

AMKOR TECHNOLOGY, INC.
Form 10-Q
November 02, 2018

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549
Form 10-Q

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

For the Quarterly Period Ended September 30, 2018

or

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

For the transition period from _____ to _____

Commission File Number 000-29472

AMKOR TECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

23-1722724

Delaware

(State of incorporation)

(I.R.S. Employer

Identification Number)

2045 East Innovation Circle

Tempe, AZ 85284

(Address of principal executive offices and zip code)

(480) 821-5000

(Registrant's telephone number, including area code)

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

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

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

Large accelerated	Accelerated	Non-accelerated	Smaller reporting	Emerging growth
filer <input checked="" type="checkbox"/>	filer <input type="checkbox"/>	filer <input type="checkbox"/>	company <input type="checkbox"/>	company <input type="checkbox"/>

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

The number of outstanding shares of the registrant's Common Stock as of October 26, 2018 was 239,532,959.

QUARTERLY REPORT ON FORM 10-Q
For the Quarter Ended September 30, 2018

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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 2018 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 focus of our research and development activities, (5) the anticipated impact of the Tax Cuts and Jobs Act (the "Tax Act") on our taxes, (6) 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, (7) the creation or release of valuation allowances related to taxes in the future, (8) our repurchase or repayment of outstanding debt or the conversion of debt in the future, (9) payment of dividends, (10) compliance with our covenants, (11) expected contributions to foreign pension plans, (12) liability for unrecognized tax benefits and the potential impact of our unrecognized tax benefits on our effective tax rate, (13) the effect of foreign currency exchange rate exposure on our financial results, (14) the volatility of the trading price of our common stock, (15) changes to our internal controls related to integration of acquired operations and implementation of an enterprise resource planning system, (16) our efforts to enlarge our customer base in certain geographic areas and markets, (17) demand for advanced packages in mobile devices and our technology leadership and potential growth in this market, (18) interest savings from the redemption of our 6.625% Senior Notes due 2021 and (19) 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 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 II, Item 1A of this Quarterly Report on Form 10-Q.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

AMKOR TECHNOLOGY, INC.
CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
	(In thousands, except per share data)			
Net sales	\$1,144,192	\$1,148,884	\$3,235,195	\$3,056,553
Cost of sales	943,485	924,996	2,707,000	2,519,815
Gross profit	200,707	223,888	528,195	536,738
Selling, general and administrative	70,463	75,568	225,886	219,635
Research and development	37,541	42,841	119,546	128,690
Gain on sale of real estate	—	—	—	(108,109)
Total operating expenses	108,004	118,409	345,432	240,216
Operating income	92,703	105,479	182,763	296,522
Interest expense	19,770	20,321	60,908	63,733
Interest expense, related party	—	180	—	1,715
Other (income) expense, net	1,315	3,257	(6,254)	11,150
Total other expense, net	21,085	23,758	54,654	76,598
Income before taxes	71,618	81,721	128,109	219,924
Income tax expense	14,326	21,263	27,438	53,404
Net income	57,292	60,458	100,671	166,520
Net income attributable to non-controlling interests	(630)	(1,194)	(1,874)	(3,029)
Net income attributable to Amkor	\$56,662	\$59,264	\$98,797	\$163,491
Net income attributable to Amkor per common share:				
Basic	\$0.24	\$0.25	\$0.41	\$0.68
Diluted	\$0.24	\$0.25	\$0.41	\$0.68
Shares used in computing per common share amounts:				
Basic	239,370	239,068	239,312	238,873
Diluted	239,766	239,640	239,783	239,610

The accompanying notes are an integral part of these statements.

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AMKOR TECHNOLOGY, INC.
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
 (Unaudited)

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
Net income	\$57,292	\$60,458	\$100,671	\$166,520
Other comprehensive income (loss), net of tax:				
Adjustments to unrealized components of defined benefit pension plans	(45)	15	(126)	263
Foreign currency translation	(6,611)	(969)	(2,664)	11,784
Total other comprehensive income (loss)	(6,656)	(954)	(2,790)	12,047
Comprehensive income	50,636	59,504	97,881	178,567
Comprehensive income attributable to non-controlling interests	(630)	(1,194)	(1,874)	(3,029)
Comprehensive income attributable to Amkor	\$50,006	\$58,310	\$96,007	\$175,538

The accompanying notes are an integral part of these statements.

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CONSOLIDATED BALANCE SHEETS
(Unaudited)

	September 30, 2018	December 31, 2017
	(In thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 547,665	\$ 596,364
Restricted cash	2,559	2,000
Accounts receivable, net of allowances	797,678	798,264
Inventories	228,108	213,649
Other current assets	35,226	33,727
Total current assets	1,611,236	1,644,004
Property, plant and equipment, net	2,714,084	2,695,065
Goodwill	24,813	25,036
Restricted cash	3,896	4,487
Other assets	141,440	139,796
Total assets	\$ 4,495,469	\$ 4,508,388
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings and current portion of long-term debt	\$ 97,646	\$ 123,848
Trade accounts payable	548,864	569,085
Capital expenditures payable	253,756	294,258
Accrued expenses	271,067	330,868
Total current liabilities	1,171,333	1,318,059
Long-term debt	1,267,992	1,240,581
Pension and severance obligations	179,900	182,216
Other non-current liabilities	54,403	47,823
Total liabilities	2,673,628	2,788,679
Commitments and contingencies (Note 16)		
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; 285,335 and 285,129 shares issued; and 239,374 and 239,184 shares outstanding in 2018 and 2017, respectively	285	285
Additional paid-in capital	1,908,171	1,903,357
Retained earnings (accumulated deficit)	84,894	(13,903)
Accumulated other comprehensive income (loss)	19,729	22,519
Treasury stock, at cost, 45,961 and 45,945 shares, in 2018 and 2017, respectively	(216,135)	(215,982)
Total Amkor stockholders' equity	1,796,944	1,696,276
Non-controlling interests in subsidiaries	24,897	23,433
Total equity	1,821,841	1,719,709
Total liabilities and equity	\$ 4,495,469	\$ 4,508,388

The accompanying notes are an integral part of these statements.

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AMKOR TECHNOLOGY, INC.
 CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
 (Unaudited)

	For the Nine Months Ended September 30,	
	2018	2017
	(In thousands)	
Cash flows from operating activities:		
Net income	\$ 100,671	\$ 166,520
Depreciation and amortization	429,181	435,667
Gain on sale of real estate	—	(108,109)
Other operating activities and non-cash items	(2,006)	(8,124)
Changes in assets and liabilities	(100,628)	(72,043)
Net cash provided by operating activities	427,218	413,911
Cash flows from investing activities:		
Payments for property, plant and equipment	(478,036)	(413,974)
Proceeds from sale of property, plant and equipment	1,606	133,320
Acquisition of business, net of cash acquired	—	(43,771)
Other investing activities	3,160	(1,600)
Net cash used in investing activities	(473,270)	(326,025)
Cash flows from financing activities:		
Proceeds from revolving credit facilities	—	75,000
Payments of revolving credit facilities	(75,000)	—
Proceeds from short-term debt	23,341	50,333
Payments of short-term debt	(35,125)	(52,068)
Proceeds from issuance of long-term debt	372,226	223,976
Payments of long-term debt	(279,697)	(398,755)
Payments of long-term debt, related party	—	(17,837)
Payment of deferred consideration for purchase of facility	—	(3,890)
Payments of capital lease obligations	(2,669)	(4,123)
Other financing activities	(2,482)	425
Net cash provided by (used in) financing activities	594	(126,939)
Effect of exchange rate fluctuations on cash, cash equivalents and restricted cash	(3,273)	9,231
Net decrease in cash, cash equivalents and restricted cash	(48,731)	(29,822)
Cash, cash equivalents and restricted cash, beginning of period	602,851	555,495
Cash, cash equivalents and restricted cash, end of period	\$ 554,120	\$ 525,673
Non-cash investing and financing activities:		
Property, plant and equipment included in capital expenditures payable	\$ 254,244	\$ 290,738
Equipment acquired through capital lease	\$ 13,272	\$ 929

The accompanying notes are an integral part of these statements.

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AMKOR TECHNOLOGY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Interim Financial Statements

Basis of Presentation. The Consolidated Financial Statements and related disclosures as of September 30, 2018, and for the three and nine months ended September 30, 2018 and 2017, are unaudited, pursuant to the rules and regulations of the United States Securities and Exchange Commission (“SEC”). The December 31, 2017, Consolidated Balance Sheet data was derived from audited financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America (“U.S.”). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”) have been condensed or omitted pursuant to such rules and regulations. In our opinion, these financial statements include all adjustments (consisting only of normal recurring adjustments) necessary for the fair statement of the results for the interim periods. These financial statements should be read in conjunction with the financial statements included in our Annual Report for the year ended December 31, 2017, filed on Form 10-K with the SEC on February 23, 2018. The results of operations for the three and nine months ended September 30, 2018, are not necessarily indicative of the results to be expected for the full year. Unless the context otherwise requires, all references to “Amkor,” “we,” “us,” “our” or the “company” are to Amkor Technology, Inc. and our subsidiaries.

