TTM TECHNOLOGIES IN	C
Form 10-Q	
August 09, 2018	

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 10-Q

QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the quarterly period ended July 2, 2018

Commission File Number: 0-31285

TTM TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

DELAWARE 91-1033443 (State or other jurisdiction of (I.R.S. Employer

incorporation or organization) Identification No.)

1665 Scenic Avenue Suite 250, Costa Mesa, California 92626

(Address of principal executive offices)

(714) 327-3000

(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 such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

Emerging growth company

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

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

Number of shares of common stock, \$0.001 par value, of registrant outstanding at August 1, 2018: 103,674,563

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (unaudited)

TTM TECHNOLOGIES, INC.

Consolidated Condensed Balance Sheets

	As of	
	July 2,	January 1,
	2018	2018
	(Unaudited)	
	(In thousands,	except par value)
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 204,100	\$ 409,326
Accounts receivable, net	541,587	483,903
Contract assets	300,717	<u> </u>
Inventories	121,285	294,588
Prepaid expenses and other current assets	34,950	33,490
Total current assets	1,202,639	1,221,307
Property, plant and equipment, net	1,072,578	1,056,845
Goodwill	758,849	372,571
Definite-lived intangibles, net	414,600	102,950
Deposits and other non-current assets	30,266	28,209
•	\$ 3,478,932	\$ 2,781,882
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt, including current portion of long-term debt	\$ 40,729	\$ 4,578
Accounts payable	448,455	497,455
Contract liabilities	7,680	_
Accrued salaries, wages and benefits	88,273	103,638
Other accrued expenses	104,139	114,685
Total current liabilities	689,276	720,356
Long-term debt, net of discount and issuance costs	1,555,425	975,479
Other long-term liabilities	92,938	74,667
Total long-term liabilities	1,648,363	1,050,146
Commitments and contingencies (Note 14)		
Equity:		
Common stock, \$0.001 par value; 300,000 shares authorized,		
*		
103,674 and 101,820 shares issued and outstanding in		
2018 and 2017, respectively	104	102
Additional paid-in capital	786,702	777,025
Retained earnings	315,975	193,342
Statutory surplus reserve	37,550	37,508

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Accumulated other comprehensive income	962	3,403
Total stockholders' equity	1,141,293	1,011,380
	\$ 3,478,932	\$ 2,781,882

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Operations

For the Quarter and Two Quarters Ended July 2, 2018 and July 3, 2017

	Quarter Er	nded	Two Quarte	rs ended
	July 2,	July 3,	July 2,	July 3,
	2018	2017	2018	2017
	(Unaudited	d)		
	(In thousa	nds, except	per share data	ı)
Net sales	\$716,887	\$627,182	\$1,380,469	\$1,252,429
Cost of goods sold	600,747	531,315	1,175,651	1,051,543
Gross profit	116,140	95,867	204,818	200,886
Operating expenses:				
Selling and marketing	18,619	15,851	36,247	32,506
General and administrative	46,298	29,050	81,486	58,932
Amortization of definite-lived intangibles	19,489	5,910	25,350	11,822
Total operating expenses	84,406	50,811	143,083	103,260
Operating income	31,734	45,056	61,735	97,626
Other income (expense):				
Interest expense	(20,453)	(12,922)	(34,200	(26,518)
Other, net	6,178	(5,825)	5,071	(7,535)
Total other expense, net	(14,275)	(18,747)	(29,129	(34,053)
Income before income taxes	17,459	26,309	32,606	63,573
Income tax benefit (provision)	66,545	(5,558)	61,495	(9,697)
Net income	84,004	20,751	94,101	53,876
Less: Net income attributable to the noncontrolling interest		(160	—	(326)
Net income attributable to TTM Technologies, Inc. stockholders	\$84,004	\$20,591	\$94,101	\$53,550
Earnings per share attributable to TTM Technologies, Inc.				
stockholders:				
Basic earnings per share	\$0.81	\$0.20	\$0.91	\$0.53
Diluted earnings per share	\$0.65	\$0.18	\$0.75	\$0.46

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Comprehensive Income

For the Quarter and Two Quarters Ended July 2, 2018 and July 3, 2017

	Quarter Ended July 2, July 3,		Two Quarters ended	
			July 2,	July 3,
	2018 (Unaudite	2017	2018	2017
	(In thousa	-		
Net income		\$20,751	\$94,101	\$53,876
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments, net	(1,701)	12,019	(1,079)	18,638
Net unrealized gains (losses) on cash flow hedges:				
Unrealized (loss) gain on effective cash flow hedges during				
the period, net	(1,739)	96	(1,745)	164
Loss realized in the statement of operations	342	43	383	87
Net	(1,397)	139	(1,362)	251
Other comprehensive (loss) gain, net of tax	(3,098)	12,158	(2,441)	18,889
Comprehensive income, net of tax	80,906	32,909	91,660	72,765
Less: Comprehensive income attributable to the noncontrolling				
interest		(160)		(326)
Comprehensive income attributable to TTM Technologies, Inc.				
stockholders	\$80,906	\$32,749	\$91,660	\$72,439

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Consolidated Condensed Statements of Cash Flows

For the Two Quarters Ended July 2, 2018 and July 3, 2017

	•	July 3, 2017
Cash flows from operating activities:		
Net income	\$94,101	\$53,876
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation of property, plant and equipment	80,073	72,223
Amortization of definite-lived intangible assets	25,350	11,822
Amortization of debt discount and issuance costs	6,358	5,304
Deferred income taxes	(64,769)	95
Stock-based compensation	9,489	8,628
Other	56	3,476
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable, net	(17,056)	(20,039)
Contract assets	(16,478)	
Inventories	5,685	(13,273)
Prepaid expenses and other current assets	356	(3,529)
Accounts payable	(33,778)	10,509
Contract liabilities	(98)	
Accrued salaries, wages and benefits and other accrued expenses	(47,911)	(20,394)
Net cash provided by operating activities	41,378	108,698
Cash flows from investing activities:		
Acquisition, net of cash acquired	(596,396)	
Purchase of property, plant and equipment and equipment deposits	(81,338)	(87,106)
Proceeds from sale of property, plant and equipment and assets held for sale	251	18,102
Net cash used in investing activities	(677,483)	(69,004)
Cash flows from financing activities:		
Proceeds from incremental long-term borrowings	600,000	_
Repayment of long-term debt borrowing	(3,718)	(50,000)
Repayment of assumed long-term debt in acquisition	(178,604)	<u> </u>
Proceeds from borrowings of revolving loan	23,000	
Payment of debt issuance costs	(7,653)	_
Payment of original issue discount	(1,500)	_
Proceeds from exercise of stock options	192	74
Redemption of convertible notes	_	(15)
Net cash provided by (used in) financing activities	431,717	(49,941)
Effect of foreign currency exchange rates on cash and cash equivalents	(838)	917
Net decrease in cash and cash equivalents	(205,226)	(9,330)
Cash and cash equivalents at beginning of period	409,326	256,277

Cash and cash equivalents at end of period	\$204,100	\$246,947
Noncash transactions:		
Property, plant and equipment recorded in accounts payable	\$54,369	\$69,373

See accompanying notes to consolidated condensed financial statements.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements

(Unaudited)

(Dollars and shares in thousands, except per share data)

(1) Nature of Operations and Basis of Presentation

TTM Technologies, Inc. (the Company or TTM) is a leading global printed circuit board (PCB) manufacturer, focusing on quick-turn and volume production of technologically complex PCBs and electro-mechanical solutions (E-M Solutions) as well as a global designer and manufacturer of high-frequency radio frequency (RF) and microwave components and assemblies. The Company provides time-to-market and volume production of advanced technology products and offers a one-stop manufacturing solution to customers from engineering support to prototype development through final mass production. This one-stop manufacturing solution enables the Company to align technology developments with the diverse needs of the Company's customers and to enable them to reduce the time required to develop new products and bring them to market.

The Company serves a diversified customer base in various markets throughout the world, including aerospace and defense, automotive components, smartphones and touchscreen tablets, high-end computing, medical, industrial and instrumentation related products, as well as networking/communications infrastructure products. The Company's customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

The accompanying consolidated condensed financial statements have been prepared by the Company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Certain information and disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) have been condensed or omitted pursuant to such rules and regulations. These consolidated condensed financial statements reflect all adjustments (consisting only of normal recurring adjustments) which, in the opinion of management, are necessary to present fairly the financial position, the results of operations and cash flows of the Company for the periods presented. It is suggested that these consolidated condensed financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's most recent Annual Report on Form 10-K. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the full year. The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's consolidated condensed financial statements and accompanying notes. Actual results could differ materially from those estimates. The Company uses a 13-week fiscal quarter accounting period with the fourth quarter ending on the Monday nearest December 31.

Recently Adopted and Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (Topic 606), which replaces most existing revenue recognition guidance in U.S. GAAP, including industry specific requirements, and provides companies with a single revenue recognition model for recognizing revenue of contracts with customers. The core principle of the new revenue standard is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services.

The Company assessed the new guidance and adopted the new revenue standard on January 2, 2018, which resulted in a change to the timing of revenue recognition for certain of the Company's revenue streams from "point in time" upon physical delivery to an "over time" model. Additionally, the Company elected the cumulative effect transition method with adjustment to the opening balance of retained earnings at January 2, 2018 for all open contracts as of January 1, 2018. Therefore, comparative information has not been adjusted and continues to be reported under previous U.S. GAAP guidance for the consolidated balance sheet at January 1, 2018 and the consolidated condensed statement of operations for the quarter and two quarters ended July 3, 2017.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The cumulative effect of the changes made to the Company's January 2, 2018 consolidated condensed balance sheet for the adoption of the new revenue standard was as follows:

	Balance at January	New Revenue Standard	Balance at January
	1, 2018	Adjustment	2, 2018
	(In thousa	nds)	
Balance Sheet			
Assets			
Accounts receivable, net	\$483,903	\$8,171	\$492,074
Contract assets	_	260,654	260,654
Inventories	294,588	(223,576)	71,012
Liabilities			
Other accrued expenses	114,685	13,384	128,069
Other long-term liabilities	74,667	3,291	77,958
Equity			
Retained earnings	193,342	28,574	221,916

As part of adoption of the new revenue standard, the Company recorded an estimated sales returns and allowance as well as a noncurrent deferred tax liability in the amount of \$5,213 and \$3,291, respectively, as of January 2, 2018. Additionally, the Company reclassified its sales returns and allowance balance of \$8,171 as of January 1, 2018, from trade accounts receivable to other accrued liabilities. Sales returns and allowances are recorded as a reduction of revenue and a component of accrued liabilities on the condensed consolidated balance sheet.

Additionally, the disclosure below summarizes the impact of the adoption of the new revenue standard on the Company's consolidated condensed balance sheet as of July 2, 2018, statement of operations for the quarter and two quarters ended July 2, 2018 and statement of cash flows for the two quarters ended July 2, 2018 for which the As Reported reflects the new revenue standard and Balances without New Revenue Standard Adjustment reflects the Company's replaced revenue recognition policy of "point in time" and upon physical delivery, for certain revenue streams, as appropriate.

July 2, 20	018	
As	Effect of	Balances
reported		
	Change	without
		New
	Increase	Revenue

(Decrease) Standard Adjustment

	(In thousands)					
Balance Sheet						
Assets						
Accounts receivable, net	\$541,587	\$8,171	\$ 533,416			
Contract assets	300,717	293,114	7,603			
Inventories	121,285	(245,895)	367,180			
Liabilities						
Other accrued expenses	104,139	14,033	90,106			
Other long-term liabilities	92,938	3,163	89,775			
Equity						
Retained earnings	315,975	38,194	277,781			

	Quarter ended July 2, 2018		Two Quarters ended July 2, 20			
		Effect of	Balances			Balances
					Effect	
		Change	without		of	without
			New			New
		Increase	Revenue		Change	Revenue
	As		Standard	As		Standard
	reported	(Decrease)	Adjustment	reported	Increase	Adjustment
	(In thousan	nds)		(In thousand	s)	
Net sales	\$716,887	\$ 17,730	\$ 699,157	\$1,380,469	\$31,811	\$1,348,658
Cost of goods sold	600,747	(10,338)	611,085	1,175,651	22,319	1,153,332
Gross profit	116,140	7,392	108,748	204,818	9,492	195,326
Net income	84,004	7,392	76,612	94,101	9,620	84,481

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

Included in the Effect of Change Increase (Decrease) columns for the quarter and two quarters ended July 2, 2018 are \$14,408, \$11,375 and \$3,033 of net sales, cost of goods sold and gross profit, respectively, related to the opening balance sheet of Anaren Inc. which was acquired on April 18, 2018 (See Note 3), and not to the activity during the quarter.

	Two Quarters ended July 2, 2018					
	Effect of Balances					
		Change	without New			
		Increase	Revenue			
	As		Standard			
	reported (In thousar	(Decrease)	Adjustmen	t		
Cash flows from operating activities:	(III tilo tibuli					
Net income	\$94,101	\$ 9,620	\$ 84,481			
Adjustments to reconcile net income to net cash						
used in operating activities:						
Deferred income taxes	(64,769)	(128) (64,641)		
Changes in operating assets and liabilities:						
Accounts receivable, net	(17,056)	_	(17,056)		
Contract assets	(16,478)	(32,460) 15,982			
Inventories	5,685	22,319	(16,634)		
Accrued salaries, wages and benefits and other						
accrued expenses	(47,911)	649	(48,560)		

In August 2017, the FASB issued ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities. This ASU amends and simplifies existing guidance in order to allow companies to more accurately present the economic effects of risk management activities in the financial statements. ASU 2017-12 also amends the guidance surrounding the recognition of the value of hedged instruments to include the entire change in value, rather than just the effective portion, in other comprehensive income and recognized in earnings at the same time that the hedged item affects earnings for cash flow and net investment hedges. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the consolidated financial statements or related disclosures.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The objective of this update is to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those annual periods and is to be applied utilizing a modified retrospective approach. The Company is currently planning on electing the package of practical expedients to not reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs, and

is evaluating other practical expedients available under the guidance. Additionally, the Company continues to evaluate the new guidance to determine the impact it may have on its consolidated financial statements and related disclosures, the primary effect of adopting this update will be to record assets and liabilities for existing operating leases.

(2) Summary of Significant Accounting Policies

Revenue Recognition

The Company derives revenues primarily from the sale of PCBs, custom electronic assemblies using customer-supplied engineering and design plans. With the acquisition of Anaren Inc. (See Note 3), the Company now also derives revenue from the design, development, and manufacture of components, assemblies, and subsystems which receive, process, and transmit microwave and RF signals which service the aerospace and defense electronics, and wireless communications markets.

The Company has three revenue streams which generally coincide with the Company's reportable segments. These reportable segments are: PCB, E-M Solutions and Anaren. See Note 17 Segment Information.

