expense, net	6,395	1,773	(6,617)
Total other expense, net	70,563	73,360	72,329
Income before taxes	386,682	159,810	185,815
Income tax expense	46,183	37,182	56,250
Net income	340,499	122,628	129,565
Net income attributable to noncontrolling interests	(2,361)	(1,740)	(2,473)
Net income attributable to Amkor	\$ 338,138	\$ 120,888	\$ 127,092
Net income attributable to Amkor per common share:			
Basic	\$ 1.40	\$ 0.50	\$ 0.53
Diluted	\$ 1.40	\$ 0.50	\$ 0.53
Shares used in computing per common share amounts:			
Basic	241,509	239,725	239,329
Diluted	242,248	240,122	239,741

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Net income	\$ 340,499	\$ 122,628	\$ 129,565
Other comprehensive income (loss), net of tax:			
Adjustments to net unrealized gains (losses) on available-for-sale debt investments	21	—	—
Adjustments to unrealized components of defined benefit pension plans	602	(7,479)	(3,644)
Foreign currency translation	7,532	2,782	4,937
Total other comprehensive income (loss)	8,155	(4,697)	1,293
Comprehensive income	348,654	117,931	130,858
Comprehensive income attributable to noncontrolling interests	(2,361)	(1,740)	(2,473)
Comprehensive income attributable to Amkor	\$ 346,293	\$ 116,191	\$ 128,385

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2020	2019
	(In thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 698,002	\$ 894,948
Restricted cash	1,007	610
Short-term investments (amortized cost of \$133,744 in 2020)	133,769	6,348
Accounts receivable, net of allowances of \$863 and \$1,314, respectively	962,643	850,753
Inventories	297,293	220,602
Other current assets	40,218	28,272
Total current assets	2,132,932	2,001,533
Property, plant and equipment, net	2,566,002	2,404,850
Operating lease right of use assets	147,236	148,549
Goodwill	27,325	25,976
Restricted cash	3,188	2,974
Other assets	145,628	111,733
Total assets	<u>\$ 5,022,311</u>	<u>\$ 4,695,615</u>
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings and current portion of long-term debt	\$ 149,007	\$ 144,479
Trade accounts payable	636,434	571,054
Capital expenditures payable	181,339	77,044
Accrued expenses	349,207	267,226
Total current liabilities	1,315,987	1,059,803
Long-term debt	1,005,339	1,305,755
Pension and severance obligations	159,610	176,971
Long-term operating lease liabilities	84,420	91,107
Other non-current liabilities	102,996	71,740
Total liabilities	2,668,352	2,705,376
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, 288,923 and 286,877 shares issued, and 242,829 and 240,805 shares outstanding, respectively	289	287
Additional paid-in capital	1,953,378	1,927,739
Retained earnings	562,502	234,077
Accumulated other comprehensive income (loss)	27,270	19,115
Treasury stock, at cost, 46,094 and 46,072 shares, respectively	(217,740)	(217,479)
Total Amkor stockholders' equity	2,325,699	1,963,739
Noncontrolling interests in subsidiaries	28,260	26,500
Total equity	2,353,959	1,990,239
Total liabilities and equity	<u>\$ 5,022,311</u>	<u>\$ 4,695,615</u>

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 Deficit)	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, 2017	285,129	\$ 285	\$ 1,903,357	\$ (13,903)	\$ 22,519	(45,945)	\$ (215,982)	\$ 1,696,276	\$ 23,433	\$ 1,719,709
Net income	—	—	—	127,092	—	—	—	127,092	2,473	129,565
Other comprehensive income (loss)	—	—	—	—	1,293	—	—	1,293	—	1,293
Treasury stock acquired through surrender of shares for tax withholding	—	—	—	—	—	(22)	(189)	(189)	—	(189)
Issuance of stock through share-based compensation plans	223	—	1,050	—	—	—	—	1,050	—	1,050
Share-based compensation	—	—	5,018	—	—	—	—	5,018	—	5,018
Subsidiary dividends to noncontrolling interests	—	—	—	—	—	—	—	—	(546)	(546)
Balance at December 31, 2018	285,352	\$ 285	\$ 1,909,425	\$ 113,189	\$ 23,812	(45,967)	\$ (216,171)	\$ 1,830,540	\$ 25,360	\$ 1,855,900
Net income	—	—	—	120,888	—	—	—	120,888	1,740	122,628
Other comprehensive income (loss)	—	—	—	—	(4,697)	—	—	(4,697)	—	(4,697)
Treasury stock acquired through surrender of shares for tax withholding	—	—	—	—	—	(105)	(1,308)	(1,308)	—	(1,308)
Issuance of stock through share-based compensation plans	1,525	2	11,403	—	—	—	—	11,405	—	11,405
Share-based compensation	—	—	6,911	—	—	—	—	6,911	—	6,911
Subsidiary dividends to noncontrolling interests	—	—	—	—	—	—	—	—	(600)	(600)
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	—	—	—	(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

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Cash flows from operating activities:			
Net income	\$ 340,499	\$ 122,628	\$ 129,565
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	510,396	524,177	571,961
Amortization of deferred debt issuance costs and premiums	1,979	1,640	1,120
Deferred income taxes	3,143	25,931	(13,110)
Loss on debt retirement	3,042	8,536	1,512
Loss (gain) on disposal of fixed assets, net	(2,821)	(4,477)	5,310
Share-based compensation	8,030	6,911	5,018
Other, net	(779)	4,394	2,558
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	(106,693)	(124,140)	80,571
Inventories	(75,499)	10,208	(16,310)
Other current assets	(12,348)	(2,369)	4,329
Other assets	(22,614)	2,253	1,986
Trade accounts payable	48,786	38,670	(43,490)
Accrued expenses	69,151	(33,297)	(78,136)
Pension and severance obligations	(21,535)	(12,216)	(4,653)
Net operating lease ROU asset	871	(127,743)	—
Operating lease liabilities	2,537	131,967	—
Other non-current liabilities	23,888	(9,223)	15,179
Net cash provided by operating activities	<u>770,033</u>	<u>563,850</u>	<u>663,410</u>
Cash flows from investing activities:			
Payments for property, plant and equipment	(553,021)	(472,433)	(547,122)
Proceeds from sale of property, plant and equipment	3,819	10,117	2,841
Proceeds from insurance recovery for property, plant and equipment	—	1,538	1,371
Payments for short-term investments	(535,368)	(5,935)	(6,477)
Proceeds from sale of short-term investments	247,081	—	—
Proceeds from maturities of short-term investments	159,015	6,469	4,829
Proceeds from foreign exchange forward contracts	49,226	13,550	6,754
Payments for foreign exchange forward contracts	(14,031)	(15,593)	(5,864)
Other investing activities	4,574	(202)	6,285
Net cash used in investing activities	<u>(638,705)</u>	<u>(462,489)</u>	<u>(537,383)</u>
Cash flows from financing activities:			
Proceeds from revolving credit facilities	312,000	272,700	—
Payments of revolving credit facilities	(332,000)	(272,700)	(75,000)
Proceeds from short-term debt	86,769	51,434	23,341
Payments of short-term debt	(87,353)	(52,635)	(46,631)
Proceeds from issuance of long-term debt	331,033	975,575	596,226
Payments of long-term debt	(648,514)	(862,927)	(535,738)
Payments for debt issuance costs	(1,644)	(7,027)	(3,796)
Payments of finance lease obligations	(9,851)	(6,574)	(3,930)
Proceeds from issuance of stock through share-based compensation plans	17,611	11,405	1,050
Other financing activities	(1,770)	(1,001)	3,855
Net cash (used in) provided by financing activities	<u>(333,719)</u>	<u>108,250</u>	<u>(40,623)</u>
Effect of exchange rate fluctuations on cash, cash equivalents and restricted cash	6,056	870	(204)
Net (decrease) increase in cash, cash equivalents and restricted cash	<u>(196,335)</u>	<u>210,481</u>	<u>85,200</u>
Cash, cash equivalents and restricted cash, beginning of period	898,532	688,051	602,851
Cash, cash equivalents and restricted cash, end of period	<u>\$ 702,197</u>	<u>\$ 898,532</u>	<u>\$ 688,051</u>

The accompanying notes are an integral part of these statements.