Effective January 1, 2018, we adopted Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (Topic 606), using the full retrospective transition method as discussed in Note 2. All amounts and disclosures set forth in this Form 10-Q reflect these changes.

On May 22, 2017, we completed the purchase of Nanium, S.A. ("Nanium"). Nanium's financial results have been included in our Consolidated Financial Statements from the date of acquisition (Note 4).

Use of Estimates. The Consolidated Financial Statements have been prepared in conformity with U.S. GAAP, using management’s best estimates and judgments where appropriate. These estimates and judgments affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. The estimates and judgments will also affect the reported amounts for certain revenues and expenses during the reporting period. Actual results could differ materially from these estimates and judgments.

Goodwill. The balance of goodwill in our Consolidated Balance Sheets reflects adjustments for foreign currency translation.

2. New Accounting Standards

Recently Adopted Standards

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606), which was subsequently amended and clarified. The standard is based on the principle that revenue is recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including significant judgments and changes in judgments. The standard permits the use of either full retrospective or modified retrospective methods of adoption.

Effective January 1, 2018, we adopted the requirements of Topic 606 using the full retrospective transition method. The new standard resulted in a change to the timing of revenue recognition, whereby revenue is recognized "over time" as services are performed rather than at a "point in time", generally upon shipment. The new standard also resulted in an increase in accounts receivables, net and a related decrease in inventories and deferred revenues. In accordance with Topic 606, we applied the following principles in connection with the adoption of the new standard:

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

We do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

We do not adjust the promised amount of consideration for the effects of a significant financing component when we expect, at contract inception, that the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less.

We exclude sales, use, value-added and similar taxes from the transaction price, without performing a jurisdiction-by-jurisdiction assessment.

The adoption of the standard impacted our previously reported results as follows:

For the Three Months Ended September
30, 2017

As Previously Reported	New Accounting Pronouncement Adjustment	As Adjusted
------------------------------	--	----------------

(In thousands, except per share data)

Income Statement:

Net sales	\$ 1,135,027	\$ 13,857	\$ 1,148,884
Cost of sales	918,389	6,607	924,996
Gross profit	216,638	7,250	223,888
Income tax expense	18,752	2,511	21,263
Net income	55,630	4,828	60,458
Net income attributable to Amkor	54,435	4,829	59,264
Net income attributable to Amkor per common share - diluted	0.23	0.02	0.25

For the Nine Months Ended September
30, 2017

As Previously Reported	New Accounting Pronouncement Adjustment	As Adjusted
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(In thousands, except per share data)

Income Statement:

Net sales	\$3,038,074	\$ 18,479	\$3,056,553
Cost of sales	2,506,295	13,520	2,519,815
Gross profit	531,779	4,959	536,738
Income tax expense	51,764	1,640	53,404
Net income	162,945	3,575	166,520
Net income attributable to Amkor	159,936	3,555	163,491
Net income attributable to Amkor per common share - diluted	0.67	0.01	0.68

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

	December 31, 2017		
	As	New	As
	Previously	Accounting	As
	Reported	Pronouncement	Adjusted
		Adjustment	
	(In thousands)		
Balance Sheet:			
Accounts receivable, net	\$692,287	\$ 105,977	\$798,264
Inventories	326,492	(112,843)	213,649
Other assets	146,051	(6,255)	139,796
Accrued expenses	374,598	(43,730)	330,868
Other non-current liabilities	46,144	1,679	47,823
Accumulated deficit ⁽¹⁾	(42,851)	28,948	(13,903)

The adjustment to accumulated deficit includes the 2017 and 2016 net income impact for the adoption of Topic 606 (1) of \$2.8 million and \$11.3 million, respectively. The adjustment also includes the cumulative impact to our 2016 beginning accumulated deficit of \$14.8 million.

The adoption of the standard had no impact on cash provided by or used in operating, investing, or financing activities on our consolidated cash flow statements.

In March 2017, the FASB issued ASU 2017-07, Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. ASU 2017-07 requires that the service cost component of net periodic pension costs be presented in the same line item as other compensation costs and all other components of net periodic pension costs be presented in the statement of income as nonoperating expenses. ASU 2017-07 is effective for reporting periods beginning after December 15, 2017 and applied retrospectively. We adopted ASU 2017-07 on January 1, 2018 and estimated the impact on the prior comparative period information presented in the consolidated financial statements applying the principles permitted by the standard. For the three and nine months ended September 30, 2017, the retrospective application resulted in a \$(0.1) million and \$0.1 million reclassification of pension costs from operating income to other (income) expense, net in the Consolidated Statements of Income for the respective periods. Refer to Note 14 for additional information.

Recently Issued Standards

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which was subsequently amended and clarified. ASU 2016-02 requires a dual approach for lease accounting under which a lessee would account for leases as finance leases or operating leases. Both finance leases and operating leases will result in the lessee recognizing a right-of-use asset and a corresponding lease liability. For finance leases the lessee would recognize interest expense and amortization of the right-of-use asset, and for operating leases the lessee would recognize a straight-line lease expense. ASU 2016-02 is effective for reporting periods beginning after December 15, 2018 and requires either a modified retrospective transition approach with application in all comparative periods presented, or an alternative transition method, which permits a company to use its effective date as the date of initial application without restating comparative period financial statements. Early adoption is permitted. We plan to adopt this standard in the first quarter of the fiscal year ending December 31, 2019 using the alternative transition method with the effective date as of January 1, 2019. We are currently evaluating the impact that this guidance may have on our financial statements and

disclosures.

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AMKOR TECHNOLOGY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
(Unaudited)

3. Significant Accounting Policies

Our significant accounting policies are detailed in Note 1 to our Consolidated Financial Statements in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2017. Significant changes to our accounting policies as a result of adopting Topic 606 are discussed below:

Revenue Recognition. We recognize revenue, net of sales, use, value-added and other similar taxes, after the following:

A contract with a customer has been identified

All performance obligations within the customer contract have been identified

The transaction price attributable to the contract has been determined and allocated to each performance obligation, and

The performance obligations have been determined to be satisfied. Performance obligations are deemed to be satisfied when, or as, control of services has been transferred to the customer.

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. 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 September 30, 2018 and December 31, 2017 were \$116.5 million and \$101.9 million, respectively. These amounts are included in accounts receivable, net of allowances in our Consolidated Balance

Sheets.

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.

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

4. Acquisition

On May 22, 2017, we completed the purchase of 100% of the shares of Nanium, a provider of wafer-level fan-out semiconductor packaging solutions. We allocated the purchase price to the assets acquired and liabilities assumed based on their estimated fair values on the date of acquisition. We did not record goodwill as a result of the acquisition.

5. Net Sales by Product Group and End Market

The following table presents net sales by product group:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands)		(In thousands)	
Advanced products (1)	\$582,165	\$563,023	\$1,554,158	\$1,383,990
Mainstream products (2)	562,027	585,861	1,681,037	1,672,563
Total net sales	\$1,144,192	\$1,148,884	\$3,235,195	\$3,056,553

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

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

The following table presents net sales by end market:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
Communications (smartphones, tablets, handheld devices)	47 %	46 %	44 %	41 %
Automotive, industrial and other (driver assist, infotainment, safety, performance)	25 %	24 %	26 %	27 %
Computing (datacenter, infrastructure, PC/laptop, storage)	17 %	17 %	18 %	18 %
Consumer (set-top boxes, televisions, connected home, personal electronics, visual imaging)	11 %	13 %	12 %	14 %
Total net sales	100 %	100 %	100 %	100 %

6. Other Income and Expense

Other income and expense consists of the following:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands)			
Interest income	\$(941)	\$(843)	\$(2,884)	\$(2,309)

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Foreign currency (gain) loss, net	1,352	(454)	(1,045)	8,678
Loss on debt retirement	1,149	4,424	1,167	4,835
Other	(245)	130	(3,492)	(54)
Other (income) expense, net	\$1,315	\$3,257	\$(6,254)	\$11,150

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

7. Income Taxes

In December 2017, the Tax Cuts and Jobs Act (the "Tax Act") was signed into law. Accounting Standards Codification ("ASC") 740, Income Taxes, requires companies to recognize the effect of tax law changes in the period of enactment even though the effective date for most provisions is for tax years beginning after December 31, 2017. Given the significance of the Tax Act, the SEC staff issued Staff Accounting Bulletin No. 118, which allows registrants to record provisional amounts during a one year "measurement period" similar to that used when accounting for business combinations. However, the measurement period is deemed to have ended earlier when the registrant has obtained, prepared and analyzed the information necessary to finalize its accounting. During the measurement period, impacts of the law are expected to be recorded at the time a reasonable estimate for all or a portion of the effects can be made, and provisional amounts can be recognized and adjusted as information becomes available, prepared or analyzed.