For the PCBs and custom electronic assemblies, orders for products generally correspond to the production schedules of the Company's customers and are supported with firm purchase orders. The Company's customers have continuous transfer of control of the work in progress and finished goods throughout the PCB manufacturing process, as PCBs are built to customer specifications and do not have an alternative use. The customer typically controls the work in progress and finished goods as evidenced either by contractual termination clauses or by the Company's rights to payment for work performed to date, plus a reasonable profit. As a result, the Company records revenue in accordance with the "over time" revenue standard as discussed in Note 1 Nature of Operations and Basis of Presentation Recently Adopted and Issued Accounting Standards, beginning in the first quarter of 2018, the Company now recognizes revenue progressively over time based on the extent of progress towards completion of the performance obligation.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The selection of the method to measure progress toward completion requires judgment and is based on the type of PCB or customized electronic assemblies being manufactured. The Company uses the cost-to-cost method as it best depicts the transfer of control to the customer which takes place as we incur costs. Under the cost-to-cost measure of progress, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred.

Additionally, the Company has certain long-term contracts related to its manufacture of components, assemblies, and subsystems which service the aerospace and defense electronics market. These long-term contracts, many of which provide for periodic payments, are recognized over time under the percentage-of completion method. Estimated manufacturing cost-at-completion for these contracts are reviewed on a periodic basis, and adjustments are made periodically to the estimated cost-at-completion, based on actual costs incurred, progress made, and estimates of costs required to complete the contractual requirements. When the estimated manufacturing cost-at-completion exceeds the contract value, the contract is written down to its net realizable value and the loss resulting from the cost overruns are immediately recognized.

Finally, the Company manufactures components, assemblies, and subsystems which service its wireless communications customers. The Company recognizes revenue at a point in time as the customer does not simultaneously receive or consume the benefits provided by the Company's performance and the asset being manufactured has alternative uses to the Company.

The Company provides customers a limited right of return for defective PCBs, assemblies, components and subsystems. The Company accrues an estimate for sales returns and allowances progressively over time based on the extent of progress towards completion of the performance obligation using the Company's judgment based on historical results and anticipated returns. To the extent actual experience varies from its historical experience, revisions to the sales returns and allowances accrual may be required. Sales returns and allowances are recorded as a reduction of revenue and included as a component of accrued liabilities on the condensed consolidated balance sheet.

(3) Acquisition of Anaren Inc.

On April 18, 2018, the Company completed its acquisition of all issued and outstanding common stock of Anaren Holding Corp. for a total consideration of \$787,911 subject to customary working capital and certain other adjustments. Other than the equity interests of Anaren, Inc. (Anaren), Anaren Holding Corp. had no material assets or liabilities and has no material independent operations. Anaren is a leading provider of mission-critical RF solutions, microelectronics, and microwave components and assemblies for the wireless infrastructure and aerospace and defense electronics markets.

For the quarter and two quarters ended July 2, 2018, bank fees and legal, accounting, and other professional service costs associated with the acquisition of \$6,852 and \$10,825, respectively, have been expensed and recorded as general and administrative expense in the consolidated condensed financial statements. There were no bank fees or legal, accounting, or other professional service costs associated with the acquisition for the quarter and two quarters ended July 3, 2017.

The following summarizes the components of the purchase price:

	(In thousands)
Cash consideration	\$ 596,396
Cash purchased	12,911
-	609,307
Debt assumed	178,604
Total consideration	\$ 787,911

Preliminary Purchase Price Allocation

The purchase price was allocated to tangible and intangible assets acquired, and liabilities assumed based on preliminary estimates of fair value at the date of the acquisition, April 18, 2018. The excess of the purchase price over the fair value of net assets acquired was allocated to goodwill. The fair value assigned to identifiable intangible assets acquired was based on estimates and assumptions made by management at the time of the acquisition.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The fair values assigned are based on reasonable methods applicable to the nature of the assets acquired and liabilities assumed. The following summarizes the preliminary estimated fair values of net assets acquired:

	(In thousand	s)
Cash	\$ 12,911	
Trade and notes receivables	32,457	
Contract assets	23,585	
Inventories	55,958	
Other current assets	1,673	
Property, plant and equipment	47,329	
Identifiable intangible assets	337,000	
Goodwill	386,278	
Trade accounts payable	(14,629)
Contract liabilities	(7,778)
Other current liabilities	(3,757)
Long-term debt	(178,604)
Non-current deferred tax liabilities	(75,123)
Other liabilities	(7,993)
Total	\$ 609,307	

Due to the fact that the acquisition occurred in the current interim period, the Company's fair value estimates for the purchase price allocation are preliminary and may change during the allowable measurement period, which is up to the point the Company obtains and analyzes the information that existed as of the date of the acquisition necessary to determine the fair values of the assets acquired and liabilities assumed, but in no case to exceed more than one year from the date of acquisition. As of July 2, 2018, the Company had not finalized the determination of fair values allocated to various assets and liabilities, including, but not limited to, property, plant and equipment, identifiable intangible assets, other assets, deferred taxes, goodwill, tax uncertainties, income taxes payable and liabilities assumed. Any changes in the fair values of the assets acquired and liabilities assumed during the measurement period may result in material adjustments to goodwill.

Inventories

The Company acquired \$55,958 of inventories as a result of the acquisition. Finished goods were preliminarily valued at estimated selling prices less costs of disposal and a reasonable profit allowance for the selling effort. Work-in-process inventory was valued at estimated selling prices less costs to complete, costs of disposal and a reasonable profit allowance for the completion and selling effort. Raw materials were preliminarily valued at estimated replacement cost.

Property, Plant and Equipment

The fair value of property, plant and equipment was preliminarily determined by utilizing three approaches: the cost, sales comparison, and income capitalization approaches, each including management assumptions. Each approach

assumes valuation of the property at the property's highest and best use.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

Identifiable Intangible Assets

Acquired identifiable intangible assets include customer relationships, developed technology and backlog. The fair value of the identifiable intangible assets was preliminarily determined using various income approach methods including excess earnings to determine the present value of expected future cash flows for each identifiable intangible asset based on discount rates which incorporate a risk premium to take into account the risks inherent in those expected cash flows. The expected cash flows were estimated using available historical data adjusted based on the Company's historical experience and the expectations of market participants. The preliminary estimated fair value assigned to each class of intangible assets and the related weighted average amortization periods are as follows:

		Weighted-
		average
	Estimated fair	amortization
	value (In thousands)	period
Customer relationships	\$ 268,000	12.2 years
Developed technology	39,500	9.4 years
Backlog	29,500	0.9 years
	\$ 337,000	

Goodwill

Goodwill represents the excess of the purchase price over the fair value of assets acquired and liabilities assumed. Prior to the Company's acquisition of Anaren, the Company had two reportable segments: PCB and E-M Solutions. Due to the acquisition, the Company has reassessed its reportable segments and determined that it has three reportable segments: PCB, E-M Solutions and Anaren. However, beginning in the third quarter of 2018, the Company will no longer report Anaren as a reportable segment as the Company will integrate it into the PCB reportable segment. The excess purchase price over the fair value of assets acquired and liabilities assumed has been completely allocated to the Anaren reportable segment.

The Company believes that the acquisition of Anaren will produce the following significant benefits:

- Provide the Company with differentiated RF expertise in aerospace and defense and embedded technology that the Company believes is critical to wireless infrastructure markets.
- Augment the Company's strong aerospace and defense position and provide new opportunities for growth in the automotive and optical networking market.
- Deepen the Company's engagement and interaction with leading customers in the aerospace and defense and wireless communication infrastructure markets.

•

Strengthen the Company's management and engineering teams with the addition of talented members having extensive experience in RF design;

The Company believes that these primary factors support the amount of goodwill recognized as a result of the purchase price paid for Anaren, in relation to other acquired tangible and intangible assets. The goodwill acquired in the acquisition is not deductible for income tax purposes.

Results of Operations

Included in the consolidated condensed statements of operations for the quarter and two quarters ended July 2, 2018 are net sales of \$62,011, excluding intercompany sales, and pre-tax net income of \$13,307 from the Anaren operations.

Pro forma Financial Information

The unaudited pro forma financial information below gives effect to this acquisition as if it had occurred at the beginning of fiscal 2017, or January 3, 2017. The pro forma financial information presented includes the effects of adjustments related to the amortization of acquired identifiable intangible assets and acquired inventory, depreciation of acquired fixed assets, and other non-recurring transactions costs directly associated with the acquisitions such as legal, accounting and banking fees.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The pro forma financial information as presented below is for informational purposes only and is not necessarily indicative of the actual results that would have been achieved had the acquisition occurred at the beginning of the earliest period presented, or the results that may be achieved in future periods.

	Quarter Ended		Two Quarters Ended	
	July 2, July 3,		July 2,	July 3,
	2018	2017	2018	2017
	(In thousa	nds)	(In thousand	ls)
Net sales	\$722,294	\$693,508	\$1,449,143	\$1,369,519
Net income attributable to TTM Technologies, Inc.				
stockholders	91,347	22,390	107,692	49,139
Basic earnings per share	\$0.88	\$0.22	\$1.05	\$0.48
Dilutive earnings per share	\$0.70	\$0.19	\$0.86	\$0.42

(4) Contract Asset and Liabilities

A contract asset is recognized when the Company has recognized revenue, but not issued an invoice for payment. Contract assets are classified as current assets and transferred to receivables when the entitlement to payment becomes unconditional. The Company's contract assets are generally converted to trade account receivables within 90 days, at which time the Company is entitled to payment of the fixed price upon delivery of the finished product subject to customer payment terms. Contract assets were \$300,717 as of July 2, 2018 and represent unbilled amounts for work performed to date, plus a reasonable profit. There were no contract assets as of January 1, 2018.

A contract liability is recognized when the Company has received payment in advance for the future transfer of goods or services. The Company's contract liabilities are generally converted to revenue within 90 days. Contract liabilities were \$7,680 as of July 2, 2018 and represent customer advances for work yet to be performed, plus a reasonable profit. There were no contract liabilities as of January 1, 2018.

(5) Inventories

Inventories as of July 2, 2018 and January 1, 2018 consisted of the following:

As of
July 2, January 1,
2018 2018
(in thousands)

Inventories:

Raw materials	\$105,603	\$75,835
Work-in-process	12,407	120,031
Finished goods	3,275	98,722
	\$121,285	\$294,588

(6) Goodwill

As of July 2, 2018 and January 1, 2018, goodwill was as follows:

	PCB	Anaren	Total
	(In thousan	ds)	
Balance as of January 1, 2018			
Goodwill	\$543,971	\$	\$543,971
Accumulated impairment losses	(171,400)	_	(171,400)
-	372,571		372,571
Goodwill recognized during the two quarters ended July 2, 2018	_	386,278	386,278
Balance as of July 2, 2018			
Goodwill	543,971	386,278	930,249
Accumulated impairment losses	(171,400)		(171,400)
	\$372,571	\$386,278	\$758,849

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The assignment of goodwill related to the acquisition is preliminary and will be completed in conjunction with the final purchase price allocation.

(7) Definite-lived Intangibles

As of July 2, 2018 and January 1, 2018, the components of definite-lived intangibles were as follows:

			Fo	Foreign		Weighted
			Cu	ırrency	Net	Average
	Gross		Tra	anslation	Carrying	Amortization
		Accumulated				
	Amount	Amortization	Ac	ljustment	Amount	Period
	(In thousa	nds)				(years)
July 2, 2018						
Customer relationships	\$203,634	\$ (112,306) \$	_	\$91,328	8.1
Technology	3,000	(3,000)	_	_	3
Acquired intangibles from acquisition						
Customer relationships	268,000	(4,605)	_	263,395	12.2
Developed technology	39,500	(986)		38,514	9.4
Backlog	29,500	(8,137)		21,363	0.9
	\$543,634	\$ (129,034) \$		\$414,600	
January 1, 2018:						
Customer relationships	\$203,563	\$ (101,089) \$	72	\$102,546	8.1
Technology	3,000	(2,596)	_	404	3
	\$206,563	\$ (103,685) \$	72	\$102,950	

The January 1, 2018 definite-lived intangible balances include foreign currency translation adjustments related to foreign subsidiaries with functional currencies other than the U.S. Dollar.

Definite-lived intangibles are generally amortized using the straight line method of amortization over the estimated useful life, with the exception of certain customer relationship intangibles, which are amortized using an accelerated method of amortization based on estimated cash flows. Amortization expense was \$19,489 and \$5,910 for the quarters ended July 2, 2018 and July 3, 2017, respectively, and \$25,350 and \$11,822 for the two quarters ended July 2, 2018 and July 3, 2017, respectively.

Estimated aggregate amortization for definite-lived intangible assets for the next five years and thereafter is as follows:

	(In thousands)
Remaining 2018	\$ 38,084
2019	53,293
2020	45,430
2021	42,118
2022	39,013
Thereafter	196,662
	\$ 414,600

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

(8) Long-term Debt and Letters of Credit

The following table summarizes the long-term debt of the Company as of July 2, 2018 and January 1, 2018:

	Interest		
	Rat P rincipal	Interest Rate	Principal
	as doutharding as of	as of January 1,	Outstanding as of
	201Ruly 2, 2018 (In thousands)	2018	January 1, 2018
Term Loan due September 2024	4.6 \$ %945,879	4.06%	\$ 349,125
Senior Notes due October 2025	5.63%275,000	5.63%	375,000
Convertible Senior Notes due December 2020	1.75%249,985	1.75%	249,985
U.S. ABL Revolving Loan due May 2020	3.60%40,000	3.06%	17,000
Asia ABL Revolving Loan due May 2020	3.50%0,000	2.96%	30,000
Capital Lease	6.43%1,556	6.43%	1,919
	1,642,420		1,023,029
Less: Long-term debt unamortized discount	(27,359)	(30,513)
Long-term debt unamortized debt issuance costs	(18,907)	(12,459)
	1,596,154		980,057
Less: current maturities	(40,729)	(4,578)
Long-term debt, less current maturities	\$ 1,555,425		\$ 975,479

Term Loan Facility

On April 18, 2018, the Company closed its \$600,000 commitment of incremental loans concurrent with the completion of its acquisition of Anaren. These incremental loans increased the Company's existing balance of its Term Loan Facility due 2024 from \$348,250 to \$948,250. This Term Loan Facility had an outstanding balance of \$945,879 as of July 2, 2018, of which \$40,000 is included in short-term debt and \$905,879 is included in long-term debt. The Term Loan Facility was issued at a weighted average discount of 99.7% and bears interest, at the Company's option, at a floating rate of LIBOR, plus an applicable interest margin of 2.50%, or an alternate base rate, (defined as the greater of the JP Morgan prime, the New York Fed bank rate plus 0.5% or LIBOR plus 1.0%), subject to a 1.0% floor plus an applicable margin of 1.5%. At July 2, 2018 the interest rate on the outstanding borrowings under the Term Loan Facility was 4.60%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan Facility will mature on September 28, 2024. The Term Loan Facility is secured by a significant amount of the domestic assets of the Company and a pledge of 65% of voting stock of the Company's first tier foreign subsidiaries and is structurally senior to the Company's Senior Notes and Convertible Senior Notes below.

The Company is required to make scheduled payments of the outstanding Term Loan Facility on a quarterly basis beginning January 1, 2018. Subsequent to July 2, 2018, the Company made an optional debt principal prepayment of \$40,000. As a result of the prepayment, the Company is no longer required to make any quarterly scheduled payments until October 2022. However, based on certain parameters defined in the Term Loan Facility, including a First Lien Leverage Ratio, the Company may be required to make an additional principal payment on an annual basis beginning after fiscal year 2018. Any remaining outstanding balance under the Term Loan Facility is due at the maturity date of September 28, 2024.