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Supplemental disclosures of cash flow information:			
Cash paid during the period for:			
Interest	\$ 61,295	\$ 65,992	\$ 77,575
Income taxes	43,404	44,495	63,080
Non-cash investing and financing activities:			
Property, plant and equipment included in capital expenditures payable	181,376	77,250	256,070
Right of use assets acquired through operating lease liabilities	41,672	60,963	—
Right of use assets acquired through finance lease liabilities	10,517	10,835	17,163
Dividends declared and unpaid	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 pioneered the outsourcing of semiconductor packaging and test services through a predecessor corporation in 1968, and over the years we have built a leading position by:

- Designing and developing innovative packaging and test technologies;
- Offering a broad portfolio of cost-effective solutions and services;
- Focusing on strategic end markets that offer solid growth potential;
- Cultivating long-standing relationships with our customers, which include many of the world's leading semiconductor companies;
- Collaborating with customers, original equipment manufacturers ("OEMs") and equipment and material suppliers;
- Developing a competitive cost structure with disciplined capital investment;
- Building expertise in high-volume manufacturing processes and developing a reputation for high quality and solid execution; and
- Providing a geographically diverse operating base, with research and development, engineering support and production capabilities at various facilities in China, Japan, Korea, Malaysia, the Philippines, Portugal and Taiwan.

Basis of Presentation

Our Consolidated Financial Statements include the accounts of Amkor Technology, Inc. and our subsidiaries ("Amkor"). 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 acquisitions, revenue recognition, income taxes, inventory, long lived assets and contingencies. 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. Certain prior year amounts have been reclassified to conform to current year presentation.

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, 2020, the combined book value of the assets and liabilities associated with these Philippine realty corporations included in our Consolidated Balance Sheet was \$17.0 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

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

interest entities for the years ended December 31, 2020, 2019 or 2018. The creditors of the Philippine realty corporations have no recourse to our general credit.

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 average exchange rates in effect during the period. 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 expense (income) 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 largest customer increased during 2020 and accounted for 14.5% of our net revenue for the year ended December 31, 2020. 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 twelve months and ranges from AAA to BBB rated financial instruments. Our short-term investments are primarily in direct obligation of the US Government or its agencies, corporate bonds, asset backed securities, commercial paper, and municipal bonds. At December 31, 2020, our cash and cash equivalents were maintained in various U.S. and foreign bank operating and time deposit accounts and invested in U.S. money market funds.

AMKOR TECHNOLOGY, INC.**Notes to Consolidated Financial Statements — (Continued)*****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 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 maintained in various U.S. and foreign bank operating and time deposit accounts and invested in U.S. money market funds.

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, 2020 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 an annual 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.

AMKOR TECHNOLOGY, INC.

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. Effective January 1, 2019, we adopted the requirements of the Financial Accounting Standards Board Accounting Standards Codification 842, Leases, using the modified transition approach without restating the comparative period financial statements or disclosures. 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 85 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 non-current prepaid taxes.

Derivatives

We use foreign exchange forward contracts to manage exposure to foreign exchange risk which are generally settled monthly. 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.

AMKOR TECHNOLOGY, INC.**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, 2020 and 2019 were \$146.8 million and \$125.4 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

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

revenue. Contract liabilities were \$51.6 million and \$17.5 million as of December 31, 2020 and December 31, 2019, respectively. As of December 31, 2020 and December 31, 2019, the short-term portion of the liability was \$30.3 million and \$16.2 million, respectively. Revenue recognized during the year that was included in the contract liability balance at the beginning of the period was \$14.1 million, \$16.4 million, and \$13.7 million, for 2020, 2019 and 2018, 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 salaries, payroll taxes, employee benefit costs, 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 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. For most of our U.S. and foreign deferred tax assets, 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

Our share-based compensation is measured at fair value and expensed over the service period (generally the vesting period). The amount of compensation expense to be recognized is adjusted for an estimated forfeiture rate which is based on historical data. For the years ended December 31, 2020, 2019 and 2018, we recognized share-based compensation attributable to stock options and restricted shares of \$8.0 million, \$6.9 million and \$5.0 million, respectively, primarily in selling, general and administrative expenses. The corresponding deferred income tax benefits for stock options or restricted shares is \$1.3 million, \$1.3 million and \$1.0 million for 2020, 2019 and 2018 respectively.

Equity Incentive Plan

Second Amended and Restated 2007 Equity Incentive Plan. The Second Amended and Restated 2007 Equity Incentive Plan, (the "2007 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

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

services to Amkor and its subsidiaries. The 2007 Plan is effective through 2027 and can be terminated at the discretion of the Board of Directors. There were originally 17.0 million shares of our common stock reserved for issuance under the 2007 Plan and at December 31, 2020 there were 2.9 million shares available for grant.

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, 2020:

	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, 2019	5,845	\$ 9.11		
Granted	805	12.85		
Exercised	(1,882)	9.26		
Forfeited or expired	(402)	9.56		
Outstanding at December 31, 2020	4,366	\$ 9.70	7.47	\$ 23,391
Fully vested at December 31, 2020 and expected to vest thereafter	4,245	\$ 9.66	7.43	\$ 22,877
Exercisable at December 31, 2020	2,197	\$ 8.92	6.41	\$ 13,407

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

	For the Year Ended December 31,		
	2020	2019	2018
Expected life (in years)	5.6	6.0	6.0
Risk-free interest rate	0.3 %	2.5 %	2.7 %
Volatility	52 %	43 %	42 %
Dividend yield	0.3%	—	—
Weighted-average grant date fair value per option granted	\$ 5.79	\$ 4.06	\$ 4.17

Total unrecognized compensation expense from stock options was \$8.3 million as of December 31, 2020, which is expected to be recognized over a weighted-average period of approximately 2.1 years beginning January 1, 2021.

Restricted Shares

We grant restricted shares to directors and employees under the 2007 Plan. Restricted shares granted to directors vest on the earlier of the one year anniversary of the grant date or the date of the next annual meeting of stockholders. Generally, other restricted shares vest ratably over three years, with 8.33% of the shares vesting in equal quarterly

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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 dates. In addition, provided that the restricted shares have not been forfeited earlier, 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. Upon vesting of restricted stock awards, we may issue new shares of common or treasury stock.