We have reported provisional amounts for the income tax effects of the Tax Act for which the accounting is incomplete, but a reasonable estimate could be determined in our financial statements for the year ended December 31, 2017. There were no specific impacts of the Tax Act that could not be reasonably estimated. Our estimate of the impact of the Tax Act may be adjusted throughout the allowable measurement period. We have not completed the accounting for any of the income tax effects of the Tax Act during the nine months ended September 30, 2018 as we continue to collect additional information, prepare and analyze the information and evaluate any regulatory guidance or clarifications, and evaluate any collateral impact on state income taxes. We have not made adjustments to the provisional amounts reported for the year ended December 31, 2017, nor have we concluded on any accounting policy elections. Changes to our provisional estimates and further analysis could impact our judgments, elections and assertions.

Income tax expense of \$27.4 million for the nine months ended September 30, 2018 reflects income taxes of our various operations, including foreign withholding taxes and minimum taxes. Income tax expense also reflects income taxed in foreign jurisdictions where we benefit from tax holidays.

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. Except for deferred tax assets in Portugal, we consider it more likely than not that we will have sufficient taxable income to allow us to realize most of our foreign deferred tax assets.

We maintain a valuation allowance on a portion of our U.S. net deferred tax assets, for net operating loss carryforwards not expected to be realized due to Global Intangible Low-Taxed Income ("GILTI") and foreign tax credit carryforwards expected to expire unused. 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.

Unrecognized tax benefits represent reserves for potential tax deficiencies or reductions in tax benefits that could result from federal, state or foreign tax audits. Gross unrecognized tax benefits decreased from \$27.2 million at December 31, 2017, to \$24.6 million as of September 30, 2018. All of our unrecognized tax benefits would reduce our

effective tax rate, if recognized. Our unrecognized tax benefits are subject to change for effective settlement of examinations, changes in the recognition threshold of tax positions, the expiration of statutes of limitations and other factors. Tax return examinations involve uncertainties, and there can be no assurance that the outcome of examinations will be favorable.

8. Earnings Per Share

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

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

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

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

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands, except per share data)			
Net income attributable to Amkor common stockholders	\$56,662	\$59,264	\$98,797	\$163,491
Weighted-average number of common shares outstanding — basic	239,370	239,068	239,312	238,873
Effect of dilutive securities:				
Stock options and restricted share awards	396	572	471	737
Weighted-average number of common shares outstanding — diluted	239,766	239,640	239,783	239,610
Net income attributable to Amkor per common share:				
Basic	\$0.24	\$0.25	\$0.41	\$0.68
Diluted	0.24	0.25	0.41	0.68

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 Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands)			
Stock options and restricted share awards	3,656	3,483	3,544	3,463

9. Equity and Accumulated Other Comprehensive Income (Loss)

Changes in equity consist of the following:

	Attributable to Amkor	Attributable to Non-controlling Interests	Total
	(In thousands)		
Equity at December 31, 2017	\$1,696,276	\$ 23,433	\$1,719,709
Net income	98,797	1,874	100,671
Other comprehensive income (loss)	(2,790) —	(2,790)
Issuance of stock through employee share-based compensation plans	1,023	—	1,023

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Treasury stock acquired through surrender of shares for tax withholding	(153)	—	(153)
Share-based compensation	3,791	—	3,791
Subsidiary dividends paid to non-controlling interests	—	(410)	(410)
Equity at September 30, 2018	\$1,796,944	\$ 24,897	\$1,821,841

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

	Attributable to Amkor	Attributable to Non-controlling Interests	Total
	(In thousands)		
Equity at December 31, 2016	\$1,409,692	\$ 19,825	\$1,429,517
Net income	163,491	3,029	166,520
Other comprehensive income (loss)	12,047	—	12,047
Issuance of stock through employee share-based compensation plans	2,421	—	2,421
Treasury stock acquired through surrender of shares for tax withholding	(1,427)	—	(1,427)
Share-based compensation	3,872	—	3,872
Subsidiary dividends paid to non-controlling interests	—	(412)	(412)
Equity at September 30, 2017	\$1,590,096	\$ 22,442	\$1,612,538

Changes in accumulated other comprehensive income (loss), net of tax, consist of the following:

	Defined Benefit Pension	Foreign Currency Translation	Total
	(In thousands)		
Accumulated other comprehensive income (loss) at December 31, 2017	\$6,303	\$ 16,216	\$22,519
Other comprehensive income (loss) before reclassifications	—	(2,664)	(2,664)
Amounts reclassified from accumulated other comprehensive income (loss)	(126)	—	(126)
Other comprehensive income (loss)	(126)	(2,664)	(2,790)
Accumulated other comprehensive income (loss) at September 30, 2018	\$6,177	\$ 13,552	\$19,729
	Defined Benefit Pension	Foreign Currency Translation	Total
	(In thousands)		
Accumulated other comprehensive income (loss) at December 31, 2016	\$1,138	\$ 5,124	\$6,262
Other comprehensive income (loss) before reclassifications	—	11,784	11,784
Amounts reclassified from accumulated other comprehensive income (loss)	263	—	263
Other comprehensive income (loss)	263	11,784	12,047
Accumulated other comprehensive income (loss) at September 30, 2017	\$1,401	\$ 16,908	\$18,309

Amounts reclassified out of accumulated other comprehensive income (loss) are included as a component of net periodic pension cost (Note 14).

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

10. 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 three and nine months ended September 30, 2018, we sold accounts receivable totaling \$193.6 million and \$622.2 million, net of discounts and fees of \$1.6 million and \$5.4 million, respectively. For the three and nine months ended September 30, 2017, we sold accounts receivable totaling \$135.1 million and \$400.4 million, net of discounts and fees of \$1.3 million and \$2.9 million, respectively.

11. Property, Plant and Equipment

Property, plant and equipment consist of the following:

	September 30, 2018	December 31, 2017
	(In thousands)	
Land	\$224,589	\$224,894
Land use rights	26,845	26,845
Buildings and improvements	1,510,082	1,384,846
Machinery and equipment	5,206,050	4,938,291
Software and computer equipment	209,051	200,500
Furniture, fixtures and other equipment	16,977	15,722
Construction in progress	41,843	104,910
Total property, plant and equipment	7,235,437	6,896,008
Accumulated depreciation and amortization	(4,521,353)	(4,200,943)
Total property, plant and equipment, net	\$2,714,084	\$2,695,065

The following table summarizes our depreciation expense:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands)			
Depreciation expense	\$143,334	\$148,099	\$427,836	\$434,394

As part of our plan to consolidate factory operations in Korea, we sold the land and buildings comprising our K1 factory in May 2017 for \$142.4 million. We received 10% of the sale price at signing in November 2016 and the balance at closing, at which time we recognized a pre-tax gain of \$108.1 million.

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

12. Accrued Expenses

Accrued expenses consist of the following:

	September 30, 2018	December 31, 2017
	(In thousands)	
Payroll and benefits	\$ 122,520	\$ 134,785
Income taxes payable	35,081	56,664
Accrued interest	19,520	11,873
Deferred revenue and customer advances	15,908	14,740
Accrued severance plan obligations	14,513	15,190
Accrued settlement costs	9,688	37,783
Other accrued expenses	53,837	59,833
Total accrued expenses	\$ 271,067	\$ 330,868

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AMKOR TECHNOLOGY, INC.
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
 (Unaudited)

13. Debt

Following is a summary of short-term borrowings and long-term debt:

	September 30, 2018	December 31, 2017
	(In thousands)	
Debt of Amkor Technology, Inc.:		
Senior notes:		
6.625% Senior notes, due June 2021 (1)	\$—	\$ 200,000
6.375% Senior notes, due October 2022	524,971	524,971
Debt of subsidiaries:		
Amkor Technology Korea, Inc. (2):		
\$75 million revolving credit facility, foreign currency funding-linked base rate plus 1.60%, due September 2018 (3)	—	75,000
Term loan, LIBOR plus 2.70%, due December 2019	—	55,000
Term loan, foreign currency funding-linked base rate plus 1.32%, due May 2020	141,000	150,000
Term loan, fixed rate at 3.70%, due May 2020	120,000	120,000
Term loan, fund floating rate plus 1.60%, due June 2020 (4)	150,000	86,000
Term loan, LIBOR plus 2.34%, due September 2021 (3)	75,000	—
J-Devices Corporation:		
Short-term term loans, variable rate (5)	19,358	30,455
Term loans, fixed rate at 0.53%, due April 2018	—	6,744
Term loan, fixed rate at 0.86%, due June 2022	32,981	39,933
Term loan, fixed rate at 0.60%, due July 2022	7,036	8,430
Term loan, fixed rate at 1.30%, due July 2023 (1)	228,672	—
Other:		
\$250 million senior secured revolving credit facility, LIBOR plus 1.25%-1.75%, due July 2023 (Singapore) (6)	—	—
Revolving credit facility, TAIEX plus the applicable bank rate, due November 2020 (Taiwan) (7)	20,000	20,000
Term loan, LIBOR plus 1.80%, due December 2019 (China)	48,500	49,000
	1,367,518	1,365,533
Less: Unamortized premium and deferred debt costs, net	(1,880)	(1,104)
Less: Short-term borrowings and current portion of long-term debt	(97,646)	(123,848)
Long-term debt	\$1,267,992	\$ 1,240,581