Borrowings under the Term Loan Facility are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments.

Senior Notes

The \$375,000 of Senior Notes, which is included in long-term debt, bear interest at a rate of 5.63% per annum. Interest is payable semiannually in arrears on April 1 and October 1 of each year beginning April 1, 2018. The Senior Notes will mature on October 1, 2025.

Borrowings under the Senior Notes are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments, dispositions, and share payments.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

Convertible Senior Notes due 2020

The Company maintains 1.75% convertible senior notes in the amount of \$249,985 due December 15, 2020. The convertible senior notes bear interest at a rate of 1.75% per annum. Interest is payable semiannually in arrears on June 15 and December 15 of each year. The convertible senior notes are senior unsecured obligations and rank equally to the Company's future unsecured senior indebtedness and are senior in right of payment to any of the Company's future subordinated indebtedness.

As of July 2, 2018 and January 1, 2018, the following summarizes the equity components of the convertible senior notes included in additional paid-in capital:

As of July 2, 2018 and January 1, 2018 Embedded

conversion

Embeddedoption —

conversiorConvertible

option — Senior Notes

Convertible

Issuance

Senior

Notes Costs Total

(in thousands)

Convertible Senior Notes due 2020 \$60,216 \$ (1,916) \$58,300

The components of interest expense resulting from the convertible senior notes for the quarter and two quarters ended July 2, 2018 and July 3, 2017 are as follows:

Quarter Ended

Two Quarters
Ended

July 2, July 3, July 2, July 3,
2018 2017 2018 2017

(In thousands) (In thousands)

Contractual coupon interest	\$1,093	\$1,093	\$2,187	\$2,187
Amortization of debt discount	\$2,267	\$2,125	\$4,497	\$4,216
Amortization of debt issuance costs	\$227	\$214	\$451	\$423

Asset-Based Lending Agreements

The Company maintains a \$200,000 U.S. Asset-Based Lending Credit Agreement (U.S. ABL), and a \$150,000 Asia Asset-Based Lending Credit Agreement (Asia ABL) (collectively the ABL Revolving Loans).

The U.S. ABL consists of three tranches comprised of a revolving credit facility for up to \$200,000, a letter of credit facility for up to \$50,000, and swingline loans for up to \$30,000, provided that at no time may amounts outstanding under the tranches exceed in aggregate \$200,000 or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the U.S. ABL agreement. Borrowings under the U.S. ABL bear interest at either a floating rate of LIBOR plus a margin of 150 basis points or JP Morgan Chase Bank's prime rate plus a margin of 50 basis points, at the Company's option. At July 2, 2018, the interest rate on the outstanding borrowings under the U.S. ABL was 3.60%. The applicable margin can vary based on the remaining availability of the facility, from 125 to 175 basis points for LIBOR-based loans and from 25 to 75 basis points for JP Morgan Chase Bank's prime rate-based loans. Other than availability and an event of default, there are no other provisions for the interest margin to increase. The U.S. ABL will mature on May 31, 2020. Loans made under the U.S. ABL are secured first by all of the Company's domestic cash, receivables and certain inventories as well as by a second position against a significant amount of the domestic assets of the Company and a pledge of 65% of the voting stock of the Company's first tier foreign subsidiaries and are structurally senior to the Company's Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. At July 2, 2018, \$40,000 of the U.S. ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

The Asia ABL consists of two tranches comprised of a revolving credit facility for up to \$150,000 and a letter of credit facility for up to \$100,000, provided that at no time may amounts outstanding under both tranches exceed in aggregate \$150,000 or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the Asia ABL agreement. Borrowings under the Asia ABL bear interest at a floating rate of LIBOR plus 140 basis points. At July 2, 2018, the interest rate on the outstanding borrowings under the Asia ABL was 3.50%. There is no provision, other than an event of default, for the interest margin to increase. The Asia ABL will mature on May 22, 2020. Loans made under the Asia ABL are secured by a portion of the Company's Asia Pacific cash and receivables and are structurally senior to the Company's domestic obligations, including the Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes above. At July 2, 2018, \$30,000 of the Asia ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The Company has up to \$50,000 and \$100,000 Letters of Credit Facilities under the U.S. ABL and the Asia ABL, respectively. As of July 2, 2018, letters of credit in the amount of \$6,137 were outstanding under the U.S. ABL and \$13,469 were outstanding under the Asia ABL with various expiration dates through June 2019. Available borrowing capacity under the U.S. ABL and the Asia ABL was \$153,863 and \$106,531, respectively, which considers letters of credit outstanding at July 2, 2018.

The Company is required to pay a commitment fee of 0.25% to 0.375% per annum on any unused portion of the U.S. ABL or Asia ABL. The Company incurred total commitment fees related to unused borrowing availability of \$247 and \$180 for the quarters ended July 2, 2018 and July 3, 2017, respectively, and \$488 and \$367 for the two quarters ended July 2, 2018 and July 3, 2017, respectively. Under the occurrence of certain events, the ABL Revolving Loans are subject to various financial and operational covenants, including maintaining minimum fixed charge coverage ratios.

Other Credit Facility

Additionally, the Company is party to a revolving loan credit facility (Chinese Revolver) with a lender in China. Under this arrangement, the lender has made available to the Company approximately \$31,700 in unsecured borrowing with all terms of the borrowing to be negotiated at the time the Chinese Revolver is drawn upon. There are no commitment fees on the unused portion of the Chinese Revolver, and this arrangement expires in January 2019. As of July 2, 2018, the Chinese Revolver had not been drawn upon.

Debt Issuance and Debt Discount

As of July 2, 2018 and January 1, 2018, remaining unamortized debt discount and debt issuance costs for the Term Loan Facility, Senior Notes and Convertible Senior Notes are as follows:

	•		As of Jar Debt	nuary 1, 201 Debt	18 Effective	
	Issuance (in thous		Interest Rate	Issuance	(Disteount	Interest Rate
Term Loan due September 2024		\$3,037	4.66%	\$2,788	\$1,691	3.96%
Senior Notes due October 2025	6,432		5.92%	6,782		5.92%
Convertible Senior Notes	2,438	24,322	6.48%	2,889	28,822	6.48%
	\$18.907	\$27,359		\$12,459	\$30.513	

The above debt discount and debt issuance costs are recorded as a reduction of the debt and are amortized into interest expense using an effective interest rate over the duration of the debt.

Remaining unamortized debt issuance costs for the ABL Revolving Loans of \$1,921 and \$2,421 as of July 2, 2018 and January 1, 2018, respectively, are included in other non-current assets and are amortized to interest expense over

the duration of the ABL Revolving Loans using the straight line method of amortization.

At July 2, 2018, the remaining weighted average amortization period for all unamortized debt discount and debt issuance costs was 4.1 years.

(9) Income Taxes

The Company's effective tax rate is impacted by tax rates in China and Hong Kong, the U.S. federal income tax rate, apportioned state income tax rates, generation of other credits and deductions available to the Company as well as changes in valuation allowances and certain non-deductible items.

During the quarter and two quarters ended July 2, 2018, the Company's effective tax rate was impacted by a net discrete benefit of \$67,309 and \$66,429, respectively. This is related to accrued interest expense on existing uncertain tax positions, tax incentives, release of uncertain tax positions due to the expiration of the statute of limitations in foreign jurisdictions, release of a portion of the Company's valuation allowance against its U.S. federal and state net deferred tax assets, and an additional expense related to the non U.S. income tax effect of a change in assertion with respect to the Company's indefinite reinvestment policy outside of the U.S. Additionally, no tax benefit was recorded on the losses incurred in certain foreign jurisdictions as a result of corresponding increases in the valuation allowances in these jurisdictions.

During the quarter ended July 2, 2018, the Company recorded a discrete tax benefit of \$74,599 (included in the net amount reported in the previous paragraph) related to the release of a portion of the Company's valuation allowance against its U.S. federal and state net deferred tax assets as a result of the net deferred tax liability established with the acquisition of Anaren. The Company expects its earnings attributable to foreign subsidiaries will be indefinitely reinvested outside of the U.S. but to facilitate more efficient cash management outside of the U.S., the Company has revised its assertion such that a majority of foreign earnings can be repatriated up to the top tier foreign holding company and as such, has provided for an additional accrual of deferred tax liabilities as a discrete tax expense of \$9,963 (also included in the net amount reported in the previous paragraph) for the quarter ended July 2, 2018. The Company continues to maintain its indefinite reinvestment of earnings attributable to foreign subsidiaries with respect to the U.S. and, therefore, no deferred tax liabilities for U.S. income taxes on undistributed earnings are recorded.

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Notes to Consolidated Condensed Financial Statements—(Continued)

Effects of the Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act (Tax Act) was enacted. Accounting Standard Codification (ASC) 740, Accounting for Income Taxes, requires companies to recognize the effect of tax law changes in the period of enactment regardless of the effective date of those tax law changes. Certain provisions of the Tax Act were effective September 27, 2017, and others were effective or identified as of December 31, 2017 or January 1, 2018.

Given the timing of enactment of the Tax Act and the significance of the legislation, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 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 should not extend beyond one year from the Tax Act enactment date and is deemed to have ended when the registrant has obtained, prepared and analyzed the information necessary to finalize its accounting.

To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act. More specifically, SAB 118 summarizes a three-step process to be applied at each reporting period to account for and disclose the tax effects of the Tax Act. The steps are (1) to record the effects of the change in tax law for which accounting is complete; (2) to record provisional amounts (or adjustments to provisional amounts) for the effects of the tax law where accounting is not complete, but for which a reasonable estimate has been determined; and (3) where a reasonable estimate cannot yet be made, to continue to apply ASC 740 based on the tax law in effect prior to enactment of the Tax Act.

Amounts recorded where accounting is complete for the year ended January 1, 2018 primarily relate to the reduction in the U.S. corporate income tax rate to 21 percent. The Company revalued its ending gross deferred tax items, previously recorded at 35 percent, using the enacted 21 percent corporate tax rate. This change caused a reduction to the Company's U.S. federal deferred tax assets fully offset by a reduction of its valuation allowance.

Effects of tax law changes where a reasonable estimate of the accounting effects cannot yet been made include the one-time mandatory repatriation transition tax on the net accumulated earnings and profits of the Company's foreign subsidiaries earned post 1986. For the year ended January 1, 2018, the Company had performed a preliminary earnings and profits analysis with consideration given to foreign loss carryforwards acquired as a result of the Company's acquisitions and determined on a provisional basis that there should be no income tax effect in the current or any future period. For the quarter and two quarters ended July 2, 2018, the Company has continued to gather documentation to support its position and maintains that there should be no income tax effect.

The Company has determined that the following provisions that are effective January 1, 2018 and relevant to the Company will not impact the quarter and two quarters ended July 2, 2018 tax expense, primarily as a result of the full valuation allowance in the U.S.: limitations on certain entertainment expenses, the inclusion of commissions and performance based compensation in determining the excessive compensation limitation, limitation on the current deductibility of net interest expense in excess of 30 percent of adjusted taxable income, and a minimum tax on certain foreign earnings in excess of 10 percent of the foreign subsidiaries tangible assets (i.e., global intangible low-taxed

income or GILTI). The Company has decided to make a policy election to treat the GILTI tax as a period expense and as such, no U.S. deferred taxes will be calculated on foreign earnings that are expected to generate GILTI income when they reverse in future years.

For the quarter and two quarters ended July 2, 2018, other than as noted above, the Company has not made any changes to its previously provisional estimate of the impact U.S. Tax Reform and the Company continues to analyze and model the impact and will record said impact as it becomes more certain. This includes the mandatory repatriation tax and the indefinite criterion assertion on foreign earnings (with respect to repatriation to the U.S.).

(10) Financial Instruments

Derivatives

Interest Rate Swaps

The Company's business is exposed to interest rate risk resulting from fluctuations in interest rates on certain LIBOR-based variable rate debt. Increases in interest rates would increase interest expenses relating to the outstanding variable rate borrowings and increase the cost of debt. Fluctuations in interest rates can also lead to significant fluctuations in the fair value of the debt obligations.

On May 15, 2018, the Company entered into a four-year pay-fixed, receive floating (1-month LIBOR), interest rate swap arrangement with a notional amount of \$400,000 for the period beginning June 1, 2018 and ending on June 1, 2022. Under the terms of the interest rate swap, the Company would pay a fixed rate of 2.84% against the first interest payments of a portion of its LIBOR-based debt and would receive floating 1-month LIBOR during the swap period. During the quarter ended July 2, 2018, the Company designated this interest rate swap as a cash flow hedge.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

At inception, the fair value of the interest rate swap was zero. As of July 2, 2018, the fair value of the interest rate swap was recorded as a liability in the amount of \$1,416 and included as a component of other accrued liabilities. The change in the fair value of the interest rate swap is recorded as a component of accumulated other comprehensive income, net of tax, in the Company's consolidated condensed balance sheet. No ineffectiveness was recognized for the quarter ended July 2, 2018. During the quarter ended July 2, 2018, the interest rate swap increased interest expense by \$303.

Foreign Exchange Contracts

The Company enters into foreign currency forward contracts to mitigate the impact of changes in foreign currency exchange rates and to reduce the volatility of purchases and other obligations generated in currencies other than the functional currencies. The Company's foreign subsidiaries may at times purchase forward exchange contracts to manage their foreign currency risks in relation to certain purchases of machinery denominated in foreign currencies other than the Company's functional currency. The notional amount of the foreign exchange contracts at July 2, 2018 and January 1, 2018 was approximately \$6,482 and \$10,927, respectively. The Company has designated certain of these foreign exchange contracts as cash flow hedges.

The fair values of derivative instruments in the consolidated condensed balance sheets are as follows:

		Asset/(Liability) Fair Value			
	Balance Sheet				
	Location	July 2, 2018 (In thous	January 1, 2018 ands)		
Cash flow derivative instrun	nents designated as hedges:				
Interest rate swap	Other accrued expenses	\$1,416			
Foreign exchange contracts	Other accrued expenses	18	\$ 6		
Cash flow derivative instruments not designated as hedges:					
Foreign exchange contracts	Prepaid expenses and other current assets		107		
Foreign exchange contracts	Other accrued expenses	131	132		
Foreign exchange contracts	Other long-term liabilities		13		

The following table provides information about the amounts recorded in accumulated other comprehensive income related to derivatives designated as cash flow hedges, as well as the amounts recorded in each caption in the consolidated condensed statements of operations when derivative amounts are reclassified out of accumulated other comprehensive income:

	Quarter ended July 2, 2018		Quarter ended July 3	er ended July 3, 2017		
		Ineffective		Ineffective		
	Effective Portion	Portion	Effective Portion	Portion		
Financial	Gain/(Loss)	Gain/(Loss)	Gain/(IGain)/(Loss)	Gain/(Loss)		
Statement	Reclassified	Reclassified	Reclassified	Reclassified		

	Caption	Recognizin Other Compreh	Income	into Income	Recogin Other Compa	Income	into Income
Cash flow hedge:		(III tilous	anus)				
Interest rate swap	Interest expense	\$(1,719)	\$ (303	· \$ —	\$ —	\$ —	\$ —
Foreign currency forward	Depreciation expense	n (20)	(39	_	96	(43	_
		Two Qua Effective Gain/(Lo		lly 2, 2018 Ineffective Portion		Quarters ended ive Portion Loss)	July 3, 2017 Ineffective Portion
		•		Recog in	nized Gain/(Loss)	Gain/(Loss)	
	Financial	Other	Reclassified	Reclassified	Other	Reclassified	Reclassified
	Statement	Compreh	neimtive	into	Comp	r ėht ensive	into
	Caption	Income (In thous	Income ands)	Income	Incom	eIncome	Income
Cash flow hedge:		`	Í				
Interest rate swap	Interest expense	\$(1,719)	\$ (303	· \$ —	\$ —	\$ —	\$ —
Foreign currency forward	Depreciation expense	n (26)	(80	_	164	(87)	_
9							

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

The following table provides a summary of the activity associated with the designated cash flow hedges reflected in accumulated other comprehensive income for the two quarters ended July 2, 2018 and July 3, 2017:

	Two Quarters		
	Ended		
	July 2,	July 3,	
	2018	2017	
	(In thousands)		
Beginning balance, net of tax	\$(742	\$(1,180)	
Changes in fair value gain (loss), net of tax	(1,745) 164	
Reclassification to earnings	383	87	
Ending balance, net of tax	\$(2,104) \$(929)	

The Company expects that approximately \$1,571 of the accumulated other comprehensive income (loss) will be reclassified into the statement of operations, net of tax, in the next 12 months.