The following table summarizes our restricted share activity for the year ended December 31, 2020:

	Number of Shares (In thousands)	Weighted- average Grant Date Fair Value (Per Share)
Non-vested at December 31, 2019	146	\$ 8.48
Awards granted	430	13.61
Awards vested	(164)	9.39
Awards forfeited	—	—
Non-vested at December 31, 2020	<u>412</u>	<u>13.47</u>

Total unrecognized compensation cost from restricted shares was \$4.7 million as of December 31, 2020, which is expected to be recognized over a weighted-average period of approximately 2.2 years beginning January 1, 2021.

3. Other Income and Expense

Other income and expense consists of the following:

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Interest income	\$ (5,449)	\$ (6,655)	\$ (4,133)
Foreign currency (gain) loss, net	9,608	1,944	1,451
Loss on debt retirement	3,042	8,536	1,512
Other	(806)	(2,052)	(5,447)
Total other (income) expense, net	<u>\$ 6,395</u>	<u>\$ 1,773</u>	<u>\$ (6,617)</u>

4. Income Taxes

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

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
United States	\$ 38,719	\$ 1,138	\$ 5,535
Foreign	347,963	158,672	180,280
Income before taxes	<u>\$ 386,682</u>	<u>\$ 159,810</u>	<u>\$ 185,815</u>

The provision for income taxes includes current federal, state and foreign taxes payable and those deferred because of temporary differences between the financial statement and the tax bases of assets and liabilities.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Current:			
Federal	\$ 4,608	\$ (179)	\$ 22,003
State	134	3	39
Foreign	38,298	11,427	47,318
	<u>43,040</u>	<u>11,251</u>	<u>69,360</u>
Deferred:			
Federal	(7,877)	1,832	5,468
State	(535)	299	2,993
Foreign	11,555	23,800	(21,571)
	<u>3,143</u>	<u>25,931</u>	<u>(13,110)</u>
Income tax expense	<u>\$ 46,183</u>	<u>\$ 37,182</u>	<u>\$ 56,250</u>

The reconciliation between the U.S. federal statutory income tax rate of 21% for 2020, 2019 and 2018 and our income tax expense is as follows:

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
U.S. federal statutory income tax rate	\$ 81,203	\$ 33,560	\$ 39,021
State taxes, net of federal benefit	346	293	1,677
Foreign income taxed at different rates	(27,988)	(10,600)	6,340
Foreign exchange (loss) gain	6,710	84	(3,797)
Change in valuation allowance	(15,624)	18,374	(12,662)
Adjustments related to prior years	(2,575)	(3,190)	1,898
U.S. tax reform (the Tax Act)	—	—	22,284
Income tax credits generated	(21,525)	(9,006)	(18,106)
Foreign earnings and profits	23,853	3,360	387
Foreign derived intangible income	(6,339)	(3,195)	—
Expiration of net operating losses and credits	144	3,084	19,462
Settlements and changes in uncertain tax positions	6,801	3,256	(1,230)
Other	1,177	1,162	976
Income tax expense	<u>\$ 46,183</u>	<u>\$ 37,182</u>	<u>\$ 56,250</u>

The change in valuation allowance for 2020, 2019 and 2018 is primarily the result of changes in our ability to realize net operating loss, tax credit, and other carryforwards.

As a result of certain capital investments, export commitments and employment levels, income from operations in Korea, Malaysia, the Philippines and Singapore was subject to reduced income tax rates and, in some cases, was exempt from income taxes. We recognized \$27.6 million, \$14.7 million and \$1.9 million in tax benefits as a result of the tax holidays in 2020, 2019 and 2018, respectively. The benefit of the tax holidays on diluted earnings per share was approximately \$0.11, \$0.06 and \$0.01 for 2020, 2019 and 2018, respectively.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

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

	December 31,	
	2020	2019
	(In thousands)	
Deferred tax assets:		
Net operating loss carryforwards	\$ 24,791	\$ 25,905
Income tax credits	93,056	98,158
Property, plant and equipment	25,342	27,199
Deferred interest expense	10,306	12,361
Accrued liabilities	57,586	61,812
Receivable	33,295	30,558
Unrealized foreign exchange loss	5,603	2,750
Operating lease liabilities	20,343	18,164
Other	11,741	11,889
Total deferred tax assets	282,063	288,796
Valuation allowance	(121,310)	(136,934)
Total deferred tax assets net of valuation allowance	160,753	151,862
Deferred tax liabilities:		
Property, plant and equipment	28,440	23,747
Deferred gain	11,907	11,193
Unrealized foreign exchange gain	5,620	1,195
Unbilled receivables	2,031	3,580
Operating lease right of use assets	19,704	17,687
Other	4,514	4,125
Total deferred tax liabilities	72,216	61,527
Net deferred tax assets	\$ 88,537	\$ 90,335
Recognized as:		
Other assets	\$ 95,045	\$ 90,465
Other non-current liabilities	(6,508)	(130)
Total	\$ 88,537	\$ 90,335

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.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

Valuation allowance against deferred tax assets consist of the following:

	December 31,	
	2020	2019
	(In thousands)	
Valuation allowance:		
U.S.	\$ 62,820	\$ 80,241
Foreign	58,490	56,693
Total valuation allowance	<u>\$ 121,310</u>	<u>\$ 136,934</u>

We had recorded a valuation allowance against our interest expense carryforward as a result of the limitation of deductibility of interest expense contained in the Tax Act. Realization of the carryforward is dependent on generating sufficient taxable income to overcome the interest limitation provisions. Although utilization of this carryforward 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 valuation allowance is no longer needed and reversed the \$12.4 million valuation allowance in 2020.

Our net operating loss carryforwards (“NOLs”) are as follows:

	December 31,		Expiration
	2020	2019	
	(In thousands)		
U.S. Federal NOLs	\$ 22,683	\$ 23,977	2021-2024
U.S. State NOLs	88,170	93,674	2021-2038
Foreign NOLs	85,960	85,123	2022-2028

At December 31, 2020 and 2019, a portion of our remaining U.S. federal net operating loss carryforward was reserved with a valuation allowance due to ownership change limitations from a prior year acquisition as well as certain state net operating loss carryforwards expected to expire unused.

Our tax credit carryforwards are as follows:

	December 31,		Expiration
	2020	2019	
	(In thousands)		
U.S. Foreign Tax Credits	\$ 70,265	\$ 77,983	2026-2027
U.S. Other Tax Credits	168	1,404	2026
Foreign Tax Credits	22,623	18,771	2021-2030

At December 31, 2020 and 2019, a portion of our U.S. and foreign tax credit carryforwards were reserved with a valuation allowance for the amount expected to expire unused.

Due to the changes in the Tax Act, 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. We estimate that repatriation of these foreign earnings would generate withholding taxes and state income taxes of approximately \$119.1 million.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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 2010-2020. 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 examination, we may be required to make tax assessment payments to proceed with the administrative appeal process. Current examinations include our 2012, 2013 and 2018 Philippine income tax returns and our 2018 Singapore 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,		
	2020	2019	2018
	(In thousands)		
Balance at January 1	\$ 26,242	\$ 25,268	\$ 27,211
Additions based on tax positions related to the current year	10,427	8,944	401
Additions for tax positions of prior years	1,173	188	636
Reductions for tax positions of prior years	(280)	(4,539)	(2,958)
Reductions related to settlements with tax authorities	—	(1,886)	—
Reductions from lapse of statutes of limitations	(4,964)	(1,733)	(22)
Balance at December 31	<u>\$ 32,598</u>	<u>\$ 26,242</u>	<u>\$ 25,268</u>

The net increase in our unrecognized tax benefits was \$6.4 million from December 31, 2019 to December 31, 2020. The increase was primarily related to income attribution offset by decreases from the lapse of statutes of limitations. At December 31, 2020, 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 entity classification and withholding taxes will decrease in the next 12 months by up to \$7.1 million due to the lapse of statutes of limitations in foreign jurisdictions.