(1) In August 2018, we redeemed all \$200 million of our 6.625% Senior Notes due 2021 ("Notes"). In accordance with the terms of the indenture governing the Notes, the redemption price was 100% of the principal amount of the Notes plus accrued and unpaid interest. We recorded a \$0.8 million charge for the write-off of the associated unamortized debt issuance costs. The redemption of the Notes was funded with proceeds from our ¥26.0 billion (US\$233.2 million) term loan agreement entered into in July 2018 by J-Devices Corporation and guaranteed by Amkor Technology, Inc. Principal and interest are payable in quarterly installments.

(2) In October 2018, Amkor Technology Korea, Inc. entered into a revolving credit facility agreement with availability of \$30.0 million. Principal will be payable at the maturity date of October 2019. Interest will be payable monthly in

arrears, at LIBOR plus the applicable bank rate.

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

In June 2018, we extended our \$75.0 million credit facility from June 2018 to September 2018. In September 2018, we entered into a \$75.0 million term loan agreement to repay the outstanding balance of our \$75.0 million credit facility due September 2018. The new term loan extended the maturity to September 2021. Principal is payable at maturity. Interest is due quarterly in arrears, at LIBOR plus 2.34% (4.68% as of September 30, 2018).

In May 2015, we entered into a term loan agreement pursuant to which we may borrow up to \$150.0 million for capital expenditures. Principal is payable at maturity. Interest is payable quarterly in arrears, at a fund floating rate plus 1.60% (4.28% as of September 30, 2018). In the second quarter of 2018, we borrowed \$64.0 million on this facility and repaid other Amkor Technology Korea, Inc. term loans with earlier maturity dates.

We entered into various short-term term loans which mature semiannually. Principal and interest are payable in monthly installments. Interest as of September 30, 2018 is at TIBOR plus 0.15% to 0.20% (weighted average of 0.17% as of September 30, 2018). As of September 30, 2018, \$4.4 million was available to be drawn.

In July 2018, the senior secured revolving credit facility of Amkor Technology, Inc. was terminated and replaced by a new facility entered into by our subsidiary, Amkor Technology Singapore Holding Pte, Ltd., and guaranteed by Amkor Technology, Inc. We recorded a \$0.4 million charge for the write-off of the associated unamortized debt issuance costs relating to the terminated credit facility. The availability for the new revolving credit facility is based on the amount of eligible accounts receivable. As of September 30, 2018, we had availability of \$250.0 million under the new senior secured revolving credit facility with no outstanding standby letters of credit.

In November 2015, we entered into a \$39.0 million revolving credit facility. Principal is payable at maturity. Interest is payable monthly, at TAIFX plus the applicable bank rate (3.67% as of September 30, 2018). As of September 30, 2018, \$19.0 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 the collateral exceeds the carrying amount of the debt.

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. also guarantees 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. We have never paid a dividend to our stockholders and we do not have any present plans for doing so. We were in compliance with all debt covenants at September 30, 2018.

14. Pension Plans

Foreign Defined Benefit Pension Plans

Our subsidiaries in Japan, Korea, Malaysia, the Philippines and Taiwan sponsor defined benefit pension plans. Charges to expense are based upon actuarial analyses. The components of net periodic pension cost for these defined benefit pension plans are as follows:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
	2018	2017	2018	2017
	(In thousands)			
Service cost	\$8,124	\$8,445	\$24,839	\$25,215
Interest cost	1,199	1,009	3,668	3,029
Expected return on plan assets	(1,390)	(1,124)	(4,249)	(3,385)
Amortization of prior service cost	—	—	—	31

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Recognized actuarial (gain) loss	(36)	18	(113)	62
Net periodic pension cost	\$7,897	\$8,348	\$24,145	\$24,952

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

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.

Defined Contribution Pension Plans

We sponsor defined contribution pension plans in Korea, Malaysia, Taiwan and the U.S. The following table summarizes our defined contribution expense:

	For the Three		For the Nine	
	Months Ended		Months Ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(In thousands)			

Defined contribution expense	\$2,595	\$2,230	\$9,608	\$8,009
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15. 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.

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. Money market funds are valued using quoted market prices in active markets for identical assets.

Recurring fair value measurements consist of the following:

	September 30,		December 31,	
	2018	2017	2018	2017
	(In thousands)			
Cash equivalent money market funds (Level 1)	\$38,557	\$ 121,627		
Restricted cash money market funds (Level 1)	2,559	2,000		

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

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AMKOR TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(Unaudited)

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:

	September 30, 2018		December 31, 2017	
	Fair Value	Carrying Value	Fair Value	Carrying Value
	(In thousands)			
Senior notes (Level 1)	\$535,544	\$524,950	\$745,943	\$723,867
Revolving credit facilities and term loans (Level 2)	838,094	840,688	639,689	640,562
Total debt	\$1,373,638	\$1,365,638	\$1,385,632	\$1,364,429

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.

16. 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.

In accordance with the accounting guidance for loss contingencies, including legal proceedings, lawsuits, pending claims and other legal matters, we accrue for a loss contingency when we conclude that the likelihood of a loss is probable and the amount of the loss can be reasonably estimated. 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.

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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 and selectively growing our scale and scope through strategic investments.

We are an industry leader in developing and commercializing cost-effective advanced packaging and test technologies. These advanced technology solutions provide increased value to our customers. This is particularly true in the mobile communications market, where growth has outpaced the semiconductor industry rate. 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. 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. For example, we are continuing our efforts to expand our sales to Chinese and Taiwanese fabless chip companies that make up a significant portion of the growing mid-tier and entry-level segments of the mobile device market. In addition, we are seeking new customers and deepening our engagement with existing customers. This includes an expanded emphasis on the automotive 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. For example, in May 2017 we acquired Nanium, which has strengthened our position in the market for wafer-level fan-out packaging. In December 2015, we completed the acquisition of J-Devices, the largest provider of outsourced semiconductor assembly and test services in Japan. J-Devices is primarily focused in the automotive, industrial and consumer end markets. We believe that selective growth through joint ventures, acquisitions and other strategic investments can help diversify our revenue streams, improve our profits, broaden our portfolio of services and continue our technological leadership.

Our IDM customers include: Intel Corporation; Renesas Electronics Corporation; STMicroelectronics N.V.; Texas Instruments Incorporated and Toshiba Corporation. Our fabless customers include: Broadcom Limited, Qualcomm Incorporated and Socionext Inc. Our contract foundry customers include: GlobalFoundries Inc. and Taiwan Semiconductor Manufacturing Company Limited.

As a supplier in the semiconductor industry, our business is cyclical and impacted by broad economic factors. Historically, there has been a strong correlation between world-wide 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 economic slowdown or subsequent economic recovery.

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 II, Item 1A of this Quarterly Report on Form 10-Q.

We operate in a capital-intensive industry and have a significant level of debt. 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, 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 things, the performance of our

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business, our capital expenditure levels and our ability to repay debt out of our operating cash flows or proceeds from debt or equity financings.

Effective January 1, 2018, we adopted Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), utilizing the full retrospective transition method. The prior periods presented here have been revised to reflect this change. For more information, see Note 2 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Financial Summary

Our net sales decreased \$4.7 million or 0.4% to \$1,144.2 million for the three months ended September 30, 2018 from \$1,148.9 million for the three months ended September 30, 2017. Gross margin for the three months ended September 30, 2018 decreased to 17.5% from 19.5% for the three months ended September 30, 2017. The decline in gross margin was primarily attributable to changes in the mix of products sold with higher material content during the period. This was partially offset by benefits realized from our 2017 factory consolidation efforts in Japan.

Our capital expenditures are primarily for investments in advanced packaging and test equipment and totaled \$478.0 million for the nine months ended September 30, 2018, compared to \$414.0 million for the nine months ended September 30, 2017. The increase in spending is due to continued investment in our business and expansion of our production facilities.

Net cash provided by operating activities was \$427.2 million for the nine months ended September 30, 2018, compared to \$413.9 million for the nine months ended September 30, 2017. This increase was primarily due to an increase in our net income, excluding the gain on sale of our K1 factory in the prior year. This increase was partially offset by changes in our net working capital.