The net gain (loss) recognized in other, net in the consolidated condensed statements of operations on derivative instruments not designated as hedges is as follows:

	Quarter Ended	Two Quarters Ended July 2, July 3,	
	July 2, July 3,		
	2018 2017	2018 2017	
	(In thousands)		
Derivative instruments not designated as hedges:			
Foreign exchange contracts	\$(324) \$(176)	\$103 \$ (29)	

(11) Accumulated Other Comprehensive Income

The following provides a summary of the components of accumulated other comprehensive income as of July 2, 2018 and January 1, 2018:

	Foreign Gains (Losses) Currency on Cash Flow			
	Translatio (In thousa	Total		
Ending balance at January 1, 2018	\$4,145	\$ (742) \$3,403	
Other comprehensive income (loss) before				
reclassifications Amounts reclassified from accumulated other	(1,079) —	(1,745 383) (2,824) 383	

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comprehensive income		
Other comprehensive income (loss)	(1,079) $(1,362)$) (2,441)
Ending balance at July 2, 2018	\$3,066 \$ (2,104) \$962

(12) Significant Customers and Concentration of Credit Risk

In the normal course of business, the Company extends credit to its customers. Most customers to which the Company extends credit are located outside the United States. The Company performs ongoing credit evaluations of customers, does not require collateral, and considers the credit risk profile of the entity from which the receivable is due in further evaluating collection risk.

The Company's customers include both OEMs and EMS companies. The Company's OEM customers often direct a significant portion of their purchases through EMS companies. While the Company's customers include both OEM and EMS providers, the Company measures customer concentration based on OEM companies, as they are the ultimate end customers.

For the two quarters ended July 2, 2018, one customer accounted for approximately 12% of the Company's net sales. There were no customers that accounted for 10% or more of net sales for the quarter ended July 2, 2018. For both the quarter and two quarters ended July 3, 2017, one customer accounted for approximately 16% of the Company's net sales. There were no other customers that accounted for 10% or more of net sales for the quarter and two quarters ended July 2, 2018 and July 3, 2017.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

(13) Fair Value Measures

The Company measures at fair value its financial and non-financial assets by using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, essentially an exit price, based on the highest and best use of the asset or liability.

The carrying amount and estimated fair value of the Company's financial instruments at July 2, 2018 and January 1, 2018 were as follows:

	July 2, 201	18	January 1,	2018	
	Carrying	Fair	Carrying	Fair	
	Amount	Value	Amount	Value	
	(In thousa	nds)			
Derivative assets, current	\$ —	\$ —	\$107	\$107	
Derivative liabilities, current	1,565	1,565	258	258	
Term Loan due September 2024	932,805	943,515	344,646	346,943	
Senior Notes due October 2025	368,568	366,829	368,218	384,769	
Convertible Senior Notes	223,225	474,547	218,274	429,199	
ABL Revolving Loans	70,000	70,000	47,000	47,000	
Capital lease	1,556	1,556	1,919	1,919	

The fair value of the derivative instruments was determined using pricing models developed based on the LIBOR swap rate, foreign currency exchange rates, and other observable market data, including quoted market prices, as appropriate using Level 2 inputs. The values were adjusted to reflect nonperformance risk of both the counterparty and the Company, as necessary.

The fair value of the long-term debt was estimated based on quoted market prices or discounting the debt over its life using current market rates for similar debt as of July 2, 2018 and January 1, 2018, which are considered Level 1 and Level 2 inputs.

The fair value of the convertible senior notes was estimated based on quoted market prices of the securities on an active exchange, which are considered Level 1 and Level 2 inputs.

As of July 2, 2018 and January 1, 2018, the Company's other financial instruments also included cash and cash equivalents, accounts receivable, and accounts payable. Due to short-term maturities, the carrying amount of these instruments approximates fair value. The Company's cash and cash equivalents at July 2, 2018 consisted of \$64,628 held in the U.S., with the remaining \$139,472 held by foreign subsidiaries.

The majority of the Company's non-financial assets and liabilities, which include goodwill, intangible assets, inventories, and property, plant and equipment, are not required to be carried at fair value on a recurring basis.

However, if certain triggering events occur (or are tested at least annually in the case of goodwill) such that a non-financial instrument is required to be evaluated for impairment, based upon a comparison of the non-financial instrument's fair value to its carrying value, an impairment is recorded to reduce the carrying value to the fair value, if the carrying value exceeds the fair value. See Note 3 for discussion of the fair value measurement of assets acquired and liabilities assumed in the Anaren acquisition.

(14) Commitments and Contingencies

Legal Matters

The Company is subject to various legal matters, which it considers normal for its business activities. While the Company currently believes that the amount of any reasonably possible loss for known matters would not be material to the Company's financial condition, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on the Company's financial condition or results of operations in a particular period. The Company has accrued amounts for its loss contingencies which are probable and estimable as of July 2, 2018 and January 1, 2018. However, these amounts are not material to the consolidated condensed financial statements of the Company.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

Environmental Matters

The process to manufacture PCBs requires adherence to city, county, state, federal regulations as well as foreign environmental regulations regarding the storage, use, handling and disposal of chemicals, solid wastes and other hazardous materials, as well as compliance with air quality standards and chemical use reporting. The Company believes that its facilities in the United States and Canada comply in all material respects with applicable environmental laws and regulations. In China, governmental authorities have adopted new rules and regulations governing environmental issues. An update to the Chinese environmental waste water law was issued in late 2012, allowing for an interim period in which plants subject to such law may install equipment that meets the new regulatory regime. Some of the Company's plants in China are not yet in full compliance with the updated environmental regulations. The Company has established and enacted an investment plan related to the efforts to come into full compliance with the new regulations. The 2018 capital expenditure costs expected for these plans are included in the Company's capital expenditure projections.

(15) Earnings Per Share

The following is a reconciliation of the numerator and denominator used to calculate basic earnings per share and diluted earnings per share for the quarter and two quarters ended July 2, 2018 and July 3, 2017:

	Quarter Ended		Two Quar	ters Ended
	July 2,	July 3,	July 2,	July 3,
	2018	2017	2018	2017
	(In thousa	nds, except	per share ar	nounts)
Basic earnings:				
Basic earnings	\$84,004	\$20,591	\$94,101	\$53,550
Diluted earnings:				
Net income attributable to TTM				
Technologies, Inc. stockholders	\$84,004	\$20,591	\$94,101	\$53,550
Interest expense from convertible senior				
notes, net of tax	3,587	3,432	7,135	6,826
Diluted earnings	\$87,591	\$24,023	\$101,236	\$60,376
Basic weighted average shares	103,553	101,756	103,030	101,344
Dilutive effect of performance-based				
restricted stock units, restricted stock				
units and stock options	1,376	1,604	1,603	1,735
Dilutive effect of outstanding warrants	3,854	3,924	3,517	3,054
Dilutive effect of assumed conversion of	25,938	25,940	25,938	25,940

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convertible senior notes outstanding				
Diluted shares	134,721	133,224	134,088	132,073
Earnings per share attributable to TTM				
•				
Technologies, Inc. stockholders:				
Basic	\$0.81	0.20	\$0.91	\$0.53
Diluted	\$0.65	0.18	\$0.75	\$0.46

Performance-based restricted stock units (PRUs), restricted stock units (RSUs) and stock options to purchase 45 and 15 shares of common stock for the quarter ended July 2, 2018 and July 3, 2017, respectively, and 488 and 97 for the two quarters ended July 2, 2018 and July 3, 2017, respectively, were not considered in calculating diluted earnings per share because the options' exercise prices or the total expected proceeds under the treasury stock method for PRUs, RSUs or stock options was greater than the average market price of common shares during the applicable quarter and two quarters and, therefore, the effect would be anti-dilutive.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

(16) Stock-Based Compensation

Stock-based compensation expense is recognized in the accompanying consolidated condensed statements of operations as follows:

	Quarter	Ended	Two Qu Ended	arters
	July 2,	July 3,	July 2,	July 3,
	2018	2017	2018	2017
	(In thousands)		(In thousands)	
Cost of goods sold	\$829	\$639	\$1,358	\$1,033
Selling and marketing	545	386	919	639
General and administrative	4,493	3,975	7,212	6,956
Stock-based compensation expense recognized	\$5,867	\$5,000	\$9,489	\$8,628

Performance-based Restricted Stock Units

The Company maintains a long-term incentive program for executives that provides for the issuance of PRUs, representing hypothetical shares of the Company's common stock that may be issued. Under the PRU program, a target number of PRUs is awarded at the beginning of each three-year performance period. The number of shares of common stock released at the end of the performance period will range from zero to 2.4 times the target number depending on performance during the period. The performance metrics of the PRU program are based on (a) annual financial targets, which are based on revenue and EBITDA (earnings before interest, tax, depreciation, and amortization expense), each equally weighted, and (b) an overall modifier based on the Company's total stockholder return (TSR) relative to a group of peer companies selected by the Company's compensation committee, over the three-year performance period.

The Company records stock-based compensation expense for PRU awards granted based on management's periodic assessment of the annual financial performance goals to be achieved. For the two quarters ended July 2, 2018, management determined that vesting of the PRU awards was probable. PRUs activity for the two quarters ended July 2, 2018 was as follows:

		Weighted
		Average Fair
	Shares (In thousands)	Value
Outstanding target shares at January 1, 2018	409	\$ 16.39

Granted	334	19.59
Change in units due to annual performance achievement	(22) 19.59
Outstanding target shares at July 2, 2018	721	\$ 17.77

Restricted Stock Units

The Company granted 195 and 61 RSUs during the quarters ended July 2, 2018 and July 3, 2017, respectively, and 1,023 and 1,007 RSUs during the two quarters ended July 2, 2018 and July 3, 2017, respectively. The RSUs granted have a weighted-average fair value per unit of \$16.06 and \$16.52 for the quarters ended July 2, 2018 and July 3, 2017, respectively, and \$15.44 and \$15.82 for the two quarters ended July 2, 2018 and July 3, 2017, respectively. The fair value for RSUs granted is based on the closing share price of the Company's common stock on the date of grant.

Stock Options

During the quarter and two quarters ended July 2, 2018, The Company granted 20 stock option awards to a newly appointed member of the board which were estimated to have a fair value per share of \$8.92. The fair value calculation is based on stock options granted during the period using the Black-Scholes option-pricing model on the date of grant. For the quarter and two quarters ended July 2, 2018, the fair value was determined using 3.0% as the risk-free interest rate, 43.0% as the expected volatility, 8.5 years as the expected term and no dividend yield. The Company did not grant stock option awards during the quarter and two quarters ended July 3, 2017.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

Summary of Unrecognized Compensation Costs

The following is a summary of total unrecognized compensation costs as of July 2, 2018:

	Unrecognized	Remaining
	Stock-	Weighted
	Based	Average
	Compensation	Recognition
	•	C
	Cost	Period
	Cost	renou
	(In thousands)	(In years)
RSU awards		
RSU awards PRU awards	(In thousands)	(In years)
	(In thousands) \$ 24,888	(In years) 1.5

(17) Segment Information

The reportable segments reported below are the Company's segments for which separate financial information is available and upon which operating results are evaluated by the chief operating decision maker to assess performance and to allocate resources. The Company has three reportable segments: PCB, E-M Solutions and Anaren. However, beginning in the third quarter of 2018, the Company will no longer report Anaren as a reportable segment as the Company will integrate it into the PCB reportable segment. The PCB reportable segment is comprised of multiple operating segments. Factors considered to determine whether operating segments can be aggregated into reportable segments included similarity regarding economic characteristics, products, production processes, type or classes of customers, distribution methods, and regulatory environments.

The Company, including the chief operating decision maker, evaluates segment performance based on reportable segment income, which is operating income before amortization of intangibles. Interest expense and interest income are not presented by segment since they are not included in the measure of segment profitability reviewed by the chief operating decision maker. All inter-segment transactions have been eliminated.

The inter-segment sales for the quarter and two quarters ended July 2, 2018 and July 3, 2017, are sales primarily from the PCB to the E-M Solutions reportable segment.

Quarter I	Ended	Two Quarters Ended				
July 2,	July 3,	July 2,	July 3,			
2018	2017	2018	2017			
(In thousands)		(In thousa	nds)			

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Net Sales:				
PCB	\$596,461	\$576,566	\$1,215,790	\$1,163,261
Anaren (1)	62,011	_	62,011	_
E-M Solutions	61,842	52,898	108,993	94,567
Total sales	720,314	629,464	1,386,794	1,257,828
Inter-segment sales	(3,427)	(2,282)	(6,325)	(5,399)
Total net sales	\$716,887	\$627,182	\$1,380,469	\$1,252,429
Operating Segment Income (Loss):				
PCB	\$68,028	\$69,435	\$131,492	\$151,691
Anaren (1)	12,936	_	12,936	_
E-M Solutions	2,496	2,689	2,536	1,047
Corporate	(32,237)	(21,158)	(59,879)	(43,290)
Total operating segment income	51,223	50,966	87,085	109,448
Amortization of definite-lived intangibles	(19,489)	(5,910)	(25,350)	(11,822)
Total operating income	31,734	45,056	61,735	97,626
Total other expense	(14,275)	(18,747)	(29,129)	(34,053)
Income before income taxes	\$17,459	\$26,309	\$32,606	\$63,573

(1) The quarter and two quarters ended July 3, 2017 does not include Anaren, as the acquisition occurred on April 18, 2018.

The Corporate category includes operating expenses that are not included in the segment operating performance measures. Corporate consists primarily of corporate governance functions such as finance, accounting, corporate sales, information technology, facilities, corporate operations and human resources personnel. Bank fees and legal, accounting, and other professional service costs associated with the acquisition of Anaren in the amount of \$6,852 and \$10,825 for the quarter and two quarters ended July 2, 2018, respectively, are included in Corporate. See Note 3 Acquisition of Anaren Inc.