The liability related to our unrecognized tax benefits is \$28.3 million as of December 31, 2020 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. The balance of accrued and unpaid interest and penalties is \$4.7 million as of December 31, 2020 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 includes restricted shares held by retirement eligible recipients and is reduced for treasury stock.

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

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands, except per share data)		
Net income available to Amkor common stockholders	\$ 338,138	\$ 120,888	\$ 127,092
Weighted-average shares outstanding — basic	241,509	239,725	239,329
Effect of dilutive securities:			
Stock options and restricted share awards	739	397	412
Weighted-average shares outstanding — diluted	242,248	240,122	239,741
Net income attributable to Amkor per common share:			
Basic	\$ 1.40	\$ 0.50	\$ 0.53
Diluted	1.40	0.50	0.53

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,		
	2020	2019	2018
	(In thousands)		
Stock options and restricted share awards	2,412	5,379	3,662

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

6. Investments

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

	December 31, 2020					
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses (1)	Total Fair Value	Fair Value Level	
					Level 1	Level 2
(In thousands)						
Cash equivalents						
Certificate of deposits	\$ 976	\$ —	\$ —	\$ 976	\$ 976	\$ —
Commercial paper	5,293	—	—	5,293	—	5,293
Corporate bonds	1,744	—	—	1,744	—	1,744
Money market funds	138,290	—	—	138,290	138,290	—
Municipal bonds	400	—	—	400	—	400
Total cash equivalents (2)	146,703	—	—	146,703	139,266	7,437
Short-term investments						
Asset-backed securities	19,111	18	(9)	19,120	—	19,120
Certificate of deposits	5,046	—	—	5,046	5,046	—
Commercial paper	15,148	—	—	15,148	—	15,148
Corporate bonds	50,771	16	(12)	50,775	—	50,775
Municipal bonds	12,702	8	(2)	12,708	—	12,708
U.S. government agency bonds	8,415	3	—	8,418	—	8,418
U.S. government bonds	17,605	3	—	17,608	17,608	—
Variable rate demand notes	300	—	—	300	—	300
Total short-term investments	129,098	48	(23)	129,123	22,654	106,469
Total (3)	\$ 275,801	\$ 48	\$ (23)	\$ 275,826	\$ 161,920	\$ 113,906

(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 year ended December 31, 2020, we sold cash equivalent investments for proceeds of \$27.1 million and realized no gain or loss on such sales.

(3) In January 2021, we increased our available-for-sale debt investments by approximately \$60 million.

The following table summarizes the contractual maturities of our cash equivalents and available-for-sale debt investments as of December 31, 2020:

	Amortized Cost	Fair Value
Within 1 year	\$ 259,652	\$ 259,667
After 1 year through 5 years	14,705	14,713
After 5 years through 10 years	1,444	1,446
Total	\$ 275,801	\$ 275,826

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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, 2020, the amortized cost and the fair market value of our held-to-maturity government bond (Level 1) maturing within a year is \$4.7 million.

The following table summarizes our debt investments as of December 31, 2019:

	December 31, 2019	
	(In thousands)	
Cash equivalent money market funds (Level 1) (1)	\$	384,474
Short-term investment government bond (Level 2) (2)		6,348

(1) The cash equivalent money market funds (Level 1) at December 31, 2019 have been corrected to include \$286.7 million of cash equivalents that were excluded in previously reported amounts. There was no change to total cash and cash equivalents reported on our consolidated balance sheet. We determined this was immaterial to the prior period but have presented the balance as revised for comparability.

(2) The fair market value of the security is \$6.3 million.

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 this program, 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 year ended December 31, 2020 and 2019, we sold accounts receivable totaling \$499.3 million and \$680.4 million, net of discounts and fees of \$2.9 million and \$4.4 million, respectively.

8. Property, Plant and Equipment

Property, plant and equipment consist of the following:

	December 31,	
	2020	2019
	(In thousands)	
Land	\$ 221,304	\$ 219,785
Buildings and improvements	1,625,355	1,571,653
Machinery and equipment	5,736,797	5,303,729
Finance lease machinery and equipment	40,856	34,158
Furniture, fixtures and other equipment	20,774	19,740
Software and computer equipment	231,171	220,264
Construction in progress	48,602	12,593
Total property, plant and equipment	7,924,859	7,381,922
Less accumulated depreciation and amortization	(5,358,857)	(4,977,072)
Total property, plant and equipment, net	<u>\$ 2,566,002</u>	<u>\$ 2,404,850</u>

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

The following table summarizes our depreciation expense:

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Depreciation expense	\$ 509,770	\$ 522,011	\$ 570,304

9. Leases

The components of lease expense were as follows:

	For the Year Ended December 31,	
	2020	2019
	(In thousands)	
Operating lease cost	\$ 52,882	\$ 41,559
Finance lease cost		
Amortization of leased assets	6,520	5,240
Interest on lease liabilities	987	933
Total finance lease cost	7,507	6,173
Short-term lease cost	7,188	8,927
Variable lease cost	5,307	5,416
Net lease cost	\$ 72,884	\$ 62,075

Rent expense was \$43.6 million for the year ended December 31, 2018.

Other information related to leases was as follows:

	For the Year Ended December 31,	
	2020	2019
Supplemental Cash Flows Information (in thousands)		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for operating leases	\$ 53,323	\$ 39,870
Operating cash flows for finance leases	946	893
Financing cash flows for finance leases	9,851	6,574
Weighted Average Remaining Lease Term (years)		
Operating leases	3.9	4.7
Finance leases	3.1	3.6
Weighted Average Discount Rate		
Operating leases	4.0 %	4.2 %
Finance leases	4.0 %	4.6 %

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

Maturities of lease liabilities were as follows:

	December 31, 2020	
	Operating Leases	Finance Leases
	(In thousands)	
2021	\$ 55,196	\$ 13,409
2022	36,850	6,395
2023	19,974	3,777
2024	10,213	1,063
2025	7,925	997
Thereafter	17,255	2,046
Total future minimum lease payments	147,413	27,687
Less: Imputed interest	(13,245)	(1,997)
Total	\$ 134,168	\$ 25,690

As of December 31, 2020, we have entered into additional lease agreements that have not yet commenced of approximately \$8 million.