In July 2018, we entered into a ¥26.0 billion term loan agreement and borrowed ¥26.0 billion (US\$233.2 million). We used the proceeds from the term loan to repay all of our \$200 million outstanding 6.625% Senior Notes due 2021 in August 2018. This refinancing is expected to generate net annualized interest savings of approximately \$11 million.

In July 2018, we also replaced our senior revolving credit facility. The terms of the new credit facility are substantially the same as the old facility, except that, among other things, the availability under the new credit facility has been increased from \$200 million to \$250 million and the termination date has been extended from December 2019 to July 2023.

Results of Operations

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

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2017	
Net sales	100.0%	100.0%	100.0%	100.0%
Materials	40.3 %	36.9 %	38.7 %	36.0 %
Labor	15.1 %	15.1 %	16.2 %	16.0 %
Other manufacturing costs	27.1 %	28.5 %	28.8 %	30.4 %
Gross margin	17.5 %	19.5 %	16.3 %	17.6 %
Operating income	8.1 %	9.2 %	5.6 %	9.7 %

Net income attributable to Amkor 5.0 % 5.2 % 3.1 % 5.3 %

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Net Sales

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,				
	2018	2017	Change	2018	2017	Change		
	(In thousands, except percentages)							
Net sales	\$1,144,192	\$1,148,884	\$(4,692)	(0.4)%	\$3,235,195	\$3,056,553	\$178,642	5.8%

Net sales were stable for the three months ended September 30, 2018, compared to the three months ended September 30, 2017.

The increase in net sales for the nine months ended September 30, 2018, compared to the nine months ended September 30, 2017, was attributable to increased participation in the major smartphone ecosystems and increased demand in the computing and automotive markets.

Gross Margin

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,			
	2018	2017	Change	2018	2017	Change	
	(In thousands, except percentages)						
Gross profit	\$200,707	\$223,888	\$(23,181)	\$528,195	\$536,738	\$(8,543)	
Gross margin	17.5	% 19.5	% (2.0))% 16.3	% 17.6	% (1.3))%

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 direct relationship between our revenue levels and gross margin where relatively modest increases or decreases can have a significant effect.

Gross margin decreased for the three and nine months ended September 30, 2018 compared to the three and nine months ended September 30, 2017 primarily due to changes in the mix of products sold with higher material content during the period. This was partially offset by benefits realized from our 2017 factory consolidation efforts in Japan.

Selling, General and Administrative

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,				
	2018	2017	Change	2018	2017	Change		
	(In thousands, except percentages)							
Selling, general and administrative	\$70,463	\$75,568	\$(5,105)	(6.8)%	\$225,886	\$219,635	\$6,251	2.8%

Selling, general and administrative expenses for the three months ended September 30, 2018 decreased compared to the three months ended September 30, 2017 primarily due to decreased employee compensation costs.

Selling, general and administrative expenses for the nine months ended September 30, 2018 increased compared to the nine months ended September 30, 2017 primarily due to net proceeds from a one-time legal settlement received in the second quarter of 2017.

Research and Development

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change

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(In thousands, except percentages)

Research and development \$37,541 \$42,841 \$(5,300) (12.4)% \$119,546 \$128,690 \$(9,144) (7.1)%

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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. Research and development expenses for the three and nine months ended September 30, 2018 decreased compared to the three and nine months ended September 30, 2017. We experienced reductions in costs for projects that moved into production, partially offset by development projects, primarily at our K5 factory and research and development facility in Korea.

Other Income and Expense

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,				
	2018	2017	Change	2018	2017	Change		
	(In thousands, except percentages)							
Interest expense, including related party	\$19,770	\$20,501	\$(731)	(\$3.6)	\$60,908	\$65,448	\$(4,540)	(6.9)
Foreign currency (gain) loss, net	1,352	(454)	1,806	>(100)%	(1,045)	8,678	(9,723)	>(100)%
Other (income) expense, net	(37)	3,711	(3,748)	>(100)%	(5,209)	2,472	(7,681)	>(100)%
Total other expense, net	\$21,085	\$23,758	\$(2,673)	(11.3)	\$54,654	\$76,598	\$(21,944)	(28.6)

Interest expense decreased for the three and nine months ended September 30, 2018 compared to the three and nine months ended September 30, 2017, primarily due to the redemption of \$200 million of our 6.625% Senior Notes due 2021 in July 2017 and the remaining \$200 million of these same notes in August 2018. The early repayment of the notes resulted in losses on debt retirement of \$0.8 million in the three and nine months ended September 30, 2018 and \$4.4 million in the three and nine months ended September 30, 2017, which is included in other (income) expense, net.

The changes in foreign currency (gain) loss, net for the three and nine months ended September 30, 2018 and the three and nine months ended September 30, 2017 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.

Income Tax Expense

	For the Three Months Ended September 30,			For the Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
	(In thousands)					
Income tax expense	\$14,326	\$21,263	\$(6,937)	\$27,438	\$53,404	\$(25,966)

The majority of our income is earned and taxed in foreign jurisdictions in the Asia Pacific region with applicable tax rates similar to the U.S. federal and state combined tax rate of approximately 25%. 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 income tax expense for the nine months ended September 30, 2017 includes the income tax on the gain on the sale of the land and buildings comprising our K1 factory in May 2017.

During the nine months ended September 30, 2018 and 2017, our subsidiaries in Korea, Malaysia, the Philippines and Singapore operated under tax holidays. The tax holiday granted to certain operations in Taiwan and Malaysia expired

as of December 31, 2017 and March 31, 2018, respectively. The tax holidays granted to certain operations in the Philippines expire in 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.

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Liquidity and Capital Resources

We assess our liquidity based on our current expectations regarding sales, operating expenses, capital spending, 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 and availability under our credit facilities, will be sufficient to fund our working capital, capital expenditure, debt service and other financial requirements for at least the next twelve months. Our liquidity is affected by, among other things, volatility in the global economy and credit markets, the performance of our business, our capital expenditure levels, other uses of our cash including any purchases of stock under our 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 II, Item 1A of this Quarterly Report on Form 10-Q.

Our primary source of cash and the source of funds for our operations are cash flows from operations, current cash and cash equivalents, borrowings under available credit facilities and proceeds from any additional debt or equity financings. As of September 30, 2018, we had cash and cash equivalents of \$547.7 million. Included in our cash balance as of September 30, 2018, is \$491.1 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 will not be subject to U.S. federal income tax. If we were to distribute this offshore cash to the U.S. as dividends from our foreign subsidiaries, we may be subject to foreign withholding and state income taxes.

In July 2018, the senior secured revolving credit facility of Amkor Technology, Inc. was terminated and replaced by a new facility entered into by our subsidiary, Amkor Technology Singapore Holding Pte, Ltd. ("Singapore Revolver"), and guaranteed by Amkor Technology, Inc. The availability for the Singapore Revolver is based on the amount of eligible accounts receivable. As of September 30, 2018, we had availability of \$250.0 million under the new first lien senior secured revolving credit facility with no outstanding standby letters of credit. We refer you to Note 13 to our Consolidated Financial Statements in Part 1, Item 1 of this Quarterly Report on Form 10-Q for additional information. Our foreign subsidiaries had \$269.0 million available to be drawn under secured revolving credit facilities, including the Singapore Revolver, and \$4.4 million available to be borrowed under secured term loan credit facilities for working capital purposes and capital expenditures.

As of September 30, 2018, we had \$1,365.6 million of debt. Our scheduled principal repayments on debt include \$26.0 million due over the remainder of 2018, \$163.2 million due in 2019, \$436.3 million due in 2020, \$131.3 million due in 2021, \$576.4 million due in 2022, and \$34.3 million due thereafter. We were in compliance with all debt covenants at September 30, 2018, and we expect to remain in compliance with these covenants for at least the next twelve months.

In August 2018, we redeemed all \$200 million of our 6.625% Senior Notes due 2021. The redemption of the Notes was funded with proceeds from our ¥26.0 billion (US\$233.2 million) term loan agreement entered into in July 2018 by J-Devices Corporation and guaranteed by Amkor Technology, Inc. This refinancing is expected to generate net annualized interest savings of approximately \$11 million. We refer you to Note 13 to our Consolidated Financial Statements in Part 1, Item 1 of this Quarterly Report on Form 10-Q for additional information.

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 nine months ended September 30, 2018 and 2017, we sold accounts receivable totaling \$622.2 million and \$400.4 million, net of discounts and fees of \$5.4 million and \$2.9 million, respectively.

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

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the open market, through privately negotiated transactions or otherwise and is subject to the terms of our indentures and other debt agreements, market conditions and other factors.