TTM TECHNOLOGIES, INC.

Notes to Consolidated Condensed Financial Statements—(Continued)

(18) Related Party Transactions

In the normal course of business, the Company's foreign subsidiaries purchase laminate and prepreg from related parties in which a member of the Board of Directors of the Company holds an equity interest. The Company's foreign subsidiaries purchased laminate and prepreg from these related parties in the amount of \$12,550 and \$12,121 for the quarters ended July 2, 2018 and July 3, 2017, respectively, and \$38,257 and \$25,611 for the two quarters ended July 2, 2018 and July 3, 2017, respectively.

As of July 2, 2018 and January 1, 2018, the Company's consolidated condensed balance sheets included \$15,256 and \$14,452, respectively, in accounts payable due to related parties primarily for purchases of laminate and prepreg and such balances are included as a component of accounts payable on the consolidated condensed balance sheets.

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

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated condensed financial statements and the related notes and the other financial information included in this Quarterly Report on Form 10-Q. This discussion and analysis contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of specified factors, including those set forth in Item 1A "Risk Factors" of Part II below and elsewhere in this Quarterly Report on Form 10-Q. This discussion and analysis should also be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" set forth in our Annual Report on Form 10-K for the fiscal year ended January 1, 2018, filed with the SEC.

COMPANY OVERVIEW

We are a leading global printed circuit board (PCB) manufacturer, focusing on quick-turn and volume production of technologically complex PCBs and electro-mechanical solutions (E-M Solutions), as well as a global designer and manufacturer of high-frequency radio frequency (RF) and microwave components and assemblies. We focus on providing time-to-market and volume production of advanced technology products and offer a one-stop manufacturing solution to our customers from engineering support to prototype development through final mass production. This one-stop manufacturing solution allows us to align technology development with the diverse needs of our customers and to enable them to reduce the time required to develop new products and bring them to market. We serve a diversified customer base consisting of approximately 2,200 customers in various markets throughout the world, including aerospace and defense, automotive components, smartphones and touchscreen tablets, high-end computing, and medical, industrial and instrumentation related products as well as networking/communications infrastructure products. Our customers include both original equipment manufacturers (OEMs) and electronic manufacturing services (EMS) providers.

RECENT DEVELOPMENTS

On April 18, 2018, we completed our acquisition to purchase all of the issued and outstanding common stock of Anaren Holding Corp. for total consideration of \$787.9 million subject to customary working capital and certain other adjustments. Other than the equity interests of Anaren, Inc. (Anaren), Anaren Holding Corp. has no material assets or liabilities and has no material independent operations. Anaren is a leading provider of mission-critical RF solutions, microelectronics, and microwave components and assemblies for the wireless infrastructure and aerospace and defense electronics markets.

Additionally, we closed our \$600.0 million commitment for incremental loans concurrent with the completion of our acquisition of Anaren. We used the proceeds of the incremental loans, along with cash on hand to fund the purchase price of the acquisition and to pay related fees and expenses.

FINANCIAL OVERVIEW

While our customers include both OEMs and EMS providers, we measure customers based on OEM companies, as they are the ultimate end customers. Sales to our 10 largest customers accounted for 43% of our net sales for both the quarter and two quarters ended July 2, 2018. Sales to our 10 largest customers accounted for 45% of our net sales for both the quarter and two quarters ended July 3, 2017. We sell to OEMs both directly and indirectly through EMS providers.

The following table shows the percentage of our net sales attributable to each of the principal end markets we served for the periods indicated:

	Quarter	Ended		Two Ende	_	arters	
	July 2,	July 3,		July	2,	July 3,	
End Markets(1)(2)	2018	2017		2018	3	2017	
Aerospace and Defense	24 %	17	%	21	%	16	%
Automotive	19	20		20		20	
Cellular Phone ⁽²⁾	8	13		12		13	
Computing/Storage/Peripherals ⁽²⁾	15	14		14		15	
Medical/Industrial/Instrumentation	14	15		14		15	
Networking/Communications	17	20		17		20	
Other ⁽³⁾	3	1		2		1	
Total	100 %	100	%	100	%	100	%

- (1) Sales to EMS companies are classified by the end markets of their OEM customers.
- (2) Smartphones are included in the Cellular Phone end market, tablets are included in the Computing/Storage/Peripherals end market and other consumer devices include wearables, portable video devices and personal headphones are included in the Other end market.
- (3) Revenue recognized progressively over time based on the extent of progress towards completion of the performance obligation, which has not yet been shipped, is included in the Other end market along with consumer devices such as wearables, portable video devices and personal headphones.

We derive revenues primarily from the sale of PCBs, custom electronic assemblies using customer-supplied engineering and design plans, and from design, development, and manufacture of components, assemblies, and subsystems which receive, process, and transmit microwave and RF signals. Most orders for products generally correspond to the production schedules of our customers and are supported with firm purchase orders. Most of our customers have continuous transfer of control of the work in progress and finished goods throughout the PCB manufacturing process, as PCBs are built to customer specifications and do not have an alternative use. The customer typically controls the work in progress and finished goods as evidenced either by contractual termination clauses or by our right to payment for work performed to date, plus a reasonable profit. As a result, and in light of our adoption of the new "over time" revenue standard as further discussed below in the "CRITICAL ACCOUNTING POLICIES AND ESTIMATES," beginning in the first quarter of 2018, we recognized revenue progressively over time based on the extent of progress towards completion of the performance obligation rather than upon shipment as we had in the past.

The selection of the method to measure progress toward completion requires judgment and is based on the type of PCB or customized electronic assemblies being manufactured. We use the cost-to-cost method as it best depicts the transfer of control to the customer which takes place as we incur costs. Under the cost-to-cost measure of progress, the extent of progress toward completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred.

Additionally, we have certain long-term contracts related to its manufacture of components, assemblies, and subsystems. These long-term contracts, many of which provide for periodic payments, are recognized over time under the percentage-of completion method. Estimated manufacturing cost-at-completion for these contracts are reviewed on a periodic basis, and adjustments are made periodically to the estimated cost-at-completion, based on actual costs incurred, progress made, and estimates of costs required to complete the contractual requirements. When the estimated manufacturing cost-at-completion exceeds the contract value, the contract is written down to its net realizable value and the loss resulting from the cost overruns are immediately recognized.

Finally, we manufacture components, assemblies, and subsystems for which we recognize revenue at a point in time as the customer does not simultaneously receive or consume the benefits provided by our performance and the asset being manufactured has alternative uses to us.

Net sales consist of gross sales less an allowance for returns, which typically have been less than 2% of gross sales. We provide our customers a limited right of return for defective PCBs, assemblies, components and subsystems. We record an estimate for sales returns and allowances at the time of sale based on historical results.

Cost of goods sold consists of materials, labor, outside services, and overhead expenses incurred in the manufacture and testing of our products. Shipping and handling fees and related freight costs and supplies associated with shipping products are also included as a component of cost of goods sold. Many factors affect our gross margin, including capacity utilization, product mix, production volume, and yield. While we have entered into supply assurance agreements with some of our key suppliers to maintain the continuity of supply of some of the key materials we use, we generally do not participate in any significant long-term contracts with suppliers, and we believe there are a number of potential suppliers for the raw materials we use.

Selling and marketing expenses consist primarily of salaries, labor related benefits, and commissions paid to our internal sales force, independent sales representatives, and our sales support staff, as well as costs associated with marketing materials and trade shows.

General and administrative costs primarily include the salaries for executive, finance, accounting, information technology, facilities, research and development, and human resources personnel, as well as expenses for accounting and legal assistance, incentive compensation expense, and gains or losses on the sale or disposal of property, plant and

equipment.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated condensed financial statements included in this report have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, net sales and expenses, and related disclosure of contingent assets and liabilities.

See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our Annual Report on Form 10-K for the fiscal year ended January 1, 2018 for further discussion of critical accounting policies and estimates. There were no material changes to our critical accounting policies and estimates since January 1, 2018, except for the adoption of Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (new revenue standard) on January 2, 2018.

The new revenue standard replaces most existing revenue recognition guidance in U.S. GAAP, including industry specific requirements, and provides companies with a single revenue recognition model for recognizing revenue of contracts with customers. The core principle of the new revenue standard is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. We assessed the new guidance and adopted the new revenue standard on January 2, 2018, which resulted in a change to the timing of revenue recognition for certain of our revenue streams from "point in time" upon physical delivery to an "over time" model.

RESULTS OF OPERATIONS

The quarter and two quarters ended July 3, 2017 do not include the results of operations from our acquisition of Anaren, as the acquisition occurred on April 18, 2018. The following table sets forth the relationship of various items to net sales in our consolidated condensed statements of operations:

	Quarter E	nded	Two Quar Ended	ters
	July 2,	July 3,	July 2,	July 3,
	2018	2017	2018	2017
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of goods sold	83.8	84.7	85.2	84.0
Gross profit	16.2	15.3	14.8	16.0
Operating expenses:				
Selling and marketing	2.6	2.5	2.6	2.6
General and administrative	6.5	4.7	5.9	4.7
Amortization of definite-lived intangibles	2.7	0.9	1.8	0.9
Total operating expenses	11.8	8.1	10.3	8.2
Operating income	4.4	7.2	4.5	7.8
Other income (expense):				
Interest expense	(2.9)	(2.1)	(2.5)	(2.1)
Other, net	0.9	(0.9)	0.4	(0.6)
Total other expense, net	(2.0)	(3.0)	(2.1)	(2.7)
Income before income taxes	2.4	4.2	2.4	5.1
Income tax provision	9.3	(0.9)	4.4	(0.8)
Net income	11.7	3.3	6.8	4.3
Less: Net income attributable to the non-				
controlling interest	_	_	_	_
Net income attributable to TTM Technologies, Inc.				
stockholders	11.7 %	3.3 %	6.8 %	4.3 %

We have three reportable segments: PCB, E-M Solutions and Anaren. We added the Anaren reportable segment following the acquisition of Anaren on April 18, 2018. See Notes to Consolidated Condensed Financial Statements Note 3 Acquisition of Anaren, Inc. However, beginning in the third quarter of 2018, we will no longer report Anaren as a reportable segment as we will integrate them into the PCB reportable segment. The PCB reportable segment is comprised of multiple operating segments. Factors considered in determining whether operating segments can be aggregated into reportable segments included similarity regarding economic characteristics, products, production process, type or class of customers, distribution methods and regulatory environments.

The following table compares net sales by reportable segment for the quarters and two quarters ended July 2, 2018 and July 3, 2017:

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	Quarter Ended		Two Quarter	s Ended
	July 2,	July 3,	July 2,	July 3,
	2018	2017	2018	2017
	(In thousar	nds)	(In thousand	s)
Net Sales				
PCB	\$596,461	\$576,566	\$1,215,790	\$1,163,261
Anaren (1)	62,011		62,011	_
E-M Solution	61,842	52,898	108,993	94,567
Total sales	720,314	629,464	1,386,794	1,257,828
Inter-segment sales	(3,427)	(2,282)	(6,325)	(5,399)
Total net sales	\$716,887	\$627,182	\$1,380,469	\$1,252,429

(1) The quarter and two quarters ended July 3, 2017 does not include Anaren, as the acquisition occurred on April 18, 2018.

Net Sales

Total net sales increased \$89.7 million, or 14.3%, from \$627.2 million for the second quarter of 2017 to \$716.9 million for the second quarter of 2018. Net sales for the PCB reportable segment, excluding inter-segment sales, increased \$18.7 million, or 3.3%, from \$574.3 million for the second quarter of 2017 to \$593.0 million for the second quarter of 2018. This increase was primarily due to higher sales in our Computing and Aerospace and Defense end markets, partially offset by a decline in our Cellular Phone and Networking/Communications end markets. Higher sales were the result of an average PCB selling price increase of 7.9%, which was

driven mainly by product mix shift, and a 4.6% decrease in PCB shipments as compared to the second quarter of 2017. Net sales for the E-M Solutions reportable segment increased \$8.9 million from \$52.9 million for the second quarter of 2017 to \$61.8 million for the second quarter of 2018. The increase was primarily due to higher demand in our Automotive end market. Anaren contributed \$62.0 million of net sales for the second quarter of 2018.

Total net sales increased \$128.1 million, or 10.2%, from \$1,252.4 million for the first two quarters of 2017 to \$1,380.5 million for the first two quarters of 2018. Net sales for the PCB reportable segment, excluding inter-segment sales, increased \$51.6 million, or 4.5%, from \$1,157.9 million for the first two quarters of 2017 to \$1,209.5 million for the first two quarters of 2018. The increase was primarily from higher demand in our Aerospace and Defense and Medical/Industrial/Instrumentation end markets, partially offset by a decline in our Networking/Communications and Cellular Phone end markets. These changes resulted in a 2.8% decrease in PCB shipments as compared to the first two quarters of 2017, and an average PCB selling price increase of 6.2%, which was driven by a product mix shift. Net sales for the E-M Solutions reportable segment increased \$14.4 million, or 15.2%, from \$94.6 million for the first two quarters of 2017 to \$109.0 million for the first two quarters of 2018. The increase was primarily due to higher demand in our Automotive end market. The Anaren acquisition, which was closed in the second quarter, contributed \$62.0 million of net sales for the first two quarters of 2018.

Gross Margin

Overall gross margin increased from 15.3% for the second quarter of 2017 to 16.2% for the second quarter of 2018. Gross margin for the PCB reportable segment decreased from 16.1% for the second quarter of 2017 to 15.4% for the second quarter of 2018 primarily due to lower capacity utilization at our Cellular Phone focused facilities. Gross margin for the E-M Solutions reportable segment decreased from 10.0% for the second quarter of 2017 to 8.0% for the second quarter of 2018 primarily due to unfavorable product mix. Gross margin for the Anaren reportable segment was 35.4% for the second quarter of 2018 which included a charge of \$4.9 million to cost of goods sold associated with inventory resulting from purchase accounting.

Overall gross margin decreased from 16.0% for the first two quarters of 2017 to 14.8% for the first two quarters of 2018. Gross margin for the PCB reportable segment decreased from 17.1% for the first two quarters of 2017 to 14.8% for the first two quarters of 2018, primarily due to decreased volumes at our Cellular Phone and Networking/Communications focused facilities. Gross margin for the E-M Solutions reportable segment increased from 6.8% for the first two quarters of 2017 to 6.9% for the first two quarters of 2018, primarily due to increased volumes. Gross margin for the Anaren reportable segment was 35.4% for the two quarters of 2018 which included a charge of \$4.9 million to cost of goods sold associated with inventory resulting from purchase accounting.

Capacity utilization is a key driver for us, particularly in our high volume Asia facilities, as a significant portion of our operating costs are fixed in nature. Capacity utilization for the second quarter of 2017 in our Asia and North America PCB facilities was 83% and 54%, respectively, compared to 71% and 61%, respectively, in the second quarter of 2018. Capacity utilization for the first two quarters of 2017 in our Asia and North America PCB facilities was 82% and 55%, respectively, compared to 74% and 61%, respectively, in the first two quarters of 2018.