10. Accrued Expenses

Accrued expenses consist of the following:

	December 31,	
	2020	2019
	(In thousands)	
Payroll and benefits	\$ 143,383	\$ 115,693
Short-term operating lease liability	49,748	40,972
Deferred revenue and customer advances	30,269	16,177
Income taxes payable	26,602	11,661
Short-term finance lease liability	12,634	9,121
Accrued severance plan obligations (Note 12)	10,837	13,408
Accrued interest	10,767	11,638
Other accrued expenses	64,967	48,556
Total accrued expenses	\$ 349,207	\$ 267,226

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

11. Debt

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

	December 31,	
	2020	2019
(In thousands)		
Debt of Amkor Technology, Inc.:		
Senior notes:		
6.625% Senior notes, due September 2027	\$ 525,000	\$ 525,000
Other	2,039	—
Debt of subsidiaries:		
Amkor Technology Korea, Inc.:		
\$30 million revolving credit facility, applicable bank rate plus 1.11% (1)	—	—
Term loan, fund floating rate plus 1.60%, due June 2020	—	24,000
Term loan, fixed rate at 1.80%, due May 2021 (2)	—	—
Term loan, applicable bank rate plus 2.03%, due July 2022	—	40,000
Term loan, applicable bank rate plus 2.03%, due September 2022 (3)	—	60,000
Term loan, applicable bank rate plus 1.77%, due April 2023 (4)	51,541	—
Term loan, LIBOR plus 2.56%, due December 2023	—	200,000
Term loan, applicable bank rate plus 1.98%, due December 2028 (5)	50,000	66,000
Amkor Technology Japan, Inc.:		
Short-term term loans, variable rate (6)	6,663	7,071
Term loan, fixed rate at 0.86%, due June 2022	14,528	23,018
Term loan, fixed rate at 0.60%, due July 2022	3,390	5,064
Term loan, fixed rate at 1.30%, due July 2023	138,499	179,541
Term loan, fixed rate at 1.35%, due December 2024	220,823	262,407
Term loan, fixed rate at 1.20%, due December 2025 (7)	105,569	—
Amkor Assembly & Test (Shanghai) Co., Ltd.:		
Term loan, LIBOR plus 1.60%, due March 2022	28,000	29,000
Term loan, LIBOR Plus 1.40%, due March 2022	18,250	19,250
Other:		
\$250 million senior secured revolving credit facility, LIBOR plus 1.25%-1.75%, due July 2023 (Singapore) (8)	—	—
Credit facility, TAIEX plus the applicable bank rate, due December 2024 (Taiwan) (9)	—	20,000
	1,164,302	1,460,351
Less: Unamortized discount and deferred debt costs, net	(9,956)	(10,117)
Less: Short-term borrowings and current portion of long-term debt	(149,007)	(144,479)
Long-term debt	\$ 1,005,339	\$ 1,305,755

In October 2020, we renewed this revolving credit facility agreement for a one-year term with availability of \$30.0 million. Principal is payable at maturity, six months after draw of funds, and interest is payable monthly in arrears. During the year ended December 31, 2020, we borrowed \$60.0 million and repaid the full \$60.0 million. As of December 31, 2020, \$30.0 million was available to be drawn.

AMKOR TECHNOLOGY, INC.**Notes to Consolidated Financial Statements — (Continued)**

In May 2020, we entered into a KRW ₩60 billion term loan agreement with the option to re-borrow the funds through May 2021. Principal is payable at maturity and interest is payable monthly in arrears, at a fixed rate of 1.80%. During the year ended December 31, 2020, we borrowed and repaid ₩60 billion (\$48.4 million). As of December 31, 2020, ₩60 billion, or approximately \$55 million, was available to be drawn.

In July 2019, we entered into a \$140.0 million term loan due September 2022. Principal is payable at maturity, and interest is payable quarterly in arrears. During the year ended December 31, 2020, we borrowed \$80.0 million available under this loan and repaid the full \$140.0 million.

In April 2020, we borrowed KRW ₩150 billion (US\$122.0 million) under a new term loan due April 2023. Principal is payable at maturity and interest is payable monthly in arrears. During the year ended December 31, 2020, we repaid KRW ₩94 billion (\$86.0 million).

In December 2018, we entered into a term loan agreement pursuant to which we may borrow up to \$90.0 million for capital expenditures. Principal is payable in semiannual installments and interest is payable quarterly in arrears (fixed at a weighted average of 3.88% as of December 31, 2020).

We entered into various short-term term loans which mature semiannually. Principal and interest are payable in monthly installments. As of December 31, 2020, \$4.8 million was available to be drawn.

In December 2020, we borrowed ¥10.9 billion (US\$105.0 million) under a new term loan agreement due December 2025, guaranteed by Amkor Technology, Inc. and our subsidiary, Amkor Technology Singapore Holding Pte, Ltd. Principal is due in 20 equal, quarterly installments plus accrued interest, through maturity.

In July 2018, our subsidiary, Amkor Technology Singapore Holding Pte, Ltd., entered into a \$250.0 million senior secured revolving credit facility, which is guaranteed by Amkor Technology, Inc. The availability for our revolving credit facility is based on the amount of eligible accounts receivable. Principal is payable at maturity. During the year ended December 31, 2020, we borrowed and repaid \$150.0 million. As of December 31, 2020, \$250.0 million was available to be drawn.

In December 2019, we entered into a \$56.0 million borrowing arrangement. This arrangement includes a \$20.0 million term loan and a \$36.0 million revolving credit facility. During the year ended December 31, 2020, we borrowed \$72.0 million and repaid \$92.0 million. As of December 31, 2020, \$36.0 million was available to be drawn.

Certain of our foreign debt is collateralized by the land, buildings, equipment and accounts receivable in the respective locations. The carrying value of all collateral exceeds the carrying amount of the collateralized debt.

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.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

	December 31,	
	2020	2019
Amkor Technology Korea, Inc.:		
Term loan, fund floating rate plus 1.60%, due June 2020	—	3.90 %
Term loan, applicable bank rate plus 1.77%, due April 2023	2.40 %	—
Term loan, LIBOR plus 2.56%, due December 2023	—	4.49 %
Amkor Technology Japan, Inc:		
Short-term term loans, variable rate	0.27 %	0.22 %
Amkor Assembly & Test (Shanghai) Co., Ltd.:		
Term loan, LIBOR plus 1.60%, due March 2022	1.83 %	3.53 %
Term loan, LIBOR Plus 1.40%, due March 2022	1.63 %	3.30 %
Amkor Technology Taiwan Ltd.:		
Revolving credit facility, TAIFX plus the applicable bank rate, due December 2024	—	3.35 %

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. and Amkor Technology Singapore Holding Pte, Ltd. 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 or, in the case of our Singapore Revolver, borrowing availability, 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, 2020 and 2019.

Maturities

	Total Debt
	(In thousands)
Payments due for the year ending December 31,	
2021	\$ 149,007
2022	182,373
2023	170,776
2024	81,461
2025	27,400
Thereafter	553,285
Total debt	<u>\$ 1,164,302</u>

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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.