Certain debt agreements have restrictions on dividend payments and the repurchase of stock and subordinated securities. These restrictions are determined in part by calculations based upon cumulative net income or borrowing availability. We have never paid a dividend to our stockholders and we do not have any present plans for doing so. From time to time, Amkor Technology, Inc. also guarantees certain debt of our subsidiaries.

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.

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 September 30, 2018, 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 plan since 2012.

Investments

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. We expect 2018 capital expenditures to be approximately \$600 million. During the nine months ended September 30, 2018, our capital expenditures totaled \$478.0 million. Ultimately, the amount of our 2018 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 II, Item 1A of this Quarterly Report on Form 10-Q 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 the nine months ended September 30, 2018 and 2017, was as follows:

	For the Nine Months Ended September 30,	
	2018	2017
	(In thousands)	
Operating activities	\$427,218	\$413,911
Investing activities	(473,270)	(326,025)
Financing activities	594	(126,939)

Operating activities: Our cash flows provided by operating activities for the nine months ended September 30, 2018, increased by \$13.3 million compared to the nine months ended September 30, 2017, primarily due to an increase in our net income, excluding the gain on sale of our K1 factory in the prior year. This increase was partially offset by changes in our net working capital.

Investing activities: Our cash flows used in investing activities are principally for payments for property, plant and equipment, which increased compared to the nine months ended September 30, 2017, primarily due to continued investment

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in our business and expansion of our production facilities. The net cash used in investing activities for the nine months ended September 30, 2017, also included a payment for the acquisition of Nanium and receipt of the remaining proceeds for the sale of the K1 factory in Korea.

Financing activities: The net cash provided by financing activities for the nine months ended September 30, 2018, was primarily due to net borrowings in Japan, offset by the full redemption of our Senior Notes due 2021. The net cash used in financing activities for the nine months ended September 30, 2017 was primarily driven by the redemption of our Senior Notes due 2021, partially offset by the net borrowings in China and Japan.

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 Nine Months Ended September 30,	
	2018	2017
	(In thousands)	
Net cash provided by operating activities	\$427,218	\$413,911
Payments for property, plant and equipment	(478,036)	(413,974)
Proceeds from sale of property, plant and equipment	1,606	133,320
Free cash flow	\$(49,212)	\$133,257

Contractual Obligations

The following table summarizes our contractual obligations at September 30, 2018, 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,					Thereafter
		2018 - Remaining	2019	2020	2021	2022	
	(In thousands)						
Total debt	\$1,367,518	\$25,989	\$163,230	\$436,288	\$131,288	\$576,422	\$34,301
Scheduled interest payment obligations (1)	200,878	24,043	59,108	45,750	37,455	34,300	222
Purchase obligations (2)	90,419	69,621	8,751	5,110	4,102	1,041	1,794
Operating lease obligations	99,538	6,958	25,712	16,673	12,066	8,715	29,414
Capital lease obligations (3)	18,121	1,451	6,085	3,142	1,832	924	4,687
Severance obligations (4)	141,301	3,697	13,230	11,920	10,765	9,704	91,985
Settlement payments (5)	9,688	9,688	—	—	—	—	—
Total contractual obligations	\$1,927,463	\$141,447	\$276,116	\$518,883	\$197,508	\$631,106	\$162,403

- (1) Represents interest payment obligations calculated using stated coupon rates for fixed rate debt and interest rates applicable at September 30, 2018, for variable rate debt.
- (2) Represents off-balance sheet purchase obligations for capital expenditures and long-term supply contracts outstanding at September 30, 2018.

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(3) Represents future minimum lease payments including interest payments.

(4) Represents estimated benefit payments for our Korean subsidiary severance plan.

(5) Represents settlement payments for patent license litigation. At September 30, 2018, the total current obligation is \$9.7 million.

In addition to the obligations identified in the table above, other non-current liabilities recorded in our Consolidated Balance Sheet at September 30, 2018, include:

- \$52.9 million of net foreign pension plan obligations, for which the timing and actual amount of impact on our future cash flow is uncertain.

\$29.4 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 September 30, 2018, 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 16 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for a discussion of our contingencies related to litigation and other legal matters.

Critical Accounting Policies

For a description of our critical accounting policies and estimates affecting revenue recognition, see Note 3 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q. Our critical accounting policies are disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017. With the exception of the changes to our revenue recognition policies referenced above, there have been no significant changes in our critical accounting policies as reported in our 2017 Annual Report on Form 10-K during the three months ended September 30, 2018.

New Accounting Pronouncements

For information regarding recent accounting pronouncements, we refer you to Note 2 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 3. 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 and the functional currency for our subsidiaries, except for J-Devices, 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. On a limited basis, we 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

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sensitivity analysis of our foreign currency exposure as of September 30, 2018, to assess the potential impact of fluctuations in exchange rates for all foreign denominated assets and liabilities. Assuming that all foreign currencies appreciated 10% against the U.S. dollar, taking into account our foreign currency forward contracts, our income before taxes for the nine months ended September 30, 2018 would have been approximately \$19 million lower, due to the remeasurement of monetary assets and liabilities. We have a significant net monetary liability at our subsidiary in Korea, principally related to our Korean severance plan.

In addition, we have foreign currency exchange rate exposure on our results of operations. For the nine months ended September 30, 2018, approximately 78% of our net sales were denominated in U.S. dollars. Our remaining net sales were principally denominated in Japanese Yen for local country sales. For the nine months ended September 30, 2018, approximately 51% 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 September 30, 2018, 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 nine months ended September 30, 2018 would have been approximately \$88 million lower.

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

Our Consolidated Financial Statements are impacted by changes in exchange rates at the entity where the local currency is the functional currency. The effect of foreign exchange rate translation for these entities was a loss of \$2.7 million and a gain of \$11.8 million for the nine months ended September 30, 2018 and 2017, 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 debt. Our fixed and variable rate debt includes foreign borrowings and revolving credit facilities. Our fixed rate debt also consists of 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 September 30, 2018:

	2018 - Remaining	2019	2020	2021	2022	Thereafter	Total	Fair Value
	(\$ in thousands)							
Debt								
Fixed rate debt	\$ 14,073	\$ 56,288	\$ 176,288	\$ 56,288	\$ 576,422	\$ 34,301	\$ 913,660	\$ 920,945

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Average interest rate	1.2	% 1.2	% 2.9	% 1.2	% 5.9	% 1.3	% 4.5	%
Variable rate debt	\$11,916	\$106,942	\$260,000	\$75,000	\$—	\$—	\$453,858	\$452,693
Average interest rate	0.4	% 4.2	% 4.4	% 4.7	% —	% —	% 4.3	%
Total debt	\$25,989	\$163,230	\$436,288	\$131,288	\$576,422	\$34,301	\$1,367,518	\$1,373,638

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For information regarding the fair value of our long-term debt, see Note 15 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 4. 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 September 30, 2018, and concluded those disclosure controls and procedures were effective as of that date.

Changes in Internal Control Over Financial Reporting

As previously reported, we are implementing an enterprise resource planning system in a multi-year program in certain of our factories. There have been no changes in our internal control over financial reporting that occurred during the three months ended September 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Information about legal proceedings is set forth in Note 16 and Note 17 to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2017, respectively.

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 Quarterly Report on Form 10-Q. 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. The risks and uncertainties described below are not the only ones facing Amkor. Additional risks and uncertainties not presently known to us may also impair our business operations. The occurrence of any of the following risks could affect our business, liquidity, results of operations, financial condition or cash flows.

Dependence on the Highly Cyclical Semiconductor Industry - We Operate 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 world-wide gross domestic product and consumer spending. The semiconductor industry has experienced significant and sometimes sudden and prolonged downturns in the past. For example, the financial crisis and global recession in 2008 and 2009 resulted in a downturn in the semiconductor industry that adversely affected our business and results of operations during those periods. The economic recovery since that time has been slow and uneven. 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, 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, generally soft economic conditions and a lack of compelling new mobile products constrained overall demand during 2015. Macroeconomic uncertainties and a cautious business climate are also expected to constrain the revenue growth in our business. It is difficult to predict the timing, strength or duration of any economic 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, including the impact of adverse economic conditions, 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 profit, operating 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:

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- fluctuation 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; expanding our sales to customers in Greater China and, in particular, in the mid-level and entry-level tiers of the mobile device market; and increasing our share of the automotive 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;
- 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 and equipment;
- changes in labor costs to perform our services;
- 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;
- intellectual property transactions and disputes;
- high leverage and restrictive covenants;
- 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;
- international events, such as the United Kingdom's vote to leave the European Union, political instability, civil disturbances or environmental or natural events, such as earthquakes like the recent ones in Japan, that impact our operations;
- pandemic illnesses that may impact our labor force and our ability to travel;
- 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;
- fluctuations in our manufacturing yields;
- 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.