Selling and Marketing Expenses

Selling and marketing expenses increased \$2.7 million, from \$15.9 million for the second quarter of 2017 to \$18.6 million for the second quarter of 2018. Selling and marketing expenses increased \$3.7 million, from \$32.5 million for the first two quarters of 2017 to \$36.2 million for the first two quarters of 2018. As a percentage of net sales, selling and marketing expenses was 2.5% for the second quarter of 2017, as compared to 2.6% for the second quarter of 2018, and 2.6% for both of the first two quarters of 2017 and 2018. The increase in selling and marketing expense for the second quarter and the first two quarters primarily relates to the acquisition of Anaren on April 18, 2018.

General and Administrative Expenses

General and administrative expenses increased \$17.2 million from \$29.1 million, or 4.7% of net sales, for the second quarter of 2017 to \$46.3 million, or 6.5% of net sales, for the second quarter of 2018. General and administrative expenses increased \$22.6 million from \$58.9 million, or 4.7% of net sales, for the first two quarters of 2017 to \$81.5 million, or 5.9% of net sales, for the first two quarters of 2018. The increase in expense primarily relates to \$6.8 million and \$10.8 million of acquisition-related costs for the quarter and the first two quarters of 2018, respectively, associated with the acquisition of Anaren on April 18, 2018 and two and a half months of general and administrative expense incurred by Anaren post acquisition.

Other Income (Expense)

Other expense, net decreased \$4.4 million from \$18.7 million for the second quarter of 2017 to \$14.3 million for the second quarter of 2018. Other expense, net decreased \$5.0 million from \$34.1 million for the first two quarters of 2017 to \$29.1 million for the first two quarters of 2018. The decrease in other expense, net for both the quarter and two quarters was primarily the result of foreign currency gains due to the depreciation of the Chinese Renminbi (RMB) as well as certain government incentives, offset by an increase in interest expense primarily related to the \$600.0 million incremental borrowing in conjunction with the Anaren acquisition. We utilize the RMB at our China facilities for employee-related expenses, foreign currency denominated purchases, and other costs of running our operations in China. Further, our translation of balance sheet accounts denominated in foreign currencies could be impacted if foreign exchange rates between those currencies (principally the RMB) and the U.S. Dollar change.

Income Taxes

The provision for income taxes decreased by \$72.1 million from a tax expense of \$5.6 million for the second quarter of 2017 to a tax benefit of \$66.5 million for the second quarter of 2018. The provision for income taxes decreased by \$71.2 million from \$9.7 million of tax expense for the first two quarters of 2017 to \$61.5 million of tax benefit for the first two quarters of 2018. The decreases in income tax expense in 2018 were primarily due to a release of a portion of our valuation allowance against our U.S. federal and state net deferred tax assets, decreased operating income, additional benefits from the release of uncertain tax positions, additional tax incentives, and an offset by an additional accrual of tax expense related to a change in our policy of indefinite reinvestment outside of the U.S. for our undistributed earnings attributable to our foreign subsidiaries.

Effects of the Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act (Tax Act) was enacted. Accounting Standards Codification (ASC) 740, Accounting for Income Taxes, requires companies to recognize the effect of tax law changes in the period of enactment regardless of the effective date of those tax law changes. Certain provisions of the Tax Act were effective September 27, 2017, others were effective or identified as of December 31, 2017 or January 1, 2018.

Given the timing of enactment of the Tax Act and the significance of the legislation, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 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 should not extend beyond one year from the Tax Act enactment date and is deemed to have ended when the registrant has obtained, prepared and analyzed the information necessary to finalize its accounting.

To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act. More specifically, SAB 118 summarizes a three-step process to be applied at each reporting period to account for and disclose the tax effects of the Tax Act. The steps are (1) to record the effects of the change in tax law for which accounting is complete; (2) to record provisional amounts (or adjustments to provisional amounts) for the effects of the tax law where accounting is not complete, but for which a reasonable estimate has been determined; and (3) where a reasonable estimate cannot yet be made, to continue to apply ASC 740 based on the tax law in effect prior to enactment of the Tax Act.

With respect to the reduction in the U.S. corporate income tax rate to 21 percent, we revalued our ending gross deferred tax items, previously recorded at 35 percent, using the enacted 21 percent corporate tax rate. This change caused a reduction to our U.S. federal deferred tax asset fully offset by a reduction of our valuation allowance. While we are able to make a reasonable estimate of the impact of the reduction in corporate rate, it may be affected by other analyses related to the Tax Act, including, but not limited to, our calculation of deemed repatriation of deferred foreign income and the state tax effect of adjustments made to federal temporary differences, as well as changes to our valuation allowance.

Further effects of tax law changes where we have made a provisional estimate include the one-time mandatory repatriation transition tax on the net accumulated earnings and profits of our foreign subsidiaries earned post 1986. We have performed a preliminary earnings and profits analysis with consideration given to foreign loss carryforwards acquired as a result of our acquisitions and determined that there should be no income tax effect in the current or any

future period. We will continue to identify and evaluate data to more thoroughly identify the tax impact and record adjustments, if any, within the measurement period.

We have determined that the following provisions that are effective January 1, 2018 and relevant to us will not impact the current quarter tax expense, primarily as a result of the full valuation allowance in the U.S.: limitations on certain entertainment expenses, the inclusion of commissions and performance based compensation in determining the excessive compensation limitation, limitation on the current deductibility of net interest expense in excess of 30 percent of adjusted taxable income, and a minimum tax on certain foreign earnings in excess of 10 percent of the foreign subsidiaries tangible assets (i.e., global intangible low-taxed income or GILTI). We are still evaluating whether to make a policy election to treat the GILTI tax as a period expense or to provide U.S. deferred taxes on foreign earnings that are expected to generate GILTI income when they reverse in future years.

In addition, significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are many transactions for which the ultimate tax determination is uncertain. Additionally, our calculations of income taxes are based on our interpretations of applicable tax laws in the jurisdictions in which we file.

Our effective tax rate was primarily impacted by tax rates in China and Hong Kong, the U.S. federal income tax rate, apportioned state income tax rates, generation of other credits and deductions available to us, as well as changes in valuation allowances, and certain non-deductible items. Certain foreign losses generated are not more likely than not to be realizable, and thus no income tax benefit has been recognized on these losses. We had a net deferred income tax liability of approximately \$18.5 million and \$4.9 million as of July 2, 2018 and January 1, 2018, respectively.

Liquidity and Capital Resources

Our principal sources of liquidity have been cash provided by operations, the issuance of senior notes, convertible senior notes, and term and revolving debt. Our principal uses of cash have been to finance acquisitions and capital expenditures, meet debt service requirements, fund working capital requirements, and repay existing debt. We anticipate that servicing debt, financing capital expenditures, financing acquisitions, and funding working capital requirements will continue to be the principal demands on our cash in the future.

Cash flow provided by operating activities during first two quarters of 2018 was \$41.4 million as compared to \$108.7 million in the same period in 2017. The decrease in cash flow was primarily due to increased investment in working capital. Cash cycle days increased to 49 days for the second quarter of 2018 as compared to 40 days for the same quarter of 2017 primarily due to increased accounts receivable resulting from a change in customer mix and timing of receivable collections. As of July 2, 2018, we had net working capital of approximately \$513.4 million compared to \$501.0 million as of January 1, 2018.

Net cash used in investing activities was approximately \$677.5 million for the first two quarters of 2018, reflecting \$596.4 million for acquisition of Anaren, net of debt assumed, and \$81.1 million net purchases of property, plant and equipment. Net cash used in investing activities was approximately \$69.0 million for the first two quarters of 2017 reflecting purchases of property, plant and equipment of \$87.1 million less proceeds from sale of property, plant and equipment and assets held for sale of \$18.1 million.

Net cash provided by financing activities was approximately \$431.7 million for the first two quarters of 2018, primarily reflecting proceeds of \$623.0 million from incremental term and revolving loan borrowings, offset by the repayment of assumed long-term debt in acquisition of \$178.6 million, repayment of long-term debt \$3.7 million, and payment of debt issuance costs and original issue discount of \$9.2 million associated with the incremental term loans. Net cash used by financing activities was approximately \$49.9 million the first two quarters of 2017 primarily reflecting additional prepayments of principal of long-term debt.

As of July 2, 2018, we had cash and cash equivalents of approximately \$204.1 million, of which approximately \$139.5 million was held by our foreign subsidiaries, primarily in China. Cash and cash equivalents held by our foreign locations are expected to be used in local operations.

Our 2018 net capital expenditures are expected to be in the range of \$150.0 million to \$170.0 million.

Long-term Debt and Letters of Credit

Term Loan Facility

On April 18, 2018, we closed our \$600.0 million commitment of incremental loans concurrent with the completion of our acquisition of Anaren. We used the proceeds of the incremental loans along with cash on hand to fund the purchase of the acquisition and to pay related fees and expenses. These incremental loans increased the existing balance of our Term Loan Facility due 2024 from \$348.3 million to \$948.3 million. This Term Loan Facility had an outstanding balance of \$945.9 million as of July 2, 2018, of which \$40.0 million is included in short-term debt and \$905.9 million is included in long-term debt, was issued at a weighted average discount of 99.7% and bears interest, at our option, at a floating rate of LIBOR, plus an applicable interest margin of 2.5%, or an alternate base rate, (defined as the greater of the JP Morgan prime, the New York Fed bank rate plus 0.5% or LIBOR plus 1%), subject to a 1% floor plus an applicable margin of 1.5%. At July 2, 2018, the interest rate on the outstanding borrowings under the Term Loan Facility was 4.60%. There is no provision, other than an event of default, for the interest margin to increase. The Term Loan Facility will mature on September 28, 2024. The Term Loan Facility is secured by a

significant amount of our domestic assets and a pledge of 65% of voting stock of our first tier foreign subsidiaries and is structurally senior to our Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes below.

We are required to make scheduled payments of the outstanding Term Loan Facility on a quarterly basis beginning January 1, 2018. Subsequent to July 2, 2018, we made an optional debt principal prepayment of \$40.0 million. As a result of the prepayment, we are no longer required to make any quarterly scheduled payments until October 2022. However, based on certain parameters defined in the Term Loan Facility, including a First Lien Leverage Ratio, we may be required to make an additional principal payment on an annual basis beginning after fiscal year 2018. Any additional annual payments or prepayments would reduce future required scheduled payments. Any remaining outstanding balance under the Term Loan Facility is due at the maturity date of September 28, 2024.

Borrowings under the Term Loan Facility are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments and dispositions, and share payments. At July 2, 2018, we were in compliance with the covenants under the Term Loan Facility.

Senior Notes

The \$375.0 million of Senior Notes, which is included in long-term debt, bear interest at a rate of 5.63% per annum. Interest is payable semiannually in arrears on April 1 and October 1 of each year beginning April 1, 2018. The Senior Notes will mature on October 1, 2025.

Borrowings under the Senior Notes are subject to certain affirmative and negative covenants, including limitations on indebtedness, corporate transactions, investments, dispositions, and share payments. At July 2, 2018, we were in compliance with the covenants under the Senior Notes.

Convertible Senior Notes due 2020

We maintain 1.75% convertible senior notes in the amount of \$250.0 million due December 15, 2020. The convertible senior notes bear interest at a rate of 1.75% per annum. Interest is payable semiannually in arrears on June 15 and December 15 of each year. The convertible senior notes are senior unsecured obligations and rank equally to our future unsecured senior indebtedness and senior in right of payment to any of our future subordinated indebtedness. Offering expenses are being amortized to interest expense over the term of the convertible senior notes.

Asset-Based Lending Agreements

We maintain a \$200.0 million U.S. Asset-Based Lending Credit Agreement (U.S. ABL), and a \$150.0 million Asia Asset-Based Lending Credit Agreement (Asia ABL) (collectively the ABL Revolving Loans).

The U.S. ABL consists of three tranches comprised of a revolving credit facility of up to \$200.0 million, a letter of credit facility for up to \$50.0 million, and swingline loans for up to \$30.0 million, provided that at no time may amounts outstanding under the tranches exceed in aggregate \$200.0 million or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the U.S. ABL agreement. Borrowings under the U.S. ABL bear interest at either a floating rate of LIBOR plus a margin of 150 basis points or JP Morgan Chase Bank's prime rate plus a margin of 50 basis points, at our option. At July 2, 2018, the interest rate on the outstanding borrowings under the U.S. ABL was 3.60%. The applicable margin can vary based on the remaining availability of the facility, from 125 to 175 basis points for LIBOR-based loans and from 25 to 75 basis points for JP Morgan Chase Bank's prime rate-based loans. Other than availability and an event of default, there are no other provisions for the interest margin to increase. The U.S. ABL will mature on May 31, 2020. Loans made under the U.S. ABL are secured first by all of our domestic cash, receivables and certain inventories as well as by a second position against a significant amount of our domestic assets and a pledge of 65% of the voting stock of our first tier foreign subsidiaries and are structurally senior to our Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes elsewhere in this section. At July 2, 2018, \$40.0 million of the U.S. ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

The Asia ABL consists of two tranches comprised of a revolving credit facility for up to \$150.0 million and a letter of credit facility for up to \$100.0 million, provided that at no time may amounts outstanding under both tranches exceed in aggregate \$150.0 million or the applicable borrowing base, which is a percentage of the principal amount of Eligible Accounts, as defined in the Asia ABL agreement. Borrowings under the Asia ABL bear interest at a floating rate of LIBOR plus 140 basis points. At July 2, 2018, the interest rate on the outstanding borrowings under the Asia ABL was 3.50%. There is no provision, other than an event of default, for the interest margin to increase. The Asia ABL will mature on May 22, 2020. Loans made under the Asia ABL are secured by a portion of our Asia cash and receivables and are structurally senior to our domestic obligations, including the Senior Notes and Convertible Senior Notes. See Senior Notes and Convertible Senior Notes elsewhere in this section. At July 2, 2018, \$30.0 million of the Asia ABL was outstanding and classified as long-term debt, which is consistent with its maturity date.

We have up to \$50.0 million and \$100.0 million Letters of Credit Facilities under the U.S. ABL and the Asia ABL, respectively. As of July 2, 2018, letters of credit in the amount of \$6.1 million were outstanding under the U.S. ABL and \$13.5 million were outstanding under the Asia ABL with various expiration dates through June 2019. Available borrowing capacity under the U.S. ABL and the Asia ABL was \$153.9 million and \$106.5 million, respectively, which considers letters of credit outstanding at July 2, 2018.

We are required to pay a commitment fee of 0.25% to 0.375% per annum on any unused portion of the ABL Revolving Loans. We paid commitment fees of \$0.2 million and \$0.5 million for the quarter and two quarters ended July 2, 2018, respectively. Under the occurrence of certain events, the ABL Revolving Loans are subject to various financial and operational covenants, including maintaining minimum fixed charge coverage ratios. At July 2, 2018, we were in compliance with the covenants under the ABL Revolving Loans.

Other Credit Facility

Additionally, we are party to a revolving loan credit facility (Chinese Revolver) with a lender in China. Under this arrangement, the lender has made available to us approximately \$31.7 million in unsecured borrowing with all terms of the borrowing to be negotiated at the time the Chinese Revolver is drawn upon. There are no commitment fees on the unused portion of the Chinese Revolver, and this arrangement expires in January 2019. As of July 2, 2018, the Chinese Revolver had not been drawn upon.