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

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Balance at January 1	\$ 127,547	\$ 142,298	\$ 153,920
Provision of severance benefits	6,542	1,306	1,939
Severance payments (1)	(42,457)	(10,659)	(7,611)
Foreign currency (gain) loss	6,530	(5,398)	(5,950)
Balance at December 31	98,162	127,547	142,298
Payments remaining with the National Pension Fund	(158)	(161)	(172)
Total accrued severance plan obligations at December 31	98,004	127,386	142,126
Less current portion of accrued severance plan obligations (Note 10)	10,837	13,408	13,179
Non-current portion of accrued severance plan obligations	\$ 87,167	\$ 113,978	\$ 128,947

(1) In 2020, some employees accepted our offer to convert their Korean severance plan participation to a defined contribution plan.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)
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, 2020 and 2019:

	For the Year Ended December 31,	
	2020	2019
(In thousands)		
Change in projected benefit obligation:		
Projected benefit obligation at January 1	\$ 207,448	\$ 175,712
Service cost	29,848	31,355
Interest cost	4,980	5,244
Benefits paid	(8,380)	(11,742)
Actuarial (gain) loss	6,104	12,540
Effects of curtailment	(2,410)	—
Settlement (1)	(31,804)	(5,310)
Foreign exchange (gain) loss	16,723	(351)
Projected benefit obligation at December 31	<u>222,509</u>	<u>207,448</u>
Change in plan assets:		
Fair value of plan assets at January 1	145,158	123,370
Actual gain (loss) on plan assets	11,400	12,221
Employer contributions	25,080	27,134
Settlement (1)	(31,804)	(5,310)
Benefits paid	(8,380)	(11,742)
Foreign exchange gain (loss)	13,757	(515)
Fair value of plan assets at December 31	<u>155,211</u>	<u>145,158</u>
Funded status of the Plans at December 31	<u>\$ (67,298)</u>	<u>\$ (62,290)</u>

(1) In 2020, some employees accepted our offer to convert their defined benefit pension plan participation to a defined contribution plan.

	December 31,	
	2020	2019
(In thousands)		
Amounts recognized in the Consolidated Balance Sheets consist of:		
Prepaid benefit cost (included in non-current assets)	\$ 4,856	\$ 498
Accrued benefit liability (included in pension and severance obligations)	(72,154)	(62,788)
Net amount recognized at year end	<u>\$ (67,298)</u>	<u>\$ (62,290)</u>

The accumulated benefit obligation as of December 31, 2020 and 2019 was \$164.7 million and \$154.7 million, respectively.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

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, 2018	\$ 602	\$ 2,057	\$ 2,659
Amortization and settlement gain included in net periodic pension cost	—	(589)	(589)
Net gain (loss) arising during period	—	(6,890)	(6,890)
Adjustments to unrealized components of defined benefit pension plan included in other comprehensive income (loss)	—	(7,479)	(7,479)
Balance at December 31, 2019	602	(5,422)	(4,820)
Amortization and settlement gain included in net periodic pension cost	—	208	208
Net gain (loss) arising during period	—	394	394
Adjustments to unrealized components of defined benefit pension plan included in other comprehensive income (loss)	—	602	602
Balance at December 31, 2020	\$ 602	\$ (4,820)	\$ (4,218)

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

	December 31,	
	2020	2019
	(In thousands)	
Plans with underfunded or non-funded projected benefit obligation:		
Aggregate projected benefit obligation	\$ 140,424	\$ 197,377
Aggregate fair value of plan assets	68,270	134,589
Plans with underfunded or non-funded accumulated benefit obligation:		
Aggregate accumulated benefit obligation	76,426	71,059
Aggregate fair value of plan assets	25,292	24,043

The following table summarizes total pension expense:

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Components of net periodic pension cost and total pension expense:			
Service cost	\$ 29,848	\$ 31,355	\$ 32,913
Interest cost	4,980	5,244	4,867
Expected return on plan assets	(5,506)	(6,412)	(5,640)
Amortization of prior service cost	—	—	6
Recognized actuarial (gain) loss	56	(374)	(147)
Net periodic pension cost	29,378	29,813	31,999
Settlement (gain) loss	62	(210)	(1,639)
Total pension expense	\$ 29,440	\$ 29,603	\$ 30,360

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.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

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,		
	2020	2019	2018
Discount rate for determining net periodic pension cost	2.5 %	3.1 %	3.2 %
Discount rate for determining benefit obligations at December 31	2.3 %	2.5 %	3.1 %
Rate of compensation increase for determining net periodic pension cost	3.7 %	3.6 %	3.8 %
Rate of compensation increase for determining benefit obligations at December 31	3.7 %	3.7 %	3.6 %
Expected rate of return on plan assets for determining net periodic pension cost	3.8 %	5.1 %	4.9 %

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	65 %	33 %	2 %
Korea defined benefit plan	15 %	40 %	45 %
Philippine defined benefit plan	40 %	50 %	10 %

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, 2020			December 31, 2019 (1)		
	Level 1	Level 2	Total	Level 1	Level 2	Total
	(In thousands)			(In thousands)		
Cash and cash equivalents	\$ 1,219	\$ —	\$ 1,219	\$ 3,572	\$ —	\$ 3,572
Equity securities	16,071	—	16,071	24,342	—	24,342
Debt securities						
Government bonds	6,571	—	6,571	3,106	—	3,106
Treasury notes	8,069	—	8,069	3,516	—	3,516
Mutual and commingled funds						
Equity funds	38,939	7,530	46,469	30,801	6,902	37,703
Debt funds	13,720	17,268	30,988	11,404	15,276	26,680
Guaranteed investment contracts	—	34,281	34,281	—	33,931	33,931
Taiwan retirement fund	12,748	—	12,748	11,359	—	11,359
Other, net	(2,365)	1,160	(1,205)	99	850	949
Total fair value of pension plan assets	<u>\$ 94,972</u>	<u>\$ 60,239</u>	<u>\$ 155,211</u>	<u>\$ 88,199</u>	<u>\$ 56,959</u>	<u>\$ 145,158</u>

(1) In the current year, plan assets were categorized at the fund level rather than the underlying individual investment of the fund. Prior year amounts were reclassified to conform to current year presentation.

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 \$23 million during 2021. 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)
2021	\$ 13,482
2022	11,299
2023	13,528
2024	14,894
2025	18,252
2026 to 2030	125,576

Defined Contribution Plans

We sponsor defined contribution plans in Korea, Malaysia, Taiwan and the U.S. Total defined contribution expense was \$16.5 million, \$13.6 million and \$12.2 million for 2020, 2019 and 2018, respectively.

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

13. Dividends

In October 2020, we announced that our Board of Directors approved the initiation of a regular quarterly cash dividend on our common stock. The first quarterly dividend of \$0.04 per share, representing an initial dividend payment of \$9.7 million in the aggregate, was paid on January 7, 2021 to stockholders of record as of December 18, 2020.

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, 2018	\$ —	\$ 2,659	\$ 21,153	\$ 23,812
Other comprehensive income (loss) before reclassifications	—	(6,890)	2,782	(4,108)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(589)	—	(589)
Other comprehensive income (loss)	—	(7,479)	2,782	(4,697)
Balance at December 31, 2019	\$ —	\$ (4,820)	\$ 23,935	\$ 19,115
Other comprehensive income (loss) before reclassifications	17	394	7,532	7,943
Amounts reclassified from accumulated other comprehensive income (loss)	4	208	—	212
Other comprehensive income (loss)	21	602	7,532	8,155
Balance at December 31, 2020	\$ 21	\$ (4,218)	\$ 31,467	\$ 27,270

(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, 2020 and 2019, our foreign exchange forward contracts consisted of the following:

	December 31, 2020			December 31, 2019		
	Notional Value	Fair Value (Level 2)	Balance Sheet Location	Notional Value	Fair Value (Level 2)	Balance Sheet Location
	(In thousands)					
Japanese Yen	\$ 465,192	\$ 1,279	Other current assets	\$ 391,643	\$ 2,225	Other current assets
Korean Won	161,612	190	Other current assets	74,076	86	Other current assets
Philippine Peso	10,974	(7)	Accrued expenses	—	—	N/A
Total forward contracts	<u>\$ 637,778</u>	<u>\$ 1,462</u>		<u>\$ 465,719</u>	<u>\$ 2,311</u>	

For the years ended December 31, 2020, 2019 and 2018, the derivatives resulted in a net gain of \$35.9 million, \$0.1 million and \$2.5 million respectively, which were 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, including money market funds (Note 6), we use inputs 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 cash equivalent money market funds and restricted cash money market funds. We also review goodwill for impairment annually during the fourth quarter of each year. 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 (Note 15) 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, operating lease right of use assets 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 financial instruments that are not recorded at fair value on a recurring basis:

	December 31, 2020		December 31, 2019	
	Fair Value	Carrying Value	Fair Value	Carrying Value
	(In thousands)			
Senior notes (Level 1)	\$ 570,339	\$ 519,803	\$ 576,875	\$ 519,211
Revolving credit facilities and term loans (Level 2)	647,557	634,543	940,756	931,023
Total financial instruments	<u>\$ 1,217,896</u>	<u>\$ 1,154,346</u>	<u>\$ 1,517,631</u>	<u>\$ 1,450,234</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.

Settlement of Patent License Litigation

Under the terms of a January 2015 patent license litigation settlement, Amkor agreed to pay a total of \$155.0 million in 16 equal quarterly recurring payments commencing in the first quarter of 2015 and continuing through the fourth quarter of 2018.

At December 31, 2020 and 2019, we had no remaining liability under this settlement agreement.

Purchase Commitments

In order to provide packaging and test services, we purchase materials under various long-term supply contracts. Future minimum payments to be made under these contracts for the period 2021 through 2027 are \$11.0 million.

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:

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

- 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.

Net sales by product group consist of the following:

	For the Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Advanced Products	\$ 3,202,094	\$ 2,110,815	\$ 2,118,571
Mainstream Products	1,848,495	1,941,835	2,197,895
Total net sales	<u>\$ 5,050,589</u>	<u>\$ 4,052,650</u>	<u>\$ 4,316,466</u>

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

(2) Mainstream products include wirebond packaging and related test services.

Net sales by end market consist of the following:

	For the Year Ended December 31,		
	2020	2019	2018
Communications (handheld devices, smartphones, tablets)	41 %	38 %	44 %
Consumer (connected home, set-top boxes, televisions, visual imaging, wearables)	24 %	18 %	12 %
Automotive, industrial and other (driver assist, infotainment, performance, safety)	20 %	27 %	26 %
Computing (datacenter, infrastructure, PC/laptop, storage)	15 %	17 %	18 %
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,		
	2020	2019	2018
	(In thousands)		
Japan	\$ 1,152,641	\$ 1,061,265	\$ 1,156,797
Europe, Middle East and Africa	848,301	625,592	605,932
Asia Pacific (excluding Japan)	672,563	487,406	535,894
Total foreign countries	2,673,505	2,174,263	2,298,623
United States	2,377,084	1,878,387	2,017,843
Total net sales	<u>\$ 5,050,589</u>	<u>\$ 4,052,650</u>	<u>\$ 4,316,466</u>

In 2020, one customer accounted for 14.5% of total net sales and another customer accounted for 10.2% of net sales in 2018. No single customer accounted for more than 10% of net sales in 2019.

AMKOR TECHNOLOGY, INC.
Notes to Consolidated Financial Statements — (Continued)

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

	December 31,	
	2020	2019
(In thousands)		
China	\$ 397,849	\$ 419,749
Japan	172,520	177,936
Korea	1,428,855	1,179,966
Malaysia	37,718	41,030
Philippines	187,108	215,941
Portugal	69,458	63,975
Taiwan	264,959	298,982
Other foreign countries	910	1,167
Total foreign countries	2,559,377	2,398,746
United States	6,625	6,104
Total property, plant and equipment, net	<u>\$ 2,566,002</u>	<u>\$ 2,404,850</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 translation adjustments.

Japan Consolidation Activities

During the year ended December 31, 2020, we recorded restructuring charges of \$18.0 million associated with our Japan factory consolidation efforts. We recorded these charges to selling, general and administrative expenses within the Consolidated Statements of Income. All amounts accrued at December 31, 2020 are classified as current liabilities. We expect to complete these restructuring actions in the first half of fiscal 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	<u>\$ 4,365</u>	<u>\$ 1,759</u>	<u>\$ 219</u>	<u>\$ 6,343</u>
Total cumulative charges incurred to date	\$ 14,179	\$ 8,258	\$ 3,523	\$ 25,960
Estimated additional charges to be incurred	\$ 3,640	\$ 275	\$ 151	\$ 4,066

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

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

AMKOR TECHNOLOGY, INC.

Notes to Consolidated Financial Statements — (Continued)

20. Quarterly Results (unaudited)

The following table sets forth our consolidated unaudited financial data for the last eight quarters ended December 31, 2020. We believe that we have included all adjustments, consisting only of normal recurring adjustments necessary for a fair statement of our selected quarterly data. The calculation of basic and diluted per share amounts for each quarter is based on the weighted-average shares outstanding for that period; consequently, the sum of the quarters may not necessarily be equal to the full year basic and diluted net income per share.

	For the Quarter Ended							
	Dec 31, 2020 (a)	Sept 30, 2020	Jun 30, 2020	Mar 31, 2020	Dec 31, 2019 (b)	Sept 30, 2019	Jun 30, 2019 (c)	Mar 31, 2019 (d)
	(In thousands, except per share data)							
Net sales	\$ 1,371,041	\$ 1,354,023	\$ 1,172,909	\$ 1,152,616	\$ 1,178,464	\$ 1,083,917	\$ 895,305	\$ 894,964
Gross profit	278,501	241,085	192,320	188,908	222,984	182,240	123,454	120,761
Operating income	159,179	127,469	86,524	84,073	118,385	78,855	22,510	13,420
Income tax expense	12,679	15,753	12,905	4,846	764	9,141	5,897	21,380
Net income (loss)	126,965	92,897	56,140	64,497	99,816	54,486	(9,006)	(22,668)
Net income (loss) attributable to Amkor	126,674	92,151	55,424	63,889	99,147	54,070	(9,450)	(22,879)
Net income (loss) attributable to Amkor per common share:								
Basic	\$ 0.52	\$ 0.38	\$ 0.23	\$ 0.27	\$ 0.41	\$ 0.23	\$ (0.04)	\$ (0.10)
Diluted	\$ 0.52	\$ 0.38	\$ 0.23	\$ 0.26	\$ 0.41	\$ 0.23	\$ (0.04)	\$ (0.10)

- (a) In the fourth quarter of 2020, we recorded a \$20.2 million discrete tax benefit from the recognition of deferred tax assets we expect to utilize in future years.
- (b) In the fourth quarter of 2019, we recorded a \$3.8 million discrete income tax benefit, primarily related to changes in the valuation of certain deferred tax assets.
- (c) In the second quarter of 2019, we incurred an \$8.4 million charge related to the early redemption of our 2022 Notes.
- (d) In the first quarter of 2019, we recorded a \$14.9 million non-cash discrete income tax charge to reduce the value of certain deferred tax assets.