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It is often difficult to predict the impact of these factors upon our results for a particular period. 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:

- changes in consumer demand resulting from deteriorating conditions in local economies;
- laws, rules, regulations and policies imposed by U.S. or foreign 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 in particular the recent increase in tariffs, customs, duties and other restrictive trade barriers considered or adopted by U.S. and foreign governments;
- 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 J-Devices;
- 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 foreign jurisdictions in which we operate 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.

In particular, 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 a recent rise in tensions within and among other countries in the region.

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Competition - We Compete Against Established Competitors in the Packaging and Test Business as Well as Internal Customer Capabilities and May 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 the People's Republic of China, or the PRC, where there are government-supported efforts to promote the development and growth of the local semiconductor industry. For example, STATS ChipPAC was acquired in 2015 by Jiangsu Electronics Technology Co., Ltd., a local PRC company. 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. For example, Advanced Semiconductor Engineering, Inc. and Siliconware Precision Industries Co., Ltd. became sister companies under a new joint holding company in April 2018.

We also face competition from the internal capabilities and capacity of many of our current and potential IDM and foundry customers. In addition, we 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. These semiconductor foundries, which are substantially larger 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.

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 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.

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. 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.

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 relatively 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. In periods of low demand, we experience relatively low capacity utilization in our operations, which leads to reduced margins during that period. Transitions between different packaging technologies, such as the transition from gold wirebond to flip chip and copper wirebond packages, can also impact our capacity utilization if we do not efficiently redeploy our equipment for other packaging and test opportunities. For example, in 2011 the migration of some customer demand from wirebond to flip chip packages resulted in under-utilized wirebond assets which negatively impacted our capacity utilization and gross margin. 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. If our gross margins decrease, our business, liquidity, results of operations, financial condition and cash flows could be materially adversely affected.

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In addition, our fixed operating costs have increased in recent years in part as a result of our efforts to expand our capacity through significant capital expenditures. Forecasted customer demand for which we have made capital investments may not materialize, especially if industry conditions deteriorate. As a result, our sales may not adequately cover fixed costs resulting in reduced profit levels or causing significant losses, both of which may adversely impact our business, liquidity, results of operations, financial condition and cash flows.

Guidance - Our Failure to Meet Our Guidance or Analyst Projections Could Adversely Impact the Trading Prices of Our Securities.

We periodically provide guidance to investors with respect to certain financial information for future periods. Securities analysts also periodically publish their own projections with respect to our future operating results. As discussed above under “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,” our operating results and cash flows vary significantly and are difficult to accurately predict. Volatility in customer forecasts and fluctuations in global consumer demand make it particularly difficult to predict future results. Further, the preparation of our financial statements in accordance with U.S. GAAP requires us to make estimates and assumptions about such things as revenue, costs and expenses, which may turn out to be incorrect or change. To the extent we fail to meet or exceed our own guidance or the analyst projections for any reason, the trading prices of our securities may be adversely impacted. Moreover, even if we do meet or exceed that guidance or those projections, if analysts and investors do not react favorably, or if analysts were to discontinue providing coverage of our company, the trading prices of our securities may be adversely impacted.

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.

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 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.

The reasons IDMs and foundries may shift their outsourced business to internal capacity include:

- their desire to realize higher utilization of their existing packaging and test capacity, especially during downturns in the semiconductor industry;
- their unwillingness to disclose proprietary technology;
- their possession of more advanced packaging and test technologies and
- the guaranteed availability of their own packaging and test 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.

In a downturn in the semiconductor industry, IDMs and foundries could respond by shifting some or all outsourced packaging and test services to internally serviced capacity on a short-term basis. Also, the IDMs and foundries could curtail or reverse

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the trend of outsourcing packaging and test services. 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.

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 September 30, 2018, our total debt balance was \$1,365.6 million, of which \$97.6 million was classified as a current liability and \$554.5 million was collateralized indebtedness at our subsidiaries. We may consider investments in joint ventures, increased capital expenditures 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 restrictive covenants in our indebtedness, among other things, our ability to borrow additional funds;
- limit our ability to refinance our existing indebtedness, particularly during periods of adverse credit market conditions when refinancing indebtedness may not be available under interest rates and other terms acceptable to us or at all and
- increase our cost of borrowing.

We May Have Difficulty Funding Liquidity Needs.

We assess our liquidity based on our current expectations regarding sales, operating expenses, capital spending and debt service requirements and other funding needs. Our liquidity is affected by, among other things, the performance of our business, our capital expenditure and other investment levels and our ability to repay debt and other long-term obligations out of our operating cash flows or with the proceeds of debt or equity financings.

We operate in a capital-intensive industry. We had capital expenditures of \$478.0 million during the nine months ended September 30, 2018. Servicing our current and future customers requires that we incur significant operating expenses and continue to make significant capital expenditures and other investments, which are generally made in advance of the related revenues and without firm customer commitments. Ultimately the actual amount of our capital expenditures for 2018 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, including those under review and those not yet planned, the performance of our business, economic and market conditions, 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.

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In addition, we have a significant level of debt, which requires significant scheduled principal and interest payments in the coming years. The sources funding our operations, including making capital expenditures and other investments and servicing principal and interest obligations with respect to our debt, are cash flows from our operations, existing cash and cash equivalents, borrowings under available debt facilities, or proceeds from any additional debt or equity financing.

The health of the worldwide banking system and capital markets 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 rising interest rates, 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 may be adversely impacted.

Restrictive Covenants in the Indentures and Agreements Governing Our Current and Future Indebtedness.

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, 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 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 \$141.3 million as of September 30, 2018. 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.

If We Fail to Maintain an Effective System of Internal Controls, We May Not be Able to Accurately Report Financial Results or Prevent Fraud.

Effective internal controls are necessary to provide reliable financial reports and to assist in the effective prevention of fraud. We must annually evaluate our internal procedures to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which requires management and our independent registered public accounting firm to assess the effectiveness of internal control over financial reporting.

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Internal controls 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 of any evaluation of effectiveness of internal controls to future periods are subject to the risk that the internal controls may become inadequate because of changes in conditions, or that the degree of compliance with the 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 and integrated the acquired operations of Amkor Technology Malaysia Sdn. Bhd. into our overall internal control over financial reporting. In December 2015, we acquired the operations of J-Devices, and we integrated those operations into our overall internal control over financial reporting. Although we continue to monitor and assess our internal controls for these systems and operations, there is a risk that deficiencies may occur that could constitute significant deficiencies or, in the aggregate, a material weakness.

In addition, in May 2017, we completed our acquisition of Nanium. We are continuing to integrate the acquired operations into our overall internal control over financial reporting. Although we have extended our oversight and monitoring processes that support internal control over financial reporting to include the acquired operations, 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 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 which occur 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.

We Face Risks in Connection with the Continuing Development and Implementation of Changes to, and Maintenance and Security of, Our Management Information Systems.

We depend on our management information systems for many aspects of our business. 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. Our systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of

upgrading, replacing or maintaining software, databases or components thereof, power outages, hardware failures, computer viruses, attacks by computer hackers, telecommunication failures, user errors, malfeasance or catastrophic events. In addition, security breaches could result in unauthorized disclosure of confidential information. From time to time we make additions or changes to our management information systems. For example, we have implemented new shop floor systems in certain of our factories, and we are integrating J-Devices' management information systems with our existing systems and processes. In addition, in May 2017, we completed our acquisition of Nanium and have begun to integrate its management information systems into our existing systems and processes. We face risks in connection with current and future projects to install or integrate new management information systems or upgrade our existing systems. These risks include:

- we may face delays in the design and implementation of the system;

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the cost of the systems may exceed our plans and expectations and disruptions resulting from the implementation or integration 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 management information systems are disrupted or if we are unable to successfully install new systems or improve, upgrade, integrate or expand upon our existing systems.

We Face Risks Trying to Attract and Retain 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. 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 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.

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 consolidations, 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; other 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:

- use a significant portion of our available cash;
- issue equity securities, which may dilute the ownership of current stockholders;
- incur substantial debt;
- 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. For example, in July 2013 and May 2017, we completed the purchase of Amkor Technology Malaysia Sdn. Bhd. and Nanium, respectively. Additionally, we increased our investment in J-Devices to 100% in 2015 through the exercise of additional options. We are now integrating these acquired entities with our existing operations. 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.

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Dependence on Materials and Equipment Suppliers - Our Business May Suffer If the Cost, Quality or Supply of Materials or Equipment Changes Adversely Including Any Disruption that May Occur in the Supply of Certain Materials due to Regulations and Customer Requirements.

We obtain from various vendors the materials and equipment required for the packaging and test services performed by our factories. 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 severe earthquake and tsunami in Japan in 2011 had a significant adverse effect on 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. For example, the shortage in the supply of 28 nanometer wafers to some of our customers in 2012 delayed or otherwise adversely impacted the demand for certain of our advanced packaging and test services.