Based on our current level of operations, we believe that cash generated from operations, cash on hand and cash from the issuance of term and revolving debt will be adequate to meet our currently anticipated capital expenditure, debt service, and working capital needs for the next 12 months.

Contractual Obligations and Commitments

The following table provides information on our contractual obligations as of July 2, 2018:

Contractual Obligations (1)	Total	Less Than 1 year	1 - 3 Years	4 - 5 Years	After 5 Years
Contractual Obligations (1)	(In thousand		¢ 70 007	Φ 7 412	¢1.072.466
Long-term debt obligations	\$1,392,435	\$40,729	\$ 70,827	\$7,413	\$1,273,466
Convertible debt obligations	249,985		249,985		—
Interest on debt obligations	437,289	70,388	135,378	127,170	104,353
Derivative liabilities	1,565	1,565	_	_	_
Purchase obligations	112,704	101,603	2,808	607	7,686
Operating lease commitments	29,526	11,176	9,052	3,522	5,776
-					
Total contractual obligations	\$2,223,504	\$225,461	\$ 468,050	\$138,712	\$1,391,281

(1) Unrecognized uncertain tax benefits of \$39.7 million are not included in the table above as the settlement timing is uncertain.

Off Balance Sheet Arrangements

We do not currently have, nor have we ever had, any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts. As a result, we are not materially exposed to any financing, liquidity, market, or credit risk that could arise if we had engaged in these relationships.

Seasonality

Orders for our products generally correspond to the production schedules of our customers. We historically experience higher net sales in the third and fourth quarters due to end customer demand in the fourth quarter for consumer electronics products. Seasonal fluctuations also include the Chinese New Year holidays in the first quarter, which typically results in lower net sales. We attribute this decline to shutdowns of our customers' and our own China based manufacturing facilities surrounding the Chinese New Year public holidays, which normally occur in January or February of each year.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

In the normal course of business operations we are exposed to risks associated with fluctuations in interest rates and foreign currency exchange rates. We address these risks through controlled risk management that includes the use of derivative financial instruments to economically hedge or reduce these exposures. We do not enter into derivative financial instruments for trading or speculative purposes.

We have not experienced any losses to date on any derivative financial instruments due to counterparty credit risk.

To ensure the adequacy and effectiveness of our interest rate and foreign exchange hedge positions, we continually monitor our interest rate swap positions and foreign exchange forward positions, both on a stand-alone basis and in conjunction with their underlying interest rate and foreign currency exposures, from an accounting and economic perspective. However, given the inherent limitations of forecasting and the anticipatory nature of the exposures intended to be hedged, we cannot assure that such programs will offset more than a portion of the adverse financial impact resulting from unfavorable movements in either interest or foreign exchange rates. In addition, the timing of the accounting for recognition of gains and losses related to mark-to-market instruments for any given period may not coincide with the timing of gains and losses related to the underlying economic exposures and, therefore, may adversely affect our consolidated operating results and financial position.

Interest rate risk

Our business is exposed to interest rate risk resulting from fluctuations in interest rates. Our interest expense is more sensitive to fluctuations in the general level of LIBOR interest rates than to changes in rates in other markets. Increases in interest rates would increase interest expense relating to our outstanding variable rate borrowings and increase the cost of debt. Fluctuations in interest rates can also lead to significant fluctuations in the fair value of our debt obligations.

On May 15, 2018, we entered into a four-year pay-fixed, receive floating (1-month LIBOR), interest rate swap arrangement with a notional amount of \$400.0 million for the period beginning June 1, 2018 and ending on June 1, 2022. At inception, the fair value of the interest rate swap was zero and as of July 2, 2018, the fair value of the interest rate swap was recorded as a liability and as a component of other accrued liabilities in the amount of \$1.4 million. Under the terms of the interest rate swap, we would pay a fixed rate of 2.84% against the first interest payments of a portion of our LIBOR-based debt and would receive floating 1-month LIBOR during the swap period. During the quarter ended July 2, 2018, we designated this interest rate swap as a cash flow hedge. No ineffectiveness was recognized for the quarter ended July 2, 2018. During the quarter ended July 2, 2018, the interest rate swap increased interest expense by \$0.3 million.

See Liquidity and Capital Resources and Long-term Debt and Letters of Credit appearing in Item 2 of this Form 10-Q for further discussion of our financing facilities and capital structure. As of July 2, 2018, approximately 62.5% of our total debt was based on fixed rates. Based on our borrowings as of July 2, 2018, an assumed 100 basis point change in variable rates would cause our annual interest cost to change by \$6.2 million.

Foreign currency risks

In the normal course of business we are exposed to risks associated with fluctuations in foreign currency exchange rates associated with transactions that are denominated in currencies other than our functional currencies, as well as the effects of translating amounts denominated in a foreign currency to the U.S. Dollar as a normal part of our financial reporting process. Most of our foreign operations have the U.S. Dollar as their functional currency, however, two of our China facilities utilize the Renminbi (RMB), which results in recognition of translation adjustments included as a component of other comprehensive income. Our foreign exchange exposure results primarily from employee-related and other costs of running our operations in foreign countries, foreign currency denominated purchases and translation of balance sheet accounts denominated in foreign currencies. Our primary foreign exchange exposure is to the RMB. Except for certain equipment purchases, we do not engage in hedging to manage foreign currency risk related to revenue and expenses denominated in RMB. However, we may consider the use of derivatives in the future. In general, our Chinese customers pay us in RMB, which partially mitigates this foreign currency exchange risk.

We enter into foreign currency forward contracts to mitigate the impact of changes in foreign currency exchange rates and to reduce the volatility of purchases and other obligations generated in currencies other than the functional currencies. Our foreign subsidiaries may at times purchase forward exchange contracts to manage their foreign currency risks in relation to certain purchases of machinery denominated in foreign currencies other than our foreign functional currency. The notional amount of the foreign exchange contracts at July 2, 2018 and January 1, 2018 was approximately \$6.5 million and \$10.9 million, respectively. We designated certain of these foreign exchange contracts as cash flow hedges.

The table below presents information about certain of the foreign currency forward contracts at July 2, 2018 and January 1, 2018:

	As of July 2, 2018		As of Jan 2018	uary 1,
		Average		Average
		Contract		Contract
		Rate or		Rate or
	Notional	Strike	Notional	Strike
	Amount (In thous		Amount (In thousa	Amount
Receive foreign currency/pay USD	(,	(=== ==================================	
Japanese Yen	\$6,482	0.01	\$9,687	0.01
Euro	_	_	1,241	1.11
	\$6,482		\$10,928	

Estimated fair value, net liability \$(149) \$(44)

Debt Instruments

The table below presents information about certain of our debt instruments as of July 2, 2018 and January 1, 2018.

	As of Jul	y 2, 2018							Waightad
	Remainir 2018 (In thousa	2019	2020	2021	2022	Thereafter	Total	Fair Market Value	Weighted Average Interest Rate
US\$ Variable									
Rate	\$40,000	\$ —	\$70,000	\$ —	\$2,671	\$903,208	\$1,015,879	\$1,013,515	4.53%
US \$ Fixed Rate	729	400	250,412			375,000	626,541	842,932	4.08%
Total	\$40,729	\$400	\$320,412	\$—	\$2,671	\$1,278,208	\$1,642,420	\$1,856,447	
			0.1.0						
	As of Jan	uary 1, 2	018						
	As of Jan	uary 1, 2	018					Fair Market	Weighted Average
	2018	2019	2020	2021	2022	Thereafter	Total	Fair Market Value	-
US\$ Variable		2019		2021	2022	Thereafter	Total		Average
US\$ Variable Rate	2018 (In thousa	2019 ands)	2020					Value	Average Interest Rate
Rate	2018 (In thousa \$3,500	2019 ands) \$2,625	2020 \$50,500	2021 \$4,375		\$331,625	\$396,125	Value \$393,943	Average Interest Rate
	2018 (In thousa	2019 ands)	2020	\$4,375				Value	Average Interest Rate

The table below presents information regarding our interest rate swaps (in thousands) as of July 2, 2018.

	2018	Fa	ir Market V	alue
Average interest payout rate	2.84%			
Interest payout amount	\$(1,009)			
Average interest received rate	1.99%			
Interest received amount	706			
Fair value loss as of July 2, 2018		\$	(1,416)

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, under the supervision and with the participation of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO), has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report. Based on this evaluation, our CEO and CFO have concluded that, as of July 2, 2018, such disclosure controls and procedures were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and

(ii) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosures.

In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their desired control objectives, and our management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control Over Financial Reporting

As a result of the acquisition of Anaren on April 18, 2018, our management is in the process of reviewing and evaluating the design and operating effectiveness of its internal control over financial reporting relating to Anaren. Certain changes have been made and will continue to be made to our internal controls until management has completed its evaluation and integrated Anaren's information and accounting systems and processes. In reliance on interpretive guidance issued by the SEC staff permitting a company to exclude an acquired business from management's assessment of the effectiveness of internal control over financial reporting for one year following the date that the acquisition is completed, we have elected to exclude disclosure of changes in internal control over financial reporting related to Anaren from this Quarterly Report on Form 10-Q.

There have been no other changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter and two quarters ended July 2, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may become a party to various legal proceedings arising in the ordinary course of our business. There can be no assurance that we will prevail in any such litigation. We believe that the amount of any reasonably possible or probable loss for known matters would not be material to our financial statements; however, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on our financial condition, results of operations, or cash flows in a particular period.

Item 1A. Risk Factors

An investment in our common stock involves a high degree of risk. You should carefully consider the factors described below, in addition to those discussed elsewhere in this report, in analyzing an investment in our common stock. If any of the events described below occurs, our business, financial condition, and results of operations would likely suffer, the trading price of our common stock could fall, and you could lose all or part of the money you paid for our common stock. The risk factors described below are not the only ones we face. Risks and uncertainties not known to us currently, or that may appear immaterial, also may have a material adverse effect on our business, financial condition, and results of operations.

In addition, the following risk factors and uncertainties could cause our actual results to differ materially from those projected in our forward-looking statements, whether made in this report or the other documents we file with the SEC, or our annual or quarterly reports to stockholders, future press releases, or orally, whether in presentations, responses to questions, or otherwise.

Risks Related to our Business

Uncertainty and adverse changes in the economy and financial markets could have an adverse impact on our business and operating results.

Uncertainty or adverse changes in the economy could lead to a significant decline in demand for the end products manufactured by our customers, which, in turn, could result in a decline in the demand for our products and pressure to reduce our prices. Any decrease in demand for our products could have an adverse impact on our financial condition, operating results and cash flows. Uncertainty and adverse changes in the economy could also increase the cost and decrease the availability of potential sources of financing and increase our exposure to losses from bad debts, either of which could have a material adverse effect on our financial condition, operating results and cash flows.

The integration of Anaren may present significant challenges to TTM, and although TTM expects the acquisition will result in cost savings, synergies, and other benefits to TTM, TTM may not realize those benefits because of difficulties related to integration, the realization of synergies, and other challenges.

TTM and Anaren have operated independently until consummation of the acquisition on April 18, 2018, and there can be no assurances that their businesses can be integrated successfully. It is possible that the integration process could

result in the loss of key TTM or Anaren employees, the loss of customers, the disruption of either company's or both companies' ongoing businesses or other unexpected integration issues, higher than expected integration costs and an overall post-completion integration process that takes longer than originally anticipated. Specifically, the following issues and potential risks, among others, must be addressed in integrating the operations of TTM and Anaren in order to realize the anticipated benefits of the acquisition so the combined company performs as expected:

- failure to implement the business plan for the combined company;
- combining the businesses of TTM and Anaren and meeting the capital requirements of the combined company in a manner that permits the combined company to achieve the cost savings or revenue synergies anticipated to result from the acquisition, the failure of which would result in the anticipated benefits of the acquisition not being realized in the time frame currently anticipated or at all;
- satisfying the requirements of our customers and meeting their expectations while we integrate operations; integration of the contracting activities of TTM and Anaren, particularly with respect to the companies' respective military and government contracts;
- harmonizing the companies' operating practices, employee development and compensation programs, internal controls, and other policies, procedures, and processes;

costs, including legal and settlement costs, associated with TTM's and Anaren's legal proceedings, and other costs, including legal and settlement costs, associated with the combined company's other loss contingencies, in each case whether known or unknown and whether relating to past, present or future facts, events, circumstances, or occurrences, any of which could be materially adverse to the business, results of operations, assets, or financial condition of TTM or Anaren and, following the acquisition, the financial position, results of operations, and liquidity of the combined company and the ability of the combined company to achieve expected benefits of the acquisition; potential deterioration in the financial performance of TTM and Anaren, including any potential deviation in results of operations from historical levels;

difficulties in the retention and assimilation of employees;

 demands on management related to the increase in the size of our company after the acquisition;

the diversion of management's attention from the management of daily operations to the integration of operations; unanticipated changes in applicable laws and regulations;

the imposition of divestiture requirements or a required exit from business lines to obtain regulatory approvals; difficulties and risks in the integration of departments and systems (including accounting, health information and management information systems), technologies (including software), books and records and procedures, as well as in maintaining uniform standards and controls (including internal control over financial reporting and related procedures and policies); and

other unanticipated issues, expenses, or liabilities that could materially adversely affect our ability to realize any expected synergies on a timely basis, or at all.

If we cannot successfully integrate Anaren, we may experience material negative consequences to our business, financial condition, or results of operations. Successful integration of TTM and Anaren will depend on our ability to manage these operations, to realize opportunities for revenue growth and to eliminate redundant and excess costs. Because of difficulties in combining the two companies, we may not be able to achieve the benefits that we expect to achieve as a result of the acquisition.

We serve customers and have manufacturing facilities outside the United States and are subject to the risks characteristic of international operations.

We have significant manufacturing operations in Asia and Canada and sales offices located in Asia and Europe, and we continue to consider additional opportunities to make foreign investments and construct new foreign facilities.

For the quarter ended July 2, 2018, we generated approximately 61.8% of our net sales from non-U.S. operations, and a significant portion of our manufacturing material was provided by international suppliers during this period. The United States' trade policies and those of foreign countries are subject to change which could adversely affect our ability to purchase and sell goods and materials without significant tariffs, taxes or duties that may be imposed on the materials we purchase or the goods we sell, thereby increasing the cost of such materials and potentially decreasing our margins. Further, our revenues could be impacted if our customers' ability to sell their goods is reduced by such tariffs, taxes or duties. The U.S. government has included PCBs among the third list of items that may be subjected to proposed tariffs to be imposed on imports from China, which may negatively impact our revenue and profitability. In addition, we are subject to risks relating to significant international operations, including but not limited to:

- managing international operations;
- imposition of governmental controls;
- unstable regulatory environments;
- compliance with employment laws;
- implementation of disclosure controls, internal controls, financial reporting systems, and governance standards to comply with U.S. accounting and securities laws and regulations;
- 4 imitations on imports or exports of our product offerings;

fluctuations in the value of local currencies;

inflation or changes in political and economic conditions;

labor unrest, rising wages, difficulties in staffing, and geographical labor shortages;

government or political unrest;

donger payment cycles;

language and communication barriers, as well as time zone differences;

- cultural differences:
- increases in duties and taxation levied on our products;
- other potentially adverse tax consequences;
- imposition of restrictions on currency conversion or the transfer of funds;
- travel restrictions;
- expropriation of private enterprises;
- the potential reversal of current favorable policies encouraging foreign investment and trade; and
- the potential for strained trade relationships between the United States and its trading partners, including trade tariffs which could create competitive pricing risk.