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, 2018	\$ 83,251	54,421	(19,112)	\$ 118,560
Year ended at December 31, 2019	\$ 118,560	21,496	(3,122)	\$ 136,934
Year ended at December 31, 2020	\$ 136,934	(15,311)	(313)	\$ 121,310

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 Securities and Exchange Commission (“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, 2020, 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, 2020, 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, 2020, 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, 2020, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears under Item 8 of this Annual Report on 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, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

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

The information required by this Item 10, with the exception of information relating to the Code of Business Conduct as disclosed below, is incorporated herein by reference from the material included under the captions “Election of Directors,” “Executive Officers,” “Corporate Governance,” and “Delinquent Section 16(a) Reports” in our definitive proxy statement (to be filed pursuant to Regulation 14A) for our 2021 Annual Meeting of Stockholders.

We have a written Code of Business Conduct applicable to all employees, including our Chief Executive Officer, Chief Financial Officer, and Controller. Our Code of Business Conduct, 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 our 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 “Executive Compensation,” “Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report” in our definitive proxy statement (to be filed pursuant to Regulation 14A) for our 2021 Annual Meeting of Stockholders.

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 to our definitive proxy statement (to be filed pursuant to Regulation 14A) for our 2021 Annual Meeting of Stockholders.

EQUITY COMPENSATION PLAN

The following table summarizes our equity compensation plan as of December 31, 2020:

	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options (In thousands)	(b) Weighted Average Exercise Price of Outstanding Options	(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 (1)	4,366	\$ 9.70	2,891
Equity compensation plans not approved by stockholders	—	—	—
Total equity compensation plans	4,366		2,891

- (1) As of December 31, 2020, a total of 2.9 million shares were reserved for issuance under the 2007 Plan. Shares available for issuance under our 2007 Plan can be granted pursuant to stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares.

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 “Certain Relationships and Related Transactions” and “Proposal One — Election of Directors” in our definitive proxy statement (to be filed pursuant to Regulation 14A) for our 2021 Annual Meeting of Stockholders.

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 proposal “Ratification of Appointment of Independent Registered Public Accounting Firm” in our definitive proxy statement (to be filed pursuant to Regulation 14A) for our 2021 Annual Meeting of Stockholders.

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 Annual Report on Form 10-K are listed in the index under Part II, Item 8 of this Annual Report.

The exhibits required by Item 601 of Regulation S-K which are filed with this report 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			Filed 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.	S-1		3.1	4/8/98
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				Filed 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	Amended and Restated Executive Incentive Bonus Plan*	8-K		10.2	5/5/17	
10.16	Retirement and Release Agreement, dated May 15, 2019, between Amkor Technology, Inc. and Gil C. Tily*	10-Q	6/30/19	10.1	8/1/19	
10.17	Employment Letter Agreement, dated June 24, 2020, between Amkor Technology, Inc. and Guillaume Marie Jean Rutten. *	10-Q	6/30/20	10.3	10/30/20	
10.18	Separation Agreement and Release, effective July 4, 2020, between Amkor Technology, Inc. and Stephen D. Kelley. *	10-Q	6/30/20	10.4	10/30/20	
10.19	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	
10.20	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	
10.21	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	
10.22	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	
10.23	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	
10.24	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	

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Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith	
		Form	Period Ending	Exhibit Filing Date		
10.25	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	
10.26	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	
21.1	List of subsidiaries of the Registrant.					X
23.1	Consent of PricewaterhouseCoopers LLP.					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.

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 19, 2021

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 attorneys-in-fact, and agents, each with the power of substitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Report on 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 might or could do in person, hereby ratifying and conforming all that said attorneys-in-fact and agents of any of them, or his 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 report 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	February 19, 2021
<u>/s/ Megan Faust</u> Megan Faust	Executive Vice President and Chief Financial Officer	February 19, 2021
<u>/s/ James J. Kim</u> James J. Kim	Executive Chairman	February 19, 2021
<u>/s/ Susan Y. Kim</u> Susan Y. Kim	Executive Vice Chairman	February 19, 2021
<u>/s/ Douglas A. Alexander</u> Douglas A. Alexander	Director	February 19, 2021
<u>/s/ Roger A. Carolin</u> Roger A. Carolin	Director	February 19, 2021

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<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Winston J. Churchill</u> Winston J. Churchill	Director	February 19, 2021
<u>/s/ Daniel Liao</u> Daniel Liao	Director	February 19, 2021
<u>/s/ MaryFrances McCourt</u> MaryFrances McCourt	Director	February 19, 2021
<u>/s/ Robert R. Morse</u> Robert R. Morse	Director	February 19, 2021
<u>/s/ Gil C. Tily</u> Gil C. Tily	Director	February 19, 2021
<u>/s/ David N. Watson</u> David N. Watson	Director	February 19, 2021

AMKOR TECHNOLOGY, INC.

LIST OF SUBSIDIARIES

Subsidiary	Jurisdiction of Organization
Amkor Advanced Technology Taiwan, Inc.	Taiwan
Amkor Assembly & Test (Shanghai) Co., Ltd.	China
Amkor Technology Euroservices, S.A.S.	France
Amkor Technology Holding, B.V.	Netherlands
Amkor Technology Holding, B.V., Germany (A Branch of a Netherlands Company)	Germany
Amkor Technology Korea, Inc.	Korea
Amkor Technology Limited	Cayman Islands
Amkor Technology Malaysia Sdn. Bhd.	Malaysia
Amkor Technology Philippines, Inc. (A Branch of a Singapore Company)	Philippines
Amkor Technology Singapore Investment Pte. Ltd.	Singapore
Amkor Technology Singapore Holding Pte. Ltd.	Singapore
Amkor Technology Taiwan Ltd.	Taiwan
Amkor Worldwide Services LLC	Delaware
ATEP - Amkor Technology Portugal, S.A.	Portugal
Guardian Assets, Inc.	Delaware
Amkor Technology Japan, Inc.	Japan

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-149376) of Amkor Technology, Inc. of our report dated February 19, 2021, relating to the financial statements and financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Phoenix, Arizona
February 19, 2021

SECTION 302(a) CERTIFICATION

I, Guillaume Marie Jean Rutten, certify that:

1. I have reviewed this annual report on Form 10-K of Amkor Technology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Guillaume Marie Jean Rutten

By: Guillaume Marie Jean Rutten
Title: President and Chief Executive Officer
Date: February 19, 2021

SECTION 302(a) CERTIFICATION

I, Megan Faust, certify that:

1. I have reviewed this annual report on Form 10-K of Amkor Technology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Megan Faust

By: Megan Faust
Title: Executive Vice President and Chief Financial Officer
Date: February 19, 2021

**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**

I, Guillaume Marie Jean Rutten, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Amkor Technology, Inc. on Form 10-K for the year ended December 31, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Amkor Technology, Inc.

/s/ Guillaume Marie Jean Rutten

By: Guillaume Marie Jean Rutten
Title: President and Chief Executive Officer
Date: February 19, 2021

I, Megan Faust, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Amkor Technology, Inc. on Form 10-K for the year ended December 31, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Amkor Technology, Inc.

/s/ Megan Faust

By: Megan Faust
Title: Executive Vice President and Chief Financial Officer
Date: February 19, 2021