Rules adopted by the SEC implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act impose diligence and disclosure requirements regarding the use of certain minerals originating from the conflict zones of the Democratic Republic of Congo and adjoining countries in our products. Industry associations and many of our customers have implemented initiatives to improve transparency and accountability concerning the supply of these materials and, in some cases, requiring us to certify that the covered materials we use in our packages do not come from the conflict areas. We may incur additional costs associated with complying with these requirements and customer initiatives. 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 in sufficient quantities and at competitive prices or that we will be able to verify the origin of all of the materials we use in our manufacturing process. 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. 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, 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.

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 67% of our net sales for the year ended December 31, 2017, and one customer accounted for more than 10% of our consolidated net sales during the period. 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

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or decrease in price from a significant customer or disruption in any of our significant strategic partnerships or other 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 year to year resulting in the loss or reduction of customer orders. Our business is likely to remain subject to this variability in order levels, and we cannot assure you 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, 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 that customer decisions regarding the purchase of semiconductor wafers will not significantly and adversely impact customer demand for our packaging and test services.

In addition, from time to time we may acquire or build new facilities, such as K5, or migrate existing business among our facilities. In connection with these facility changes, our customers require us to re-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 re-qualify or that our customers will not qualify our competitors and move the business for such services.

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. For example, we expect that our 2018 capital expenditures will be approximately \$600 million. 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, 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 our capital expenditures to increase production capacity will put downward pressure on our gross margin, at least over 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 margin could be negatively impacted. Our capital expenditures or cost per square foot may increase as we transition to new or more advanced packaging and test technologies because, among other things, new equipment used for these technologies is generally more expensive and often our existing equipment cannot be redeployed in whole or part for these technologies.

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.

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The lead time needed to order, install and put into service various capital investments is often significant, and, as a result, we often need to commit to capital expenditures in advance of our receipt of firm orders or advance deposits based on our view of anticipated future demand with only very limited visibility. Although we seek to limit our exposure in this regard, in the past we have from time to time expended significant capital for additional equipment or facilities for which the anticipated demand did not materialize for a variety of reasons, many of which were outside of our control. To the extent this occurs in the future, our business, liquidity, results of operations, financial condition and cash flows could be materially adversely affected.

In addition, during periods where customer demand exceeds our capacity, customers may transfer some or all of their business to other suppliers who are able to support their needs. To the extent this occurs, our business, liquidity, results of operations, financial condition and cash flows could be materially adversely affected.

In September 2014, we started the construction of K5. The land purchase agreement includes various construction, investment, hiring, regulatory and other compliance obligations. While we completed the initial phase of construction in December 2016, there can be no assurance regarding when K5 will be fully utilized, or that the actual scope, costs, timeline or benefits of the project will be consistent with our current expectations.

Impairment Charges - Any Impairment Charges Required Under U.S. GAAP May Have a Material Adverse Effect on Our Net Income.

Under U.S. GAAP, we review our long-lived assets including property, plant and equipment, intellectual property, goodwill and other intangibles for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. In addition, we review goodwill for impairment annually during the fourth quarter of each year. Factors we consider include significant under-performance relative to expected historical or projected future operating results, significant negative industry or economic trends and our market capitalization relative to net book value. We may be required in the future to record a significant charge to earnings in our financial statements during the period in which any impairment of our long-lived assets is determined. Such charges have had and could have a significant adverse impact on our results of operations and our operating flexibility under our debt covenants.

Litigation Incident to Our Business Could Adversely Affect Us.

We have been a party to various legal proceedings, including those described from time to time in our reports filed with the SEC, and may be a party to legal proceedings in the future. These proceedings could require significant management time and resources and, if an unfavorable ruling or outcome were to occur in these legal proceedings, there could be a material adverse impact on our business, liquidity, results of operations, financial condition, cash flows and the trading price of our securities.

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. In addition, organizations such as the Organisation for Economic Co-operation and Development may, from time to time, propose guidelines regarding transfer pricing and other international tax matters relating to multinational companies like Amkor. Changes in U.S. or foreign tax laws arising out of such proposals or otherwise 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,

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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.

The Enactment of Recent Tax Reform Could Materially Impact Our Financial Position and Results of Operations for the Period Ending December 31, 2017 and for Subsequent Periods.

On December 22, 2017, the Tax Cuts and Jobs Act (the “Tax Act”) was signed into law. The Tax Act made significant changes to the U.S. tax code. Changes include a reduction of the U.S. federal corporate tax rate from 35% to 21%, a one-time transition tax on unremitted foreign earnings and profits applicable for our fiscal year ended December 31, 2017, limitations on tax deductions for interest expense for the period beginning January 1, 2018, and changes to other existing deductions and business-related exclusions in future periods. As a result, in the fourth quarter of 2017, we recognized a one-time net tax benefit of approximately \$41.6 million, primarily due to the release of a valuation allowance against U.S. deferred tax assets that we now expect to realize as a result of the change to the U.S. tax law limiting the deductibility of interest expense. We also incurred charges for the one-time transition tax on our unremitted foreign earnings and profits offset by the anticipated utilization of foreign tax credits. We were also required to re-measure our deferred tax assets based on the new U.S. federal corporate tax rate of 21%. Our provisional estimates and preliminary view of the impact of the Tax Act are uncertain and may be adjusted in future periods as a result of the ongoing analysis of our tax positions and any new guidance from regulators and other interpretations of the law. Changes to our provisional estimate of the impacts of the Tax Act may be material to income tax expense.

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 breadth of semiconductor packaging and test services are rapidly increasing. As a result, we expect that we will need 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 also typically 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.

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 meaningful protection or other commercial advantage to us.

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.

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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. 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. In the past, we have been involved in legal proceedings involving the acquisition and license of intellectual property rights, the enforcement of our existing intellectual property rights or the enforcement of the intellectual property rights of others. Unfavorable outcomes in any legal proceedings involving intellectual property could result in significant liabilities 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 Quarterly Report on Form 10-Q on our results of operations, financial condition and cash flows could change in the future.

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. 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. In addition, 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 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.

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In addition, in line with industry practice, new customers usually require us to pass a lengthy and rigorous qualification process that may take several months. If we fail to qualify packages with potential customers or existing customers, such failure could have a material adverse effect on our business, results of operations, financial condition and cash flows.

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.

The semiconductor packaging process generates byproducts that are subject to extensive governmental regulations. 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. 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 in our production processes and on the factories we occupy and are increasingly imposing restrictions on the materials contained in semiconductor products. For example, 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 existence of hazardous materials on our properties or hazardous substances in the products we manufacture. 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 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 we manufacture, 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 manufacturing costs may increase.

Our Business and Financial Condition Could be Adversely Affected by Natural Disasters and Other Calamities, Political Instability, Hostilities, or Other Disruptions.

We have significant packaging and test and other operations in China, Japan, Korea, Malaysia, the Philippines, Portugal 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 Ebola, SARS or flu); industrial strikes; 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, including any such events that may arise out of increased tensions involving North Korea or in other regions where we have facilities; industrial accidents and other events, that could disrupt or even shutdown our operations. In addition, our suppliers and customers also have significant operations in

such locations. 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 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.

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. We also incurred earthquake related costs for damaged inventory, buildings and equipment.

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Also, Japan experienced a severe earthquake and tsunami in 2011 that resulted in significant disruption in the electronics industry supply chain and adversely affected Japan's economy and consumer spending. In addition, in October 2011, Thailand experienced substantial flooding which affected the facilities and operations of customers and suppliers in our industry. 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. Although we maintain insurance policies for various types of property, casualty and other risks, we do not carry insurance for all the above referred risks, and 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.

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 September 30, 2018, Mr. James J. Kim, the Executive Chairman of our Board of Directors, Mr. John T. Kim, the Executive Vice Chairman of our Board of Directors, Ms. Susan Y. Kim, member of our Board of Directors, and members of the Kim family and affiliates owned approximately 137.6 million shares, or approximately 57%, of our outstanding common stock. The Kim family also has options to acquire approximately 0.3 million shares. If the options are exercised, the Kim family's total ownership would be an aggregate of approximately 137.9 million shares of our outstanding common stock or approximately 58% of our outstanding common stock.

In June 2013, the Kim family exchanged their convertible notes issued by Amkor for approximately 49.6 million shares of common stock (the "Convert Shares"). The Convert Shares are subject to a voting agreement. The 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.

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Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Repurchase of Equity Securities

The following table provides information regarding repurchases of our common stock during the three months ended September 30, 2018.

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)
July 1 - July 31	—	\$ —	—	\$91,586,032
August 1 - August 31	5,425	8.78	—	91,586,032
September 1 - September 30	—	—	—	91,586,032
Total	5,425	\$ 8.78	—	

(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. For the three months ended September 30, 2018, we made no common stock purchases, and at September 30, 2018, approximately \$91.6 million was available pursuant to the stock repurchase program.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

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Item 6. Exhibits