We have substantial outstanding indebtedness, and our outstanding indebtedness could adversely impact our liquidity and flexibility in obtaining additional financing, our ability to fulfill our debt obligations and our financial condition and results of operations.

We have substantial debt and, as a result, we have significant debt service obligations. We maintain \$250.0 million of Convertible Senior Notes due 2020 at an interest rate of 1.75%, a \$945.9 million Term Loan Facility due 2024 (Term Loan Facility) at a floating rate of LIBOR plus 2.5%, \$375.0 million of Senior Notes due 2025 (Senior Notes) at an interest rate of 5.63%, \$40.0 million outstanding under a \$200.0 million U.S. Asset-Based Lending Credit Agreement (U.S ABL), and \$30.0 million outstanding under a \$150.0 million Asia Asset-Based Lending Credit Agreement (Asia ABL). We and a number of our direct and indirect subsidiaries also have various credit facilities and letters of credit. Such agreements also contain certain financial covenants which require us to maintain, under the occurrence of certain events, a consolidated fixed charge coverage ratio.

Subject to the limits contained in the credit agreements governing the Term Loan Facility, the U.S. ABL, the Asia ABL, the indenture governing the Senior Notes, and our other debt instruments, we may be able to incur substantial additional debt from time to time to finance working capital, capital expenditures, investments or acquisitions, or for other purposes. If we do so, the risks related to our high level of debt could intensify. Specifically, our high level of debt could have important consequences to us and our shareholders. For example, it could:

•make it more difficult for us to satisfy our obligations with respect to our indebtedness, which could in turn result in an event of default on such indebtedness;

require us to use a substantial portion of our cash flow from operations for debt service payments, thereby reducing the availability of cash for working capital, capital expenditures, acquisitions and other general corporate purposes; impair our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions and other investments or general corporate purposes, which may limit our ability to execute our business strategy; diminish our ability to withstand a downturn in our business, the industry in which we operate or the economy generally and restrict us from exploiting business opportunities or making acquisitions;

limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate or the general economy;

•ncrease our vulnerability to general adverse economic and industry conditions, including movements in interest rates, which could result in increased borrowing costs;

4imit management's discretion in operating our business; and

place us at a competitive disadvantage as compared to our competitors that have less debt as it could limit our ability to capitalize on future business opportunities and to react to competitive pressures or adverse changes.

In addition, the indenture governing the Senior Notes and the credit agreements governing the Term Loan Facility, the U.S. ABL and the Asia ABL contain restrictive covenants that will limit our ability to engage in activities that may be in our long-term best interest. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all our debt.

Servicing our debt requires a significant amount of cash and we may not be able to generate sufficient cash to service all of our debt and may be forced to take other actions to satisfy our obligations under our debt, which may not be successful.

On July 2, 2018, we made an optional debt principal prepayment of \$40.0 million. As a result of the prepayment, we are no longer required to make any quarterly scheduled payments until October 2022. However, based on certain parameters defined in the term loan facilities, including a First Lien Leverage Ratio, we may be required to make an additional principal payment on an annual basis, beginning after fiscal year 2018.

Our ability to make scheduled payments on or to refinance our debt obligations and to fund planned capital expenditures and expansion efforts depends on our ability to generate cash in the future and our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain regulatory, competitive, financial, business and other factors beyond our control. We cannot assure you that we will maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our debt.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional capital (which could include obtaining additional equity capital on terms that may be onerous or highly dilutive) or restructure or refinance our indebtedness. We may not be able to effect any such alternative measures, if necessary, on commercially reasonable terms or at all and, even if successful, those alternative actions may not allow us to meet our scheduled debt service obligations. The credit agreements governing the Term Loan Facility, the U.S. ABL and the Asia ABL, the indenture governing the Senior Notes will restrict our ability to dispose of assets and use the proceeds from those dispositions and may also restrict our ability to raise debt or equity capital to be used to repay other indebtedness when it becomes due. We may not be able to consummate those dispositions or to obtain proceeds in an amount sufficient to meet any debt service obligations then due.

In addition, we conduct certain of our operations through our subsidiaries. Accordingly, repayment of our indebtedness may be dependent on the generation of cash flow by our subsidiaries and their ability to make such cash available to us, by dividend, debt repayment or otherwise. Unless they are guarantors of the Senior Notes or our other indebtedness, our subsidiaries do not have any obligation to pay amounts due on our indebtedness or to make funds available for that purpose. Our subsidiaries may not be able to, or may not be permitted to, make distributions to enable us to make payments in respect of our indebtedness. Each subsidiary is a distinct legal entity, and under certain circumstances, legal and contractual restrictions may limit our ability to obtain cash from our subsidiaries. While the indenture governing the Senior Notes and the credit agreements governing the Term Loan Facility, the U.S. ABL and the Asia ABL will limit the ability of our subsidiaries to incur consensual restrictions on their ability to pay dividends or make other intercompany payments to us, these limitations are subject to qualifications and exceptions. In the event that we do not receive distributions from our subsidiaries, we may be unable to make required principal and interest payments on our indebtedness.

Our inability to generate sufficient cash flows to satisfy our debt obligations, or to refinance our indebtedness on commercially reasonable terms or at all, would materially and adversely affect our financial position and results of operations and our ability to satisfy our obligations under our indebtedness.

If we cannot make scheduled payments on our debt, we will be in default and holders of the Senior Notes could declare all outstanding principal and interest to be due and payable, the lenders under the Term Loan Facility, the U.S. ABL and the Asia ABL could terminate their commitments to loan money, the lenders could foreclose against the assets securing their borrowings and we could be forced into bankruptcy or liquidation.

Despite our current level of indebtedness, we and our subsidiaries may still be able to incur substantially more debt. This could further exacerbate the risks to our financial condition described above.

We and our subsidiaries may be able to incur significant additional indebtedness in the future. Although the indenture governing the Senior Notes and the credit agreements governing the Term Loan Facility, the U.S. ABL and the Asia ABL will contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions, and the additional indebtedness incurred in compliance with these restrictions could be substantial. These restrictions also will not prevent us from incurring obligations that do not constitute indebtedness.

Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

Borrowings under the Term Loan Facility, the U.S. ABL and the Asia ABL are at variable rates of interest and expose us to interest rate risk. If interest rates were to increase, our debt service obligations on the variable rate indebtedness would increase even though the amount borrowed remained the same, and our net income and cash flows, including cash available for servicing our indebtedness, will correspondingly decrease. On May 15, 2018, we entered into an interest rate swap arrangement with a notional amount of \$400.0 million, which expires on June 1, 2022, in order to reduce interest rate volatility exposure. This arrangement effectively converts \$400.0 million of our variable rate debt to fixed rate. Under the terms of the interest rate swap, we would pay a fixed rate of 2.84% and would receive floating 1-month LIBOR during the swap period.

For illustrative purposes and assuming all loans under the Term Loan Facility, the U.S. ABL and the Asia ABL were fully drawn, each quarter point change in interest rates would result in a \$2.2 million change in annual interest expense on our indebtedness under the Term Loan Facility, the U.S. ABL and the Asia ABL, after giving effect to our interest rate swap.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies may increase our future borrowing costs and reduce our access to capital.

When issued, our debt will have a non-investment grade rating, and any rating assigned could be lowered or withdrawn entirely by a rating agency if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Consequently, real or anticipated changes in our credit ratings will generally affect the market value of the Senior Notes. Credit ratings are not recommendations to purchase, hold or sell the Senior Notes. Additionally, credit ratings may not reflect the potential effect of risks relating to the structure or marketing of the Senior Notes.

Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing.

Changes in prices or availability of raw materials could have a material adverse effect on our business, financial condition, and results of operations and reduce our gross margins.

To manufacture PCBs, we use raw materials such as laminated layers of fiberglass, copper foil, chemical solutions, gold, copper and other commodity products, which we order from our suppliers. In the case of backplane assemblies, components include connectors, sheet metal, capacitors, resistors and diodes, many of which are custom made and controlled by our customers' approved vendors. If raw material and component prices increase or if there is inflationary pressure on the cost of the metals that we use to produce our product, especially copper, it may reduce our gross margins. Further, if the supply of materials which we use in our manufacturing process becomes limited, our ability to obtain the quantities necessary to meet our customers' demand may be impacted which could cause us to encounter reduced revenue levels or price increases which would impact our profit margins. If either of these situations occurs our financial condition and results of operations could be negatively impacted.

The Company may experience cash flow volatility.

We experience fluctuations in our revenues and cost structure and the resulting cash flows and expect that this will continue to occur in the future. We experience fluctuations in our cash flows for reasons that include (i) the types and complexity, number, size, timing and duration of client engagements; (ii) the timing of revenue recognition under U.S. GAAP; (iii) the seasonality of our business; (iv) fluctuations in costs of labor; (v) fluctuations in the cost and availability of raw materials; (vi) fluctuations in demand for our products; (vii) the length of billing and collection cycles and changes in amounts that may become uncollectible; (viii) changes in the frequency and complexity of government regulatory and enforcement activities; (ix) timing of customer payments; (x) fluctuations in the exchange rates of various currencies against the U.S. dollar; and (xi) economic factors beyond our control. Such fluctuations could affect our ability to meet our obligations including debt repayments. Any failure to meet our financial obligations could have a material adverse effect on our financial position and results of operations.

We are subject to risks of currency fluctuations.

A portion of our cash, other current assets and current liabilities is held in currencies other than the U.S. dollar. Changes in exchange rates among other currencies and the U.S. dollar will affect the value of these assets or liabilities as re-measured to U.S. dollars on our balance sheet. To the extent that we ultimately decide to repatriate some portion of these funds to the United States, the actual value transferred could be impacted by movements in exchange rates. Any such type of movement could negatively impact the amount of cash available to fund operations or to repay debt. Additionally, we have revenues and costs denominated in currencies other than the U.S. dollar (primarily the RMB). Fluctuations in the exchange rates between the U.S. dollar and the RMB could result in increases or decreases in our costs or revenues which could negatively impact our business, financial condition, and results of operations. Significant inflation or disproportionate changes in foreign exchange rates could occur as a result of general economic conditions, acts of war or terrorism, changes in governmental monetary or tax policy, or changes in local interest rates Further, China's government imposes controls over the convertibility of RMB into foreign currencies, which subjects us to further currency exchange risk.

Our results of operations are often subject to demand fluctuations and seasonality. With a high level of fixed operating costs, even small revenue shortfalls would decrease our gross margins.

Our results of operations fluctuate for a variety of reasons, including:

- timing of orders from and shipments to major customers;
- the levels at which we utilize our manufacturing capacity;
- price competition;
- changes in our mix of revenues generated from quick-turn versus standard delivery time services;
- expenditures, charges or write-offs, including those related to acquisitions, facility restructurings, or asset impairments; and
- expenses relating to expanding existing manufacturing facilities.

A significant portion of our operating expenses is relatively fixed in nature, and planned expenditures are based in part on anticipated orders. Accordingly, unexpected revenue shortfalls may decrease our gross margins. In addition, we have experienced sales fluctuations due to seasonal patterns in the capital budgeting and purchasing cycles, as well as inventory management practices of our customers and the end markets we serve. In particular, the seasonality of the cellular phone and tablet industries and quick-turn ordering patterns affect the overall PCB industry. These seasonal trends have caused fluctuations in our operating results in the past and may continue to do so in the future. Results of operations in any period should not be considered indicative of the results that may be expected for any future period. In addition, our future quarterly operating results may fluctuate and may not meet the expectations of securities analysts or investors.

Recently enacted changes in tax law could materially affect our financial position and results of operations.

On December 22, 2017, the President of the United States signed into law H.R. 1 (the "U.S. Tax Reform"). We are in the process of determining the impact to our financial statements of all aspects of U.S. Tax Reform and intend to reflect the impact of such reform in the financial statements during the period in which such amounts can be reasonably estimated. The U.S. Tax Reform includes a number of provisions, including the lowering of the U.S. corporate tax rate from 35% to 21%, effective January 1, 2018. There are also provisions that may partially offset the benefit of such rate reduction, such as the repeal of the deduction for domestic production activities. The U.S. Tax Reform also includes international provisions, which generally establish a territorial-style system for taxing foreign-source income of domestic multinational corporations. Financial statement impacts could include adjustments for the re-measurement of deferred tax assets (liabilities) and the accrual for deemed repatriation tax on unremitted foreign earnings and profits. There is substantial uncertainty regarding the details of the U.S. Tax Reform. The intended and unintended consequences of the U.S. Tax Reform on our business are not yet widely understood and, due to the large and expanding scale of our international business activities, the changes to the taxation of our activities effected by the U.S. Tax Reform could increase our worldwide effective tax rate and could materially impact our financial position or results of operations.

We rely on the cellular phone and mobile technology industry for a significant portion of sales. The economic volatility in this industry has had, and may continue to have, a material adverse effect on our ability to forecast demand and production and to meet desired sales levels.

A large percentage of our business is conducted with customers who are in the cellular phone and mobile technology industry. This industry is characterized by intense competition, short product life cycles, seasonality, particularly around the year-end holiday season, and significant fluctuations in consumer demand. This industry is heavily dependent on consumers and therefore can be affected by their demand patterns. If the volatility in this industry continues, it may have a material adverse effect on our business, financial condition, and results of operations.

If we are unable to respond to rapid technological change and process development, we may not be able to compete effectively.

The market for our manufacturing services is characterized by rapidly changing technology and continual implementation of new production processes. The future success of our business will depend in large part upon our ability to maintain and enhance our technological capabilities, to manufacture products that meet changing customer needs, and to successfully anticipate or respond to technological changes on a cost-effective and timely basis. We expect that the investment necessary to maintain our technological position will increase as customers make demands for products and services requiring more advanced technology on a quicker turnaround basis. For example, in 2018 we expect to continue to make significant capital expenditures to expand our HDI, mSAP, and other advanced manufacturing capabilities. We may not be able to obtain access to additional sources of funds in order to respond to technological changes as quickly as our competitors. In addition, failure to adopt and implement technological improvements quickly may cause inefficiencies as our product yields or quality may decrease, resulting in increased costs.

In addition, the PCB industry could encounter competition from new or revised manufacturing and production technologies that render existing manufacturing and production technology less competitive or obsolete. We may not respond effectively to the technological requirements of the changing market. If we need new technologies and equipment to remain competitive, the development, acquisition, and implementation of those technologies and equipment will require us to make significant capital investments.

An increase in the cost of raw materials could have a material adverse effect on our business, financial condition, and results of operations and reduce our gross margins.

To manufacture PCBs, we use raw materials such as laminated layers of fiberglass, copper foil, chemical solutions, gold, and other commodity products, which we order from our suppliers. In the case of backplane assemblies, components include connectors, sheet metal, capacitors, resistors and diodes, many of which are custom made and controlled by our customers' approved vendors. If raw material and component prices increase, it may reduce our gross margins.

Products we manufacture may contain design or manufacturing defects, which could result in reduced demand for